# PHYSICAL AND MENTAL HEALTH CHALLENGES OF MIGRANT FEMALE HEAD PORTERS (KAYAYEI) IN GHANA: GUIDELINES FOR HEALTH PROMOTION INTERVENTIONS

**Thesis Submitted in fulfilment of the requirement for the degree**
**Doctor of Philosophy (Health Promotion)**

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## DECLARATION

I certify that the work in this thesis entitled *Physical and Mental Health Challenges of Migrant Female Head Porters (Kayayei) in Ghana: Guidelines for Health Promotion Intervention* has not been submitted previously for a degree nor has it been submitted as part of requirements for a degree to any university or institution other than the University of KwaZulu-Natal.

I also certify that the thesis is an original research study, and that it has been written by myself. Any help and assistance that I have received in my research work and in the preparation of the thesis itself has been acknowledged appropriately. In addition, I certify that all information sources and literature used are listed in the references.

# DEDICATION

I dedicate this thesis to my son Yaw Barimah Buabeng for being my strength throughout the process of writing this thesis.

## ACKNOWLEDGMENTS

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# ABSTRACT

**Background:** While internal migrants (Kayayei) in Ghana have been perceived as a vulnerable group faced with mental and physical health challenges, there has not been enough research on the impact of the trade on their health. Grounded on the broad bioecological framework of Bronfenbrenner and Morris, this study investigated the lived experiences, prevalence of physical and mental health challenges, risk factors for mental health challenges, protective factors that mitigate the effects of the daily lived experiences on mental health.

**Methods:** The study adopted a sequential exploratory mixed method design whereby qualitative data were collected and analysed first to get in-depth understanding of the physical and mental health of Kayayei, followed by the quantitative survey. For the qualitative study, the study employed a purposive sampling technique to select 31 Kayayei from the Agbogbloshie market. The study utilised Interpretive Phenomenology Analysis (IPA) to analyse the transcripts from the qualitative study interviews. The quantitative aspect of the study undertook a cross-sectional survey using an interviewer-administered questionnaire to collect data from 352 participants. On the other hand, the quantitative study used exploratory factor analysis, Chi-Square test, mean test, and binary logistic regression for the analysis.

**Results:** Results for the qualitative study showed that the main reasons for migrating to Accra are economic and cultural restrictions and oppression. The findings also revealed that the Kayayei were often maltreated, lacked decent accommodation, and were involved in accidents. To cope with the situation, they used religion, social support, and distractions such as entertainment. The quantitative results indicated that participants had low level of education. Only 6.2 per cent (n=21) had Senior High education, and the majority suffered from poor physical (59.9%) and mental health, [anxiety a94.4 per cent, followed by depression 86.6 per cent, and stress at 42.4 per cent] challenges. The difficult nature of their work context coupled with maltreatment by their clients contributed to poor mental health outcomes. The results showed participants adopted various coping strategies to deal with their situation. However, apart from humour, which helped mitigate stress (OR=0.358, 95% CI=0.169, 0.757, p= 0 007), all other coping strategies used by the Kayayei increased mental health distress. The use of denial coping strategy predicted depression (95% CI=2.428, 27.038, p=0.001), stress (95% CI=0.988, 3.323, p=0.005, p=0.005), and anxiety (95% CI= 2.37, 54.088, p= 0.002). The results also showed that participants received low to medium social support overall, while support from family and friends helped mitigate mental health distress.

**Conclusion:** The results of the present study indicated that even though the work of Kayayei exposes them to physical and mental health challenges, the coping strategies they adopt create more rather than less mental health concerns. However, social support from family and friends helped to buffer the impact of the challenges. The findings of the present study were used to develop a multilevel prevention intervention aimed at training the Kayayei on the appropriate coping strategies to adopt to improve mental health outcomes. It is recommended that at the personal level, the Kayayei should have access to psychological counselling that will teach them how to adopt better coping strategies that could enhance their mental health outcomes. At the interpersonal level, the Kayayei should be assisted to form cooperatives that could facilitate social networks, proper integration, and social support for its members. At the structural level, relevant governmental and non-profit organisations should address the determinants of health including access to physical and mental health care services, employment opportunities, skills training, and affordable housing for the Kayayei. Finally, there should be structural change and interventions that target the mental health of the vulnerable in society, particularly women.

# ACRONYMS

| | |
|---|---|
| **APA** | American Psychological Association |
| **DASS-21** | Depression, anxiety, and Stress Scale |
| **FAO** | Food and Agriculture Organisation |
| **GDP** | Gross Domestic Product |
| **GHS** | Ghana Health Service |
| **GSS** | Ghana Statistical Service |
| **HSQ** | Health Status Questionnaire |
| **ILO** | International Labour Organisation |
| **IM** | Intervention Mapping |
| **IOM** | International Organisation for Migration |
| **LMIC** | Low- and Middle-Income country |
| **MSPSS** | Multidimensional Scale Perceived Social Support |
| **NCDs** | Non-Communicable Diseases |
| **NGO** | Non-Governmental Organisation |
| **NHIS** | National Health Insurance Scheme |
| **PPCT** | Process-Person-Context-Time |
| **SDG** | Sustainable Development Goal |
| **SSA** | Sub-Saharan Africa |
| **ToC** | Theories of Change |
| **UN** | United Nations |

## DEFINITION OF TERMS USED IN THE CONTEXT OF THIS STUDY

**Coping:** **"**Constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (Folkman, & Lazarus, 1984, p.114).

**Head porter:** An individual who carries goods on the head for a fee.

**Internal migration:** Human movement within a geographical entity or a country for economic improvement.

**Kayayei:** A female head porter.

**Mental health:** The World Health Organisation (WHO) defines mental health as "state of well-being in which every individual realizes his or her potential, can cope with the normal stresses of life, can work productively and fruitfully, and can contribute to her or his community" The phrase describes the condition of an individual regarding their psychological and emotional well-being (*The World Mental Health Report* 2001, p3).

**North-south migration:** The movement of people from the northern part of Ghana to the southern part

**Physical health:** Absence of disease and being fit to perform daily activities.

**Psychosocial support:** The actions of family, friends, and society in general that address both psychological and social needs of the Kayayei.

**Stress:** **"**A particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being" (Folkman, & Lazarus, 1984, p.19).

**Anxiety:** **"**Refer to a group of mental disorders characterized by feelings of anxiety and fear, including generalised anxiety disorder (GAD), panic disorder, phobias, social anxiety disorder, obsessive-compulsive disorder (OCD) and post-traumatic stress disorder (PTSD)" (WHO, 2017, p.7).

**Depression:** **"**It is characterized by sadness, loss of interest or pleasure, feelings of guilt or low self-worth, disturbed sleep or appetite, feelings of tiredness, and poor concentration" (WHO, 2017, p.7).

**TABLE OF CONTENT**

**DECLARATION** .... i

**DEDICATION** .... ii

**ACKNOWLEDGMENTS** .... iii

**ABSTRACT** .... iv

**ACRONYMS** .... vi

**DEFINITION OF TERMS USED IN THE CONTEXT OF THIS STUDY** .... vii

**TABLE OF CONTENT** .... viii

**LIST OF TABLES** .... xiv

**LIST OF FIGURES** .... xvi

**PROLOGUE** .... xvii

**CHAPTER ONE** .... 1

**INTRODUCTION** .... 1

1.1 Background of the Study .... 1

1.2 Problem Statement .... 3

1.3 Rationale for the Study .... 5

1.4 Broad aim of the Study .... 6

1.4.1 Objectives of the Study .... 6

1.5 Research Questions .... 6

1.6 Ethical Considerations .... 7

1.7 Outline of the Thesis .... 7

1.7.1 Chapter 1: Introduction .... 7

1.7.2 Chapter 2: Literature Review .... 7

1.7.3 Chapter 3: Research Methods .... 8

1.7.4 Chapter 4: Lived Experiences of the Kayayei .... 8

1.7.5 Chapter 5: Prevalence of Physical and Mental Health Challenges among the Kayayei .... 8

1.7.6 Chapter 6: Risk Factors for Mental Health Challenges among the Kayayei in Ghana .... 8

1.7.7 Chapter 7: Social Support and Coping Strategies Adopted by the Kayayei .... 8

1.7.8 Chapter 8: Integrative Discussion, Intervention Mapping and Conclusion .... 9

**CHAPTER TWO** .... 10

**LITERATURE REVIEW** .... 10

2.1 Introduction .... 10

2.2 Empirical Literature Review........................................................................................10
2.2.1 Trends in Migration ........................................................................................10
2.2.2 Reasons for Migration......................................................................................13
2.2.3 Consequences of Migration ................................................................................15
2.2.4 Physical Health Challenges.................................................................................19
2.2.5 Mental Health Challenges among Migrants .........................................................21
2.2.5.1 Socio-Cultural and Economic Risk Factors .......................................................22
2.2.5.2 Migration Related Variables ...........................................................................24
2.2.5.3 Gender Differences and Mental Health ...........................................................25
2.2.6 Protective Factors /Coping Strategies....................................................................26
2.3 Theoretical Perspectives of the Study.....................................................................30
2.3.1 Bio-Ecological Model.........................................................................................31
2.3.1.1 Process ..........................................................................................................32
2.3.1.2 Person............................................................................................................33
2.3.1.3 Context..........................................................................................................34
2.3.1.4 Time ..............................................................................................................37
2.3.2 Theory of Social Isolation.....................................................................................38
2.4 Intervention Mapping Framework to Develop Guidelines for Health Promotion Interventions. ..........................................................................................................40
2.4.1 Step 1: Needs Assessment ..................................................................................41
2.4.2 Step 2: Programme Outcomes and Objectives.......................................................42
2.4.3 Step 3: Programme Design .................................................................................42
2.4.4 Step 4: Programme Development/Production .......................................................43
2.4.5 Step 5: Programme Implementation Plan ..............................................................43
2.4.6 Step 6: Evaluation Plan........................................................................................43
**CHAPTER THREE..........................................................................................................45**
**RESEARCH METHODS...................................................................................................45**
3.1 Introduction.............................................................................................................45
3.2 Study Setting............................................................................................................45
3.3 Study Permission and Ethical Principles ....................................................................49
3.4 Research Design.......................................................................................................50
3.4.1 Sequential Exploratory Mixed Method...................................................................50
3.5 Phase 1: Qualitative Study ........................................................................................53
3.5.1 Research Paradigm and Design .............................................................................53
3.5.2 Sampling Population, Sampling Strategy, Sample Size ..........................................54
3.5.3 Interview Schedule, Focus Group Discussion, and Observation.............................55
3.5.3.1 In-depth Interviews ..........................................................................................56
3.5.3.2 Focus Group Discussion ....................................................................................56
3.5.3.3 Observation......................................................................................................56
3.5.3.2 Pilot Study........................................................................................................57
3.5.3.3 Data Collection and Procedures..........................................................................57
3.5.3.4 Observation Study.............................................................................................58
3.5.3.5 Use of Research Assistants ................................................................................59
3.5.4 Data Analysis.........................................................................................................59
3.5.5 Data Quality Control /Validity and Reliability/Trustworthiness.............................61

3.6 Phase II – Quantitative Phase ..... 63
3.6.1 Sampling Strategy and Sample Size ..... 64
3.5.1.1 Sample Size Determination..... 65
3.6.2 Research Instruments ..... 65
3.6.3 Pilot Study..... 69
3.6.4 Recruitment of Participants and Data Collection Procedure ..... 70
3.6.5 Data Quality Control ..... 71
3.6.6 Data Analysis ..... 71
3.6.7 Study Objectives and Statistical Tests Used. ..... 74

**CHAPTER FOUR ..... 75**

**LIVED EXPERIENCES OF THE KAYAYEI ..... 75**

4.1 Introduction ..... 75

4.2 Results ..... 75
4.2.1 Background Characteristics of Participants ..... 75
4.2.2 Findings..... 77

4.3 Reasons for Migrating to Accra ..... 78
4.3.1 Economic Reasons ..... 78
4.3.2 Cultural Reasons ..... 80

4.4 Daily Lived Experiences ..... 81
4.4.1 Daily Routine ..... 81
4.4.2 Psychosocial Challenges ..... 84
4.4.3 Physical Challenges ..... 87
4.4.4 Mental Health Problem ..... 90

4.5 Coping Strategies ..... 93

4.6 Findings from Researchers Observation ..... 96

4.7 Discussion ..... 96
4.7.1 Reasons for Migration..... 97
4.7.2 Economic Reasons ..... 98
4.7.3 Cultural Reasons ..... 101
4.7.4 Daily Lived Experiences ..... 101
4.7.4.1 Physical and Mental Health Challenges ..... 103
4.7.5 Coping Strategies ..... 104

4.8 Limitations of the Qualitative Study ..... 105

4.9 Conclusion ..... 105

**CHAPTER FIVE ..... 107**

**PREVALENCE OF PHYSICAL AND MENTAL HEALTH CHALLENGES AMONG THE KAYAYEI IN GHANA ..... 107**

5.1 Introduction ..... 107

5.2 Background Characteristics of Respondents ..... 107

5.3 Physical Health Challenges among the Kayayei ..... 109

5.4 Prevalence of physical health challenges among the Kayayei ..... 110

5.5 Mental Health Challenges among the Kayayei ..... 111
5.6 Background Characteristics and Depression among Kayayei ..... 112
5.7 Background Characteristics and Stress Among the Kayayei ..... 116
5.8 Background characteristics and anxiety ..... 119
5.9 Levels of Depression among the Kayayei ..... 122
5.10 Levels of Anxiety among the Kayayei ..... 122
5.11 Levels of Stress among the Kayayei ..... 122
5.12 Prevalence of mental health challenges measured by DASS-21 subscale scores. ..... 123
5.13 Discussion ..... 124
5.13.1 Prevalence of Physical Health Challenges among the Kayayei ..... 124
5.13.2 Prevalence of Mental Health Challenges among the Kayayei ..... 126
5.13.3 Conclusion ..... 129

**CHAPTER SIX ..... 130**

**RISK FACTORS FOR MENTAL HEALTH OF THE KAYAYEI ..... 130**

6.1 Introduction ..... 130
6.2. Results ..... 130
6.2.1 Association between Background Characteristic and Depression ..... 130
6.2.2 Association between Background Characteristics and Stress ..... 134
6.2.3 Association between background Characteristics Anxiety ..... 137
6.2.4 Association between Physical Health and Mental Health Challenges ..... 140
6.3 Discussion ..... 141
6.4 Conclusion ..... 146

**CHAPTER 7 ..... 147**

**SOCIAL SUPPORT AND COPING STRATEGIES ADOPTED BY THE KAYAYEI ..... 147**

7.1 Introduction ..... 147
7.2 Pearson Correlation between Mental Distress, Social Support, Coping Strategies and Physical health challenges. ..... 148
7.3 Results ..... 151
7.3.1 Coping Strategies Used by the Kayayei ..... 151
7.3.2 Coping Strategies among the Kayayei ..... 152
7.3.3 Prevalence of Cumulative Avoidant and Approach Coping Strategies ..... 153
7.3.4 Association between Individual Coping Strategies and Mental Health ..... 153
7.3.5 Association between Cumulative Coping Strategies and Mental Health Challenges ..... 161
7.3.6 Social Support Available to the Kayayei ..... 165
7.3.7 Social Support Systems used by the Kayayei. ..... 165
7.3.8 Association Between Social Support and Mental Health Challenges ..... 166
7.3.9 Results of the Logistic Regression in Predicting Mental Health Challenges (Depression, Stress, and Anxiety) ..... 170

7. 3.9.1 Results of the Logistic Regression in Predicting Depression ....................... 170
7.3.9.2 Results of the Logistic Regression in Predicting Stress................................ 171
7. 3.9.3 Results of the Logistic Regression in Predicting Anxiety ........................... 172

7. 4 Discussion ................................................................................................ 173

7.5 Conclusion ................................................................................................ 180

**CHAPTER EIGHT ........................................................................................ 181**

**SUMMARY AND INTEGRATIVE DISCUSSION, GUIDELINE FOR HEALTH PROMOTION AND CONCLUSION ........................................................ 181**

8.1 Introduction ................................................................................................ 181

8.2 Brief Summary of Key Findings ................................................................ 181

8.3 Brief Integrated Discussion ........................................................................ 181

8.4 The Development of Health Promotion Intervention Guidelines for the Kayayei ...... 185
8.4.1 Step 1: Needs Analysis - Summary of the Study Findings. ................................ 185
8.4.2 Step 2 Metrics of Change Objectives ................................................................ 187
8.4.3 Intervention Mapping – Step 3 Theoretical Methods and Practical Applications 192

8.5 Contribution of the Study to the Body of Knowledge ................................. 195

8.6 Recommendation for Future Research ....................................................... 196

8.7 Limitations of the Study ............................................................................. 197

8.8 Conclusion ................................................................................................ 197

**REFERENCES ............................................................................................. 199**

**APPENDICES .............................................................................................. 245**

**APPENDIX 1: ETHICAL CLEARANCE ....................................................... 245**

**APPENDIX 2: PERMISSION LETTER FROM THE KAYAYEI ASSOCIATION ... 247**

**APPENDIX 3: MEMORANDUM OF UNDERSTANDING BETWEEN THE KAYAYEI ASSOCIATION AND RESEARCHER ................................................ 248**

**APPENDIX 4: INTERVIEW GUIDE ............................................................. 249**

**APPENDIX 5: FOCUS GROUP DISCUSSION GUIDE ................................. 253**

**APPENDIX 6: OBSERVATIONAL STUDY GUIDE ...................................... 258**

**APPENDIX 7: INTERVIEW GUIDE FOR KEY INFORMANTS .................. 259**

**APPENDIX 8: QUESTIONNAIRE ................................................................ 260**

**APPENDIX 9: INFORMED CONSENT FOR QUALITATIVE DATA ............ 264**

**APPENDIX 10: PARTICIPANT DECLARATION FORM FOR QUALITATIVE STUDY ........................................................................................................ 266**

**APPENDIX 11: CONSENT FORM FOR QUANTITATIVE STUDY ............................ 267**

**APPENDIX 12: PARTICIPANT DECLARATION FORM FOR QUANTITATIVE STUDY ............................ 268**

## LIST OF TABLES


| | | |
|---|---|---|
| **Table 1** | Descriptive Statistics and Measures Used in for the study | 73 |
| **Table 2** | Stated Objective and Statistics Used | 74 |
| **Table 3** | Background Characteristics of Participants | 76 |
| **Table 4** | Themes and Sub-themes of Qualitative Study | 77 |
| **Table 5** | Background Characteristics of Quantitative Respondents | 108 |
| **Table 6** | Physical Health Challenges among the Kayayei | 109 |
| **Table 7** | Mental Health Challenges among the Kayayei | 111 |
| **Table 8** | Background Characteristics and Depression among the Kayayei | 114 |
| **Table 9** | Background Characteristics and Stress among the Kayayei | 117 |
| **Table 10** | Background Characteristics and Anxiety among the Kayayei | 120 |
| **Table 11** | Prevalence of Mental Health Challenges | 123 |
| **Table 12** | Association between Background Characteristics and Depression | 132 |
| **Table 13** | Association between Background Characteristics and Stress | 135 |
| **Table 14** | Association between Background Characteristics and Anxiety | 138 |
| **Table 15** | Association between Physical Health and Depression | 140 |
| **Table 16** | Association between Physical Health and Stress | 140 |
| **Table 17** | Association between Physical Health and Anxiety | 141 |
| **Table 18** | Correlations between Mental Health, Social Support, Coping Strategies and Physical health | 149 |
| **Table 19** | Correlations between Mental Health Challenges and Individual Coping Strategies | 150 |
| **Table 20** | Coping Strategies Used by the Kayayei | 151 |
| **Table 21** | Prevalence of Avoidant and Approach coping strategies | 153 |
| **Table 22** | Association between Avoidant coping Strategies and Depression | 155 |
| **Table 23** | Association between Avoidant coping Strategies and Stress | 156 |
| **Table 24** | Association between Avoidant coping Strategies and Anxiety | 157 |
| **Table 25** | Association between Approach coping Strategies and Depression | 158 |
| **Table 26** | Association between Approach coping Strategies and Stress | 159 |
| **Table 27** | Association between Approach coping Strategies and Anxiety | 160 |
| **Table 28** | Association between Coping Strategy and Depression | 162 |
| **Table 29** | Association between coping strategy and Stress | 163 |
| **Table 30** | Association between coping strategy and Anxiety | 164 |

| | | |
|---|---|---|
| **Table 31** | Social Support Available to the Kayayei | 165 |
| **Table 32** | Association between Social Support and Depression | 168 |
| **Table 33** | Association between Social Support and Stress | 168 |
| **Table 34** | Association between Social Support and Anxiety | 169 |
| **Table 35** | Results of Logistic Regression in Predicting Depression | 171 |
| **Table 36** | Results of Logistic Regression in Predicting Stress | 172 |
| **Table 37** | Results of Logistic Regression in Predicting Anxiety | 173 |
| **Table 38** | Intervention Mapping Steps | 185 |
| **Table 39** | Matrix of Individual Change Objectives Pertaining to self-development | 190 |
| **Table 40** | Matrix of Interpersonal Change Objectives | 191 |
| **Table 41** | Matrix of Structural and Societal Change Objectives | 191 |
| **Table 42** | Theoretical Methods and Practical Applications | 192 |

## LIST OF FIGURES


| | | |
|---|---|---|
| **Figure 1** | Bioecological Perspective Applied to the Physical and Mental Health Challenges of the Kayayei | **40** |
| **Figure 2** | Map of Agbogbloshie Market | **46** |
| **Figure 3** | Google Map Showing the Kayayei Association Office | **47** |
| **Figure 4** | Rubbish Dump at Agbogbloshie Market | **47** |
| **Figure 5** | Picture of Agbogbloshie Market | **48** |
| **Figure 6** | Picture of Kayayei Carrying Pans of Yam | **48** |
| **Figure 7** | Picture of Kayayei Carrying Various Types of Headloads | **49** |
| **Figure 8** | Prevalence of Physical Health Challenges among the Kayayei | **110** |
| **Figure 9** | Overall Physical Health Challenges | **110** |
| **Figure 10** | Levels of Depression among the Kayayei | **122** |
| **Figure 11** | Levels of Anxiety among the Kayayei | **122** |
| **Figure 12** | Levels of Stress among the Kayayei | **123** |
| **Figure 13** | Coping Strategies Used by the Kayayei | **153** |
| **Figure 14** | Social Support Available | **166** |
| **Figure 15** | Personal and Structural/Societal Level Factors that Affect the Physical and Mental Health of the Kayayei | **186** |
| **Figure 16** | Individual, Interpersonal, and Structural Factors that Influence Mental Health Outcomes of the Kayayei | **187** |

## PROLOGUE

This study aimed to assess the physical and mental health challenges of Kayayei in Ghana, analyse impacting factors, and assess the social support available to them and their coping strategies. In Ghana, young women from the north migrate to the south to look better livelihoods. Due to lack of regular jobs, they engage in menial jobs such as hawking on the streets and operate as Head Porters referred to as Kayayei in Ghana. The motivation to conduct this study was borne out of my understanding of the struggles internal migrant women go through to provide for their families particular in Ghana, where the rights of these migrants are not protected. This interest was heightened after observing and interacting with some of the Kayayei about their daily struggles.

This research employed a sequential exploratory mixed method approached. A purposive sampling selection technique was adopted to select 21 Kayayei who were interviewed to understand their experiences of daily living and another 10 participants for focus group discussion at the Agbogbloshie market in Accra. An interview guide consisting of items ranging from reasons for migration, lived experiences as a Kayayei, hazards associated with the business, their physical and mental health status, and how they cope with their circumstances. The study was conducted in 2018 after receiving institutional ethical (HSS/0404/018D), and permission was granted from the Kayayei association to collect the data among their members.

With two research assistants' assistance, I frequently visited the Agbogbloshie market to understand the Kayayei business and collect data from participants. The Kayayei business is very challenging. The difficulties these women go through are enormous, carrying heavy pans on their heads, and some of them even carry their children at their backs in addition. As a researcher, talking to these women without offering any immediate assistance caused me emotional distress thinking how they could go through these challenges for a very long time. In the beginning it was difficult for some of them to open up about their circumstances but after reassuring them about the intention of the study, they finally were less guarded and started talking. Some of their quotes touched me deeply and strengthened the motivation for the study. Here are a few of them:

> *"If death were to be sold at the market, I would have bought it and die"*
>
> Single 22 years old, Single.

*I ran away from my community because of forced marriage when I was about 13 or 14 years. The person to whom I was about to be given to was 47 years old and he had three (3) wives".*
Married 33 years old.

*"My mother stopped me from attending school because she does not have money to cater for me in school, but she allowed my brothers to stay in school".*
Single 19 years

The question going through my mind was, why would society allow this to happen to these women? On the other hand, the Kayayei show resilience and can navigate through the challenges despite these challenges. I remember one Sunday at the Agbogbloshie market, I saw some of these women dressed in their best garments, singing and dancing very happily. I was amazed by their tenacity and strength despite their daily struggles and circumstances. Therefore, I allowed participants to be active in the process by engaging them regularly throughout the data collection process. This enabled me to build relationships with participants and gained deeper understanding of their issues of concern. Their partnership in the research process was the first step in the empowerment process that will be continued. As a researcher, I also learned a lot from their resilience, which has inspired me throughout my doctoral studies.

# CHAPTER ONE
# INTRODUCTION

## 1.1 Background of the Study

Internal rural-urban migration is a global phenomenon due to its importance in socio-economic development (De Brauw, Mueller, & Lee, 2014). In every country's development, the migration transition from agricultural labour have become a significant feature, with each country having its distinct approach (De Brauw et al., 2014; World Bank, 2008). In Ghana, the population of people living in urban areas in 2000 was 43.8 per cent, this increased to 50.9 per cent in 2010, while this number is expected to increase to 63 per cent in 2025 (Awumbila, Teye, & Yaro, 2017; Ghana Statistical Service [GSS], 2012).

Ghana has experienced a steadily increasing economic growth since 2005 of over seven per cent yearly on average. Despite this growth, inequality has widened, and poverty remains prevalent especially in the northern regions (Abdulai, Bawole, & Kojo Sakyi, 2018). Poverty levels in Accra, Ghana's capital is relatively low (5.6%), but the picture is different in the northern regions comprising Upper East, Upper West, and the Northern Region of Ghana. About forty per cent of the population in the Upper East Region is poor, while about half (50.5%) of the population in the Northern Region and seventy-seven per cent (77%) of the population in Upper Region are poor (GSS, 2014). Various government developmental policies have favoured the urban and southern sectors of Ghana to the detriment of the regions in the north, resulting in unequal development between the south and the north. This, therefore, led to poor infrastructural development, unemployment, and poverty in the area (Serbeh, Adjei, & Yeboah, 2016).

Although the northern regions constitute the largest part of Ghana in terms of geographical space, they are the least developed in terms of infrastructure and other social amenities. These areas are predominantly savannah, with limited natural resources (Serbeh et al., 2016; Marchetta, 2011). A World Bank report noted that overdependence on food crop farming is one of the major reasons for the under-development in the north (Shepherd, Gyimah-Boadi, Gariba, Plagerson, & Musa, 2006). The economies of rural agriculture are affected by the neoliberal reforms adopted by governments where export crops divert subsidies coupled with land reforms, limiting the rural farmer to subsistence farming, and reducing other opportunities for non-farm employment (Oberhauser & Yeboah, 2011).

The lack of sustainable jobs and education coupled with poverty has made the northern regions a major source of the unskilled labour market for other areas in the country (Awumbila & Ardayfio-Schandorf, 2008; Serbeh et al., 2016). Young men and women, therefore, migrate from the north of Ghana to the south, popularly referred to as the 'north-south' migration, in search of better opportunities to support families back home financially (Kwankye, 2012; Van der Geest, 2011). The men who migrate engage in domestic work, street hawking, and are involved in the construction industry (Awumbila et al., 2017; Yaro, Awumbila, & Teye, 2015), while the young women usually engage in head porterage, known in Ghana as 'Kayayei'. Ziblim (2013), in his study among Kayayei in market centres in Accra, while assessing effects of migration on the health of female head porters, maintained that people move for either political, economic, environmental, or humanitarian reasons. Ziblim further posits that migration from the northern regions of Ghana to predominantly economically productive areas of southern Ghana (Accra and Kumasi), is due to environmental, endemic poverty, violence, and forced underage marriage.

The north-south migration offers the opportunity for remittances that migrants send home as a source of income to many households in northern Ghana, particularly during periods of economic shock (Kwankye, 2012; Pickbourn, 2011). The youth from the north, therefore, venture on a southward migration with the hope of getting employment to earn income to remit and support their relations back at their places of origin (Adaawen & Owusu, 2013). However, Darkwah (2013) and White (2012) argue that increasing educational attainment levels have resulted in many of the youth abandoning agriculture and that they are flocking to urban areas in search of lucrative 'white-collar' jobs even though they are often difficult to get. This is an indication that the north-south migration is not only due to a lack of employment but other factors, which include literacy levels and urbanisation.

Attributing the north-south migration to the increasing inequality in resources and opportunities in northern and Southern Ghana, Buske (2014) argued that migrants travel southwards in search of jobs and better opportunities. However, the author argues that poverty alone is not the sole cause of the north-south migration. Buske’s study of 737 Kayayei girls showed that the most common reason for migration to the markets given by the girls was 'parental requirement'. This means parents expect their children to move to Accra to work and send remittances to the household. Burks noted that many girls pride themselves on their ability to contribute financially to support their families.

The Kayayei usually operate at market centres and at lorry stations (Awumbila et al., 2008). Their work basically consists of carrying goods on their head for shoppers. Head porterage is one of the main forms of transport of goods in Ghana. All over the country, people bring their wares from farms to their homes on their heads (Ojo, Janowski, & Awotwi, 2013). Many of the Kayayei usually settle in slums in Accra where other migrants are located (Awumbila et al., 2008). The areas are, however, densely populated, and lack basic facilities including health services (Awumbila et al., 2011; Owusu, Adjei-Mensah, & Lund 2008). Although there have been many discussions in Ghana about the threats these Kayayei face daily, due to political interference in the handling of Kayayei related issues, Kayayei continue to be vulnerable to physical and mental health risks, as support systems that could either reduce their risks or eliminate interest in head porterage remain unimplemented. This study, therefore, sought to examine the physical and mental health challenges that these Kayayei face.

**1.2 Problem Statement**

The United Nations (UN) Sustainable Development Goals (SDG) set up in 2015 to a better and more sustainable future for all in 2030 call on all nations in the world to promote sustainable and comprehensive economic growth, with employment that is productive and decent for all (UN, 2015). The focus of the SDG is therefore to ensure workplace safety for workers including migrants (Hargreaves et al., 2019). However, migrant workers particularly women, work in exploitative and hazardous conditions exposing them to various forms of physical and mental health risks (Hargreaves et al., 2019).

Mental health has not been given the attention it deserves in Africa, specifically in sub-Saharan Africa (SSA), where little attention has been given to it in the mainstream health care system. Issues of mental health have largely been neglected, as is largely the case for most SSA countries (Becker & Kleinman, 2013; Faydi et al., 2011; Omar et al., 2010). Generally, in SSA, research on the impact of migration on the general health and wellbeing of internal migrants are scarce. A study conducted in slums of Nairobi, Kenya showed that internal migrants faced health vulnerabilities including mental health distress (Bocquier et al., 2011). More males (84.3%) than females (81.5%) reported a better mental health status (Ajaero, Odimegwu, Chisumpa, & Obisie-Nmehielle, 2017). Pannetier, Lert, Roustide and du Loû (2017) reported that among SSA migrants, their mental health is related to the migratory path and the conditions in the host country. Pannetier et al. (2017) further indicated that the mental health outcomes are different for men and women as the mental health distress of men was associated with an

illegal migrant status, while for women the way in which they were treated in their home countries impacted their mental health negatively.

In a review of the mental health policies in selected SSA countries (Ghana, South Africa, Uganda, & Zambia), Omar et al. (2010) found that Governments of these countries gave low priority to mental health as compared to social and economic issues. In Ghana, only 1.4 per cent of the expenditure allocated to the health sector goes to mental health care, in a country of estimated 24.3 million, while 2.4 million people suffer from mental health distress. (Roberts, Mogan, & Asare, 2014). Despite the large number of mental health challenges among the general population and mostly migrants, the limited research, and data on internal migration in Ghana has focused mainly on migration and remittance, and accessibility to health care in general (Awumbila, Owusu & Teye 2014; Baah-Ennumh, Amponsah, & Owusu, 2012; Yiran, Teye, & Yiran, 2014).

While socio economic wellbeing is now receiving governmental attention, academic research on migrants and their mental health is quite scanty in Ghana. For instance, Baah-Ennumh et al. (2012) conducted a mixed-method research among 100 Kayayei on their living conditions in the Kumasi Metropolis, Ghana. Yiran, et al. (2014) conducted a mixed-method research among 70 Kayayei in Agbogbloshie and Madina on accessibility of maternal health care. Opare (2003) ascertained why the Kayayei migrated from their places of origin and why they engaged in porterage work as well as their future outcome.

Whilst migrants are also usually faced with physical and mental health issues, the focus of various researchers has been mostly on the flow of remittances as mentioned above, and how migration from rural areas or smaller towns to cities results in challenges, such as unemployment, poverty, and the development of slum communities (Awumbila et al., 2014). Furthermore, issues concerning physical and mental health have not been given the necessary attention they deserve in Ghana. For instance, in a systematic review of mental health research conducted by Read and Doku (2012), the researchers noted that between 1955 and 2009, 98 articles were published in peer-reviewed journals on mental health in Ghana. Several studies were on drug use, and only one was on homelessness (due to poverty) and mental health. Lamptey (2005), for instance, researched the socio-demographic characteristics of substance abusers admitted to a private specialist clinic while Sanati (2009) investigated the quality of psychotropic drug prescriptions at Accra Psychiatric Hospital. On homelessness, De-Graft Aikins and Ofori-Atta (2007) conducted a study on homelessness and mental health in Ghana.

The study explored the lived experiences of squatters in settlements in East-Legon, an affluent neighbourhood in Accra. The current study, however, focused on Kayayei from the three northern regions but not migrants from Central and Volta regions of Ghana whose backgrounds and lived experiences might be different from migrants from the three northern regions due to spatial and cultural variations.

Studies have shown that internal migrants show lower levels of self-esteem, have higher social anxiety, report loneliness and the perception of discrimination which seems to be a cause of psychological distress, and physical and behavioural problems (Gushulak, Weekers, & MacPherson, 2010; Lin et al., 2011; Mao & Zhao, 2012). Even though some studies (Agarwal et al., 1997; Opare, 2003; Van den Berg, 2007) have been conducted among the Kayayei in Ghana, little attention has been given to the physical and mental health of Kayayei in these studies. Besides, there is a paucity of empirical literature on the mental health of Kayayei in the country. To address the literature gap, the current study sought to examine the physical and mental health challenges of the Kayayei. Additionally, the study sought to ascertain the role of protective factors in mitigating the consequences of the Kayayei business and mental health conditions with a view to inform relevant health promotion interventions for the Kayayei.

### 1.3 Rationale for the Study

While various studies have been conducted on migration and health, most of these studies were conducted in different parts of the world, with very few studies in Ghana. Previous studies in Ghana have focused mainly on socio-economic well-being and access to health care (Adamtey, Yajalin, & Oduro, 2015; Tutu, Boateng, Busingye, & Ameyaw, 2017; Yiran et al., 2014). As a result, there have been incomplete interventions with limited successful interventions, with NGO's enrolling the Kayayei into the National Health Insurance Scheme (NHIS). These interventions are, however, limited since they only focus on accessibility to physical health care. This present study, therefore, sought to investigate both the physical and mental health challenges of Kayayei and to suggest intervention strategies to mitigate their challenges in this regard. This study used an exploratory mixed-method approach that enabled a deeper understanding of the complex issue of Kayayei and their mental and health challenges. By using exploratory mixed-method research, this study was able to get a first-hand insight of the physical and mental health challenges of the Kayayei. The qualitative aspect gave a broad perspective of the issues under consideration, which informed the quantitative investigation. The findings of the study therefore add to the existing knowledge and literature on the impact

of migration on the physical and mental health of the Kayayei. In the Ghanaian context, the study provides more insight into the physical and mental health challenges experienced by Kayayei daily. This could inform the government and other stakeholders such as the International Organisation for Migration (IOM), Non-Governmental Organisations (NGO) and Religions Bodies in formulating the best policies and strategies to address the physical and mental health challenges faced by the Kayayei. The study could serve as a basis for developing interventions to prevent specific mental health conditions by providing adequate psychosocial support. The study could also be relevant in serving as an important source of literature for future studies on the migration process, physical and mental health challenges of migrants, and the Kayayei phenomenon in Ghana.

### 1.4 Broad aim of the Study

The broad aim of this study was to assess the physical and mental health challenges of Kayayei in Ghana as well as available support and ways of coping with the view to suggesting guidelines for health promotion interventions among this vulnerable group.

#### 1.4.1 Objectives of the Study

To address the broad aim, the study specifically sought to:

1. Explore the lived experiences of Kayayei in Ghana;
2. Ascertain the prevalence of physical and mental health challenges among the Kayayei in Ghana;
3. Investigate the risk factors impacting on the mental health of the Kayayei in Ghana;
4. Examine social support and coping strategies adopted by the Kayayei; and
5. Provide guidelines for health promotion interventions.

### 1.5 Research Questions

1. What are the lived experiences of Kayayei in Ghana?
2. What is the prevalence of physical and mental health challenges among Kayayei in Ghana?
3. What are the risk factors of mental health challenges among the Kayayei in Ghana?
4. What are the social supports and coping strategies adopted by the kayayei in dealing with their mental Health challenges?

### 1.6 Ethical Considerations

Before data collection, ethical clearance was obtained from the College of Humanities, University of KwaZulu Natal Research Ethics Committee in South Africa, and permission was granted from the Kayayei association to collect data from among their members. All the ethical issues stated in the *American Psychological Association (APA) Guidelines* when using human participants were adhered to in the conduct of the study. Participants selected were briefed about the objectives of the study and were invited to participate in the study through a gate keeper, specifically their president. Each participant was briefed on the aims and objectives of the study, and was assured of voluntary participation, confidentiality, anonymity, and participants' ability to withdraw from the study at any stage. Those who volunteered to participate then signed/imprinted a thumbprint on the written consent form. The participants were informed about the fact that the study was solely for academic purposes and was aimed at promoting the physical and mental health of Kayayei, and that they could be possible beneficiaries of any intervention emanating from recommendations proposed by the study upon its completion. They were also told that there would be no psychological distress to participants involved in this type of study. Chapter 3 provides details of all the ethical procedures that were followed in the study.

### 1.7 Outline of the Thesis

This section of the thesis presents the outline of all the chapters and what they entailed.

#### 1.7.1 Chapter 1: Introduction

Chapter 1 introduces the study. It focuses on the background, the problem statement, the rationale of the study, aims and objectives, research questions. and lastly ethical considerations. The general outline of the study is presented.

#### 1.7.2 Chapter 2: Literature Review

This chapter first presents the literature on trends of migration, its complexities, and how migration has shaped global history. This is then followed by literature review of the reasons and consequences of migration. Literature about physical and mental health challenges that are prevalent among migrants are also reviewed. In addition, the literature on social support available to migrants and coping strategies are discussed. The chapter further presents the theoretical and conceptual frameworks that underpin the study and concludes with an intervention mapping framework that helped in developing guidelines for health promotion intervention.

### 1.7.3 Chapter 3: Research Methods

In chapter three, the methods used for the study is described and provides justification for the use of mixed-method research that involves both qualitative and quantitative studies. The chapter describes the setting, research design, target population, sampling procedure, instruments, data collection procedure, and data analysis. Interviews as well as focus group discussions were used for the qualitative inquiry, and surveys (questionnaire) used for the quantitative investigation in answering the research questions are explained in detail.

### 1.7.4 Chapter 4: Lived Experiences of the Kayayei

This chapter presents the results of the lived experiences of the Kayayei. The themes that emerged from the interviews and focus group discussions in terms of their physical and mental health challenges, coping strategies, and available social support are presented. The findings of the study are then discussed in addition to the conclusion and recommendations for interventions in health promotion stemming from this qualitative inquiry.

### 1.7.5 Chapter 5: Prevalence of Physical and Mental Health Challenges among the Kayayei

Chapter five presents the quantitative findings regarding the prevalence of physical and mental health challenges among the Kayayei. The chapter first presents the background characteristics of the Kayayei. This is then followed by the prevalence of physical and mental health challenges of the Kayayei and a discussion of the major findings. The chapter concludes with recommendations and suggestions for further research.

### 1.7.6 Chapter 6: Risk Factors for Mental Health Challenges among the Kayayei in Ghana

This chapter presents empirical findings of the risk factors associated with mental health challenges among the Kayayei. Associations between background characteristics and mental health challenges are presented, after which the discussion of the findings in relation to empirical literature and recommendations made for future research followed.

### 1.7.7 Chapter 7: Social Support and Coping Strategies Adopted by the Kayayei

The coping strategies adopted by the Kayayei as well as social support available to them, are examined in this chapter. The use of approach and avoidance coping strategies and social support are examined, and the predictors of mental health outcomes in relation to the existing

empirical literature are presented. Suggestions for health promotion interventions concluded the chapter.

### 1.7.8 Chapter 8: Integrative Discussion, Intervention Mapping, and Conclusion

The final chapter discusses the results of the whole doctoral thesis. The findings from both the qualitative and quantitative studies are summarised in relation to the relevant literature. An intervention mapping process was followed to guide suggested health promotion interventions that primarily target the Kayayei but could also be relevant for other vulnerable groups in the Ghanaian society. The chapter concludes with contributions to new knowledge and insight, limitations of the study, and provides recommendations and suggestions for future research.

# CHAPTER TWO
# LITERATURE REVIEW

## 2.1 Introduction

In this chapter, relevant literature has been reviewed on the physical and mental health challenges of migrant female migrant workers. The review has been divided into the review of empirical studies, theoretical, and conceptual frameworks. The empirical review focuses mainly on the objectives of the study. The theoretical perspective of the study focuses on the Urie Bronfenbrener Bioecological model (Bronfenbrenner & Morris, 2006), as a broad framework for the study and on two other theories on migration, namely, social isolation theory of migration and goal-striving stress theory of migration (Hawkley & Cacioppo 2010; Hyman, 1942). A conceptual framework has been developed based on these theories and previous works of researchers on migration. An intervention mapping framework that guided the development of guidelines for health promotion intervention concluded the chapter. All these aspects are discussed hereunder.

## 2.2 Empirical Literature Review

This section of the study focuses on the empirical literature regarding the physical and mental health of female migrants. Since this study was conducted among migrants, relevant literature pertaining to global migration trends was reviewed. The chapter started with the review of literature on the complexity of migration and the global trends of internal and external migration. This is followed by reviewing the possible reasons for migration and the risk factors such as socio-cultural and economic factors, migration-related variables, and gender-related risks associated with migration.  The literature is further reviewed on the protective factors of mental health with a focus on strategies of coping, social support, and resilience.

### 2.2.1 Trends in Migration

Migration has become a global phenomenon, which has grown in scope, complexity, and impact over the last five decades (Awumbila et al., 2014). It is a significant part of human society that has been driven by change leading to societal development. One of the main strategies for human survival has been based on migration which has shaped the history of humankind (Awumbila et al., 2014). Awumbila et al. (2014), further indicated that migration has become and adaptation strategy in response to global events and structural shifts. It is, therefore, important to get a better understanding of migration and the complexities involved.

Kumar and Diaz (2019, p. 7), defines migration as "the movement of people, either across an international border or within a country, including refugees, displaced persons, economic migrants, and persons moving for other purposes, including family reunification. Migration may take different forms, such as people moving from rural to urban areas and vice versa, or between neighbouring countries and over longer distances". Globally, the number of migrants has seen a rapid increase with international migration. In 2000 there was 170 million migrants, this number has increased to 220 million in 2010 with the number increasing to 251 million in 2017, out of this number, 124.8 million and 36.1 million were women and children respectively (International Organisation for Migration [IOM], 2017; United Nations [UN], 2017). The International Labour Organisation (ILO) estimates that there were about 150.3 million migrant workers globally in 2013 out of which 66.6 million were women, and almost half (48.5%) in North America and Europe (ILO, 2015).

A review of the scientific literature on migration revealed four types of internal migration, which includes rural to rural, rural to urban, urban to urban and urban to rural migration. The most important form of internal migration evident from the literature is rural-urban migration which has a strong social and economic impact on individuals at the origin and at the destinations (IOM, 2006; Marta, Fauzi, Juanda, & Rustiadi, 2020). According to the IOM (2006), these types of migration are often present in localities within the same country. Previously, these types of migration were carried out by men, however, more women are also migrating (IOM, 2006).

Various governments in the past decades have attempted to link migration to development issues by studying the forms of migration within a country to understand the socio-economic situation within the country (De Haas, 2012). For example, migration has been linked to the increase in manufacturing and urbanisation in most parts of Asia, urban-urban migration in Latin America, and the increased occupational diversification due to economic reforms in SSA (Yang, Watkins, & Marsick, 2004). Rural-urban migration has seen a rapid increase in recent times as individuals search for real or perceived opportunities in city centres, and it is estimated that the number of people living in urban areas will double to 6.4 billion by 2050 (Adger et al., 2015; Ajaero & Onokala, 2013; Marchand & Siegel, 2015). Ghana, for instance, has also witness a rapid growth in urbanisation due to the movement of people from rural to the urban centres in search for better standard of living due to better infrastructural development and

better living standards (GSS, 2014). According to the GSS (2014), the urban population of Ghana has increased from 23 per cent in 1960 to 50.1 per cent in 2010.

In a study on trends, pattern, and drivers on African migration, Flahaux and De Haas (2016) reported that migration in Africa has remained predominantly intra-continental. This pattern has since seen a rapid change since the late 1980s with Africans now migrating to Europe, Asia, North Amarica and the Gulf. According to Flahaux and De Haas (2016) the diversification of migration of African emigrants has been driven partly due to European states' restriction on immigration by the introduction of visas. Migration out of Africa is being driven by the development and social transformation in Africa by equipping more people with the aspiration capability to migrate (Flahaux & De Haas, 2016).

However, Flowerdew (2004) stated earlier that the patterns of migration and movement are very complex. Flowerdew indicated that people may migrate to short distance locations which may be followed by movement to other locations, these movement can only be understood in the context of changes in such factors as age, marital status, and household income. Flowerdew (2004) further established that internal migrations are now being replaced by commuting over long distances as well as temporary moves and weekly or daily. In most developing countries, particularly in SSA, a shift from subsistence farming to cash crop production has disrupted household food security which has resulted in temporal or permanent migration of men and women from rural areas to urban centres in search of employment opportunities which are sometimes non-existent (Deshingkar & Grimm, 2005; Holmelin, 2021). In recent times, rural-urban migration has received policy attention in developing countries that had seen rapid development due to urbanisation and structural transformation, labour force from the rural areas has been transferred to urban areas to play a role in the economic growth (Deshingkar & Grimm, 2005; Zhao, 2003).

According to the GSS (2014), in 2000, there were about 30 per cent of internal migrants in Ghana, this number increased to 34 per cent in 2010. The GSS indicated that the movement was more of inter-regional than intra-regional meaning that internal migration in Ghana is mostly characterised by long distance movement. This increase in inter-regional migration could be explained by the creation of new districts capital due to the deepening decentralisation system in in the country. The more developed regions in the southern part of Ghana have over the years been the recipient of internal migrants mostly from the north (GSS, 2014).

### 2.2.2 Reasons for Migration

In recent times, there have been many discussions in both academic and non-academic fields on the reasons for migration due to its severe impact on health and well-being. Human migration is not a new phenomenon, however, the growth of globalisation and the push and pull factors of shifting capital has changed migration significantly in nature and number with effects of climate change, increasing political upheaval, and widening income gap (Kumar & Diaz, 2019; Zimmerman, Kiss, & Hossain, 2011). Individuals have different reasons for migrating including wars and violence, poverty/hunger, employment, and political and religious freedom, and seeking opportunities for a better life. Each of these factors affects both the nature of the migration and the migrants' health (Adger et al., 2015; Bhugra, 2004).

Studies have indicated that in the past three decades, the disparities in household income levels have increased significantly, resulting in the rich getting richer while poverty and environmental degradation have become major forces in migration (Cingano, 2014; Hoffmann, Konerding, Nautiyal, & Buerkert, 2019). The complicated phenomenon of migration plays an essential role in livelihood survival strategies in rural households, which aims to reduce risks and to diversify income for household (Deotti & Estruch, 2016). Various interrelated reasons have been given for migration at the individual, household, local and national levels. Some of these reasons include war, ethnic conflicts, human right violation, and civil unrest just to mention a few. In several cases, especially in Ghana, migrants may decide to leave their community for economic and socio-cultural reasons to look for better work elsewhere. The displacement of people due to poverty and violent conflicts has also forced many people to move within their home countries, the African continent, or to other parts of the world (Flahaux & Haas, 2016; WHO, 2016).

Often, the decision to migrate is dependent on the position an individual holds within the family. A study by Simpson (2017) noted people may be more liked to migrate if the household head is female and young, and also homeownership, and household size are the main determinants for migration. A study by Duplantier, Ksoll, Lehrer, and Seitz (2017) also found that, in households, the young members usually move to work somewhere else to increase the household income. Duplantier et al. (2017) further argued that youth from rural areas are most likely to migrate to urban centres due to their inability to find gainful employment as well as lack of opportunity to set up a viable business in a rural economy.

Even though agriculture is the mainstay of Ghana's economy, contributing 54 per cent of the Gross Domestic Product (GDP) and employing about 52 per cent of the labour force (Food and Agriculture Organisation [FAO], 2018), the practice of agriculture in Ghana, like many SSA countries, is predominantly on a smallholder basis. The dependence on rainfall farming and poor conservation practices leading to post-harvest losses causes financial hardship for the rural dwellers. Several factors such as social, economic, political, landlessness, and environmental factors has influenced the decision to migrate in Ghana (Anarfi & Kwankye, 2005). These factors are linked to land degradation causing rural poverty due to lack of employment opportunities (Anarfi & Kwankye, 2005).

Further, lack of investment in the agricultural sector has resulted in poor development in farming areas with a lack of social amenities, electricity, piped water, credit, and other infrastructure such as good roads, insurance markets, among others (FAO, 2015; Kanu, Salami, & Numasawa, 2014; Shimeles, Verdier-Chouchane, & Boly, 2018). In addition to socio-economic characteristics such as age, size of household, level of education, gender, among others, there are also other driving forces behind the migration of households (Ibrahim, Abedo, Omer, & Ali, 2009). Recent studies (Anarfi & Kwankye, 2005; Awumbila & Ardayfio-Schandorf, 2008) have indicated a changing trend of migration in Ghana, where young females constitute the majority of internal migrants. These independent young females mostly work as Kayayei who usually work at market centres and lorry stations with support from friends and other relatives.

Even though Ghana has experienced steady economic growth of over seven per cent per year on average since 2005, inequality is increasing and poverty remains prevalent in many areas, with the three northern regions having the highest poverty rates (Cooke, Hague, & McKay, 2016). Greater Accra, which is the capital city of Ghana, has a low level (5.6%) of poverty incidence. However, the picture is different in the three northern regions, which comprise mainly savannah areas. The GSS (2018) report in Ghana stated that while poverty in the greater Accra region, the capital of Ghana decreased from 3.5 per cent in 2012/13 to two per cent in 2016/17, the reverse happened in the savannah zones with poverty from 55 per cent in 2012/13 increasing to 67.7 per cent in 2017 (GSS, 2018).

Migration flows in Ghana are mostly driven by socio-economic circumstances in areas people are originating from as well as the socio-economic conditions of the destination (Awumbila et al., 2014). The Ghana housing and population censuses conducted in 2000 (GSS 2005) and

2010 (GSS, 2012) showed a positive relationship between socio-economic development and the direction and volume of migration, in the year 2000, the Upper West and Upper East Regions, which are the least in terms of infrastructure and modern services respectively attracted net losses of 219 and 332 per 1000 indigenous people, respectively. On the other hand, Accra which is the most urbanised and developed, attracted a net increase of 310 per 1000 people.

Due to the lack of development and declining agricultural productivity, young people, especially young girls, migrate from the three regions in the north to the urban south in search of better opportunities. In the absence of regular jobs, these young people are compelled to engage in all forms of menial jobs such as hawking on the streets, assisting market women in trading, acting as shop assistants, fetching water for people, and serving as head porters (Kayayei) (Awumbila & Ardayfio-Schandorf, 2008). The word Kayayei or Kaya Yei is a Ghanaian term that refers to a female porter or bearer (Opare, 2003). As mentioned earlier, they usually operate at market centres and lorry stations (Awumbila & Ardayfio-Schandorf, 2008). Head porterage is one of the main forms of transportation of goods in Ghana. All over the country, people carry their products from farms to their houses on their heads (Ojo et al., 2013). Many of the Kayayei settle in migrant communities that have emerged in urban slums, has become a primary destination for internal economic migrants (Awumbila & Ardayfio-Schandorf, 2008). These slums are, however, associated with dense population, dangerous buildings, congested and unhygienic conditions, they also lack basic facilities such as clean water, sanitation, and access to health care services (Awumbila, Manuh, Quartey, Antwi Bosiakoh, & Tagoe 2011; Owusu et al., 2008).

### 2.2.3 Consequences of Migration

Migration may place individuals in situations that impact negatively on their physical and mental health. The movement of migrants exposes them to violent, psychosocial disorders, all forms of physical health and mental health challenges (Mladovsky, 2007; WHO, 2016). Kirmayer et al. (2011) grouped the migrants' trajectory into three components, premigration, migration, and postmigration resettlement. No matter what the prevalent health challenge may be within a period, each of these periods is associated with its own physical and mental health challenges. The premigration period involves disruptions to normal social roles and networks, family separation, and conflicts, violence, and persecution (Corley & Sabri, 2020; Kirmayer et al., 2011). During the migration process, immigrants may experience persistent uncertainty

about their status, a situation that may expose them to violence. These uncertainties could either provoke or aggravate mental health challenges since migrants at this stage may not have the needed psychosocial resources to deal with the stressors (Kirmayer et al., 2011; Lazarus & Folkman, 1984; Sabri & Granger, 2018). Furthermore, exposure to stressors at different levels at destinations could also create physical and mental health challenges for migrants. Issues such as disappointments, demoralisation, and depression can occur due to losses associated with migration. Before migration, migrants may have set goals and aspiration they want to achieve at their destination, if initial hopes and expectations are not realised due to obstacles they face through structural barriers and inequalities, discrimination, and uncertainty of migration status, migrants may experience challenges that may have consequences on their health and wellbeing (Corley & Sabri, 2020; Kirmayer et al., 2011).

There is further evidence of social implications and consequences of migration both to origin and destination countries. The movement within a geographical boundary causes population density to reduce, and birth rate falls (Orrenius & Zavodny, 2012). It has also been found that migrants who return to their areas of origin increase social expectations of their communities to provide better social facilities (De Haas, 2010). A report by Collinson (2010) on the dynamics of migration, health, and poverty in rural South Africa, revealed links between migration and mortality patterns, including a higher mortality among returnee migrants in comparison to permanent residents. Although migration brings about economic gains to the migrants, some of these migrants live and work in poor conditions at the host destination which becomes a hot spot for transmission of diseases (Collinson, 2010). In a different study to determine the influence of internal migration on mental health status in South Africa, Ajaero et al. (2017) reported a significant difference in the mental health status of migrants and non-migrants. Their study indicated that the mental health status of migrants declined significantly after a period. Migration undeniably predisposes migrants to issues of physical and mental health challenges because the migration process involves change in the social and cultural settings for the migrant and this change has implications on physical and mental health outcomes (Meyer, Lasater, & Tol, 2017; Mulcahy & Kollamparambil, 2016).

In broader terms, in Ghana, poverty levels in the cities are lower than in rural areas. There is, however, underestimation of the levels of poverty in the large cities which confront migrants in terms of paying more for food, accommodation, transportation, and water, which are at times free in the rural areas. Migrants, therefore, in trying to escape poverty from the rural areas by

moving to the urban centres, seem rather to transport the poverty from the place of origin to the areas of destination (Awumbila, Owusu, & Teye, 2014).

Migrant workers are supposed to be accorded the same rights as any other worker in society. The ILO's 2002 resolution on decent work and informal economy provided a framework that recognised the diversity of the various sectors of the economy (ILO, 2002). Governments are expected to provide legal protection and recognition to those working in the informal sector. The decent work framework further affirmed the right of workers regardless of them being in either the informal or formal sectors of the economy (ILO, 2013). Many countries across the globe have adopted labour policies and laws to protect workers in their labour forces (Alfers, & Moussié, 2020). This is in respect of the aims and standards of the ILO towards promoting decent work for all through the promotion of social dialogue, through the extended social protection, employment generation, and respect of fundamental principles and rights at work.

Section 24 of the 1992 constitution of Ghana clearly lays down economic rights, including the right to work under acceptable, secure, and healthy conditions and to receive equal pay for equal work (Republic of Ghana, 1992). This law, however, focuses mainly on employees who work for an employer but not on the self-employed. There is no law protecting the rights of the self-employed, including the Kayayei. It is, therefore, important to understand how the dynamics of adjusting to urban life affect the physical and mental health of migrants. Ghana enacted major legal acts such as the Factories, Shops and Offices Act 1970, and the Labour Act of 2003, and integrated various components of former legislation that ratified ILO Conventions of 1919 to protect the health, safety, and welfare of all formal and informal workers (Hodges & Baah, 2006). Ghana, as a developing country, is progressively becoming an industrialised nation and, at the same time, has a rampant growing informal sector (Asumeng, Asamani, Afful, & Agyemang, 2015). This change resulted in exposing a large percentage of the workforce to various health and safety hazards in the workplace (Amponsah-Tawiah & Dartey-Baah, 2011). Despite the danger to which the informal sector workers are exposed. Ghana, as a country has no national policy on occupational health and safety management that could protect the informal sector workers as the ILO convention number 155 (1981) requires (Amponsah-Tawiah, & Dartey-Baah, 2011).

Informal work (employment) is all economic activities or work enragements by individuals, economic entities, or enterprises that in legal practice are not covered or partially covered by formal arrangements (Saha, Kar, & Baskaran, 2004). Informal employment is comprised of

employers, employees, own-account workers, and contributing family workers (Bonnet, Vanek, & Chen, 2019). Informal work is recognised as a major and relevant player in the economy of both developing and developed countries (Hussmanns, 2004). However, the proportion of informal employment is relatively higher in low and middle-income countries (LMICs) (90%) than in developed countries (18%) (OECD/ILO, 2019). Informal employment accounts for about 80 per cent of non-agricultural employment in SSA (ILO, 2002). In Ghana, over 80 per cent of the total working population is working in the informal sector (GSS, 2008). According to the GSS (2008), most informal workers (75%) in rural Ghana engage mainly in agriculture, fishing and fish processing, agro-based processing while those in the urban areas engage more in non-agricultural activities such as petty trading, retailing, food processing, and craftsmanship. The informal sector in Ghana comprises small-scale businesses, including producers, wholesalers, and retailers (Osei-Boateng & Ampratwum, 2011). It is important to note that a substantial number of informal sector workers in Ghana are ensnared in poverty because they do not get enough revenue or have access to productive resources like credit capital that can help them lift themselves up from poverty (Osei-Boateng & Ampratwum, 2011). One advantage of the informal sector is that it has flexible work arrangements, including outsourcing and subcontracting and therefore it does have decent work aspects (Hendrickx, 2019).

According to Magidimisha and Gordon (2015), men have greater access relatively to wage employment both in formal and informal sector compared to women. Gender disparity traditionally persists when it comes to unemployment, even in informal economy in Africa sub-region (Robles, 2012). For instance, in 2007 the general female unemployment rate was 45.3 percent whiles that of their male counterparts was 30.9 percent (Magidimisha & Gordon, 2015). Most women are engaged in informal self-employment or family businesses (Chen, 2011). Although women are equally represented in the informal sectors in comparison to men in most developing countries, their efforts are not properly documented because they mostly engage in secondary activities such as processing agricultural products in rural areas (ILO, 2017; Kraemer-Mbula & Wunsch-Vincent, 2016). Regardless of these omissions, women are still able to play a crucial and important role in the informal economies of SSA (Chen, 2008). Despite the high informal workforce and the important role, they play in Ghanaian economy, the interests of informal workers continue to be neglected in the development of both social and economic policies (Alfers, 2013).

### 2.2.4 Physical Health Challenges

In the preamble to the WHO's Constitution, health is defined as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity" (WHO,1948, p. 100). Health, therefore, embraced a state of wellness and not simply the absence of disease. Health is not just something at the physical level, but also covers mental and social wellbeing. This section of the thesis discusses the physical manifestation of illnesses among migrants.

While the movement of labour has been associated with rapid growth and development in both sending and receiving countries, it also exposes millions of migrants, especially females, to various health risks (Khanal & Shrestha, 2010; Simkhada, Van Teijlingen, Gurung, & Wasti, 2018). Migrants, mostly unskilled, are usually employed in risky jobs and in dangerous and unsanitary conditions that usually impact negatively on their health and well-being (Mucci et al., 2019). Migration does not only connect high transmission of diseases in urban to rural areas, but it also exposes migrants to higher risk due to unsafe working as well as and living conditions (Lurie & Williams, 2014). Several studies have documented the occupational health risks faced by migrants (Fitzgerald, Chen, Qu, & Sheff, 2013; Sadarangani, Lim, & Vasoo, 2017; Simkhada et al., 2018; Yang et al., 2015).

A survey of health challenges among Nepalese female migrant workers in the Middle East and Malaysia by Simkhada et al. (2018) found that 24 per cent of the participants experienced health challenges including severe illness and accidents in their country of destination, while 40 per cent suffered workplace abuse. In a systematic review by Fitzgerald et al. (2013), the authors found that migrant workers constituted a higher proportion of occupational morbidity and mortality recorded cases. In another study by Sadarangani et al. (2017) on infectious diseases and migrant worker health in Singapore, it was reported that migrants accounted for significant proportions of diagnosed malaria (40.4%), enteric fevers (40.4%), hepatitis A (36%) and E (48%) and tuberculosis (48%). The migration process also affects the health of migrants through non-communicable diseases (NCDs) that they are exposed to (Wang, Hendrickson, Brandt, & Nunez-Smith, 2019; WHO, 2019). The main NCDs are diabetes, cardiovascular diseases, chronic lung diseases, and cancer. The WHO (2019) estimated the prevalence of NCDs such as hypertension and diabetes in adults in some low and middle income countries (LMICs) to be as high as 25–35 per cent. For migrants who are already suffering from NCDs, migration could result in inability to access medication, loss of prescriptions, and inability to

access health care services leading to disruption of treatment (Langlois, Haines, Tomson, & Ghaffar, 2016; WHO, 2019).

One of the main challenges of the migration process is the interruption of care due to a lack of access to or the obliteration of health care systems and the fact that migration may disrupt the uninterrupted treatment that is crucial for chronic disease management (Bempong et al., 2019). There is also a degradation of living conditions of migrants, which affects their physical health. Issues such as lack of accommodation, and some basic amenities such as water and regular food supplies need to be faced. The situation is further compounded by the lack of regular income, which adds to physical and psychological strain and has eventual implications for the proper physical health and wellbeing of the migrants (WHO, 2019). Another physical challenge has to do with injuries that occur due to the hazardous nature of work (Adsul, Laad, Howal, & Chaturvedi, 2011). Coupled with this, factors such as secondary infections and poor control of NCDs may hinder the management of serious injuries among migrants (WHO, 2019). Vulnerable migrants, especially women and children, are predisposed to gastrointestinal illnesses and respiratory infections mainly because of deplorable living conditions, and deprivation during migration, and lack of access to appropriate health care (WHO, 2019). Poor hygienic conditions among migrants also usually leads to skin infections (Pavli & Maltezou, 2017; Weathers & Garrison, 2004).

Every country's economic development is linked to the health status of its workforce (Akazili et al., 2018). However, workers in the informal sector tend to fight for job security for survival to the detriment of the need to promote their health and safety as well as quality of work life (Amponsah-Tawiah & Dartey-Baah, 2011). As a result, workers such as the Kayayei and those in illegal mining (Galamsey) are prone to many physical health challenges due to the exhaustive and risky nature of the work they engage in. They work in an insecure, hazardous, unhealthy, and unsafe environment (Akazili et al., 2018). According to Ametepeh (2011), the rates of annual occupational injury of Ghana surpasses 11.5 injuries/1,000 persons in the urban areas and 44.9/1,000 in the rural areas. This precarious health challenge among informal workers is also partially due to lack of well-structured and institutionalised occupational health and safety policy in Ghana (Amponsah-Tawiah & Dartey-Baah, 2011). Over 70 per cent of informal workers like Kayayei in SSA are exposed to a heavy physical workload involving much repetitive lifting and moving of heavy items, exposing them to injuries and musculoskeletal disorders (Akazili et al., 2018). Women, especially market women in Ghana,

are recognised to be major players in the informal sector that drive the consumer economy of the country. According to the International Labour Office (2018) 89.7 per cent of women in Africa work in the informal sector.

In Ghana, most women (91%) are self-employed (Abraham, Ohemeng, & Ohemeng, 2017) and yet, their work conditions and environment, as well as their living environment (slums) for market women are poor and appalling (Amoako, 2019). These unhealthy conditions expose women in the informal workforce to strenuous physical labour, chemicals, noise, communicable agents, and stress that threatens their health and wellbeing (WHO, 2004). The WHO (2018) reiterated that the occupational health hazards of women expose them to chronic diseases such as cancers, accidents, respiratory infections, circulatory diseases, hearing loss, musculoskeletal diseases, and stress-related disorders. Poor income earning by informal workers in Ghana, long waiting time at the health facilities and poor attitudes of the health professionals, bedevils wiliness of most of the informal workers to access health care service. This service is predominantly based on out-of-pocket payment despite the introduction of the national health insurance scheme (NHIS) in 2003 (Alfers, 2013; Blanchet, Fink, & Osei-Akoto, 2012; Kiwanuk et al., 2008). In spite of the health implications of the Kayayei business, there is paucity of empirical literature on the physical health of the Kayayei in the country. The studies conducted on the health of the Kayayei were on migration and health in general, focusing mainly on access to health care and health care seeking behaviour (Lattof, 2017; Lattof, Coast, & Leone, 2018; Shamsu-Deen & Adadow 2019). This study, therefore, focussed on the specific physical and mental health challenges of the Kayayei.

### 2.2.5 Mental Health Challenges among Migrants

The WHO 2004 summary report on promoting mental health: concepts, emerging evidence, practice, defines mental health as a “state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community” (WHO, 2004, p.10). The joint release by the World Health Organisation, united for global mental health, and world federation for mental health during the World Mental Health Celebration in 2020 stated that close to one billion people suffer from mental health disorders leading to ill health and disability, yet a few people receive treatment for mental health challenges (WHO, 2020). This revelation is an indication that mental health is a global health concern needing global attention. The WHO’s global estimate of common mental health conditions in 2017 identified common

types of mental disorders as depressive and anxiety disorders (WHO, 2017). According to the publication, people suffering from depressive disorder may experience sadness, loss of interest, feelings of guilt or low self-worth, disturbed sleep, among others. The report further revealed that depression is one of the most common psychiatric disorders in the world, affecting more than 300 million people worldwide. Anxiety disorders on the other hand may cause feelings of anxiety and fear with its associated symptoms ranging from mild to severe. It may occur without an identifiable triggering stimulus and affects about 11 per cent of the general population (American Psychiatric Association, 2018; WHO, 2017). Another mental health concern is stress which is defined by Lazarus and Folkman (1984, p. 19), as "a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being".

There is ongoing theoretical debate on the development of mental health challenges due to international migration, social and environmental factors such as traumatic events, daily stressors, adversity, and chronic strain as having adverse impacts on mental health (Bhugra, 2004; Bhugra & Becker, 2005; Maggi et al., 2010). On the other hand, studies on the impact of internal migration on mental health have produced conflicting and sometimes contradictory results (Ajaero et al., 2017; Lin et al., 2011; Lu, 2012; Sudhinaraset, Mmari, Go, & Blum, 2012; Switek, 2012). For instance, Switek (2012) found that internal migration is accompanied by an increase in life satisfaction due to increase in income levels. In a related study in China, migrant workers reported a lower prevalence of depression as compared to non-migrant workers. It must, however, be noted that in the above studies, the migrants were gainfully employed which might have accounted for the increment in life satisfaction. In another study in Indonesia, by contrast, the results show that migrants tended to have mental health challenges such as depression (Lu, 2010). Notwithstanding these contradictions in the literature, there is no doubt that migrants are exposed to different forms of mental health challenges. In the following section, the literature on the risk factors associated with mental health challenges among migrants is discussed.

#### 2.2.5.1 Socio-Cultural and Economic Risk Factors

One of the main determinates of the mental health of migrants is the ability to adapt to the new environment. As Lin et al. (2011) argued, there is an increased risk to mental health challenges as migrants face new lifestyles and need to adjust to the new socio-economic as well as socio-cultural environments. A study by Simich, Hamilton, and Baya (2006) on mental distress,

financial hardship, and expectations of life in Canada among Sudanese newcomers revealed that financial hardship is associated with psychological distress among the migrants. The study further reported that respondents who worry about the lack of money were more likely to be psychologically distressed than those who did not bother. Mental health challenges have also been associated with the disruption of family life and the loss of social support. Migration, therefore, creates disruption of social ties and reconstruction of other social networks, which is often compounded by difficult life circumstances and intensified stress in the migration and adjustment process, leading to decline in mental health (Kirmayer et al., 2011; Lu, 2010). Social support is vital in promoting positive mental health outcomes through healthy behaviour. It is especially useful if trusted family members and friends are available to provide emotional support, companionship, daily needs, and material support (Lu, 2010). In a study by Dai et al. (2016), low social support was significantly associated with post-traumatic stress disorders (PTSD). Dai et al. (2016) further indicated that the availability of social support lessens the severity of psychological conditions such as (PTSD).

According to Wang, Stanton, and Fang (2010), discrimination and perceived social inequity is associated with adverse mental health outcomes among migrants. Human migration has always been a complicated and stressful experience for the individuals involved, impacting negatively on both their physical and mental health (Corley & Sabri, 2020; Kirmayer et al., 2011; Wang et al., 2010). This situation may be further aggravated by the actual or perceived discrimination and stigmatisation of migrants. Migrants may be victimised due to lower socio-economic status and language barriers which are likely to heighten incidence of psychological distress, anxiety, and depression (Wang et al., 2010; Wilkes & Wu, 2019). The academic literature suggests that migrants do suffer from mental health challenges since people from different cultures and social groups behave differently when they move to a different environment. Migrants are often stigmatised because they are perceived by the host communities as different, which may lead to their devaluation by the host communities (Li et al., 2007; Link & Phelan, 2006; Wang et al., 2010). Other studies show that the actual or perceived unfair treatment by migrants has a considerable impact on their mental health. In a study by Lin et al. (2011), a negative relationship between health status and perceived social inequity and higher discrimination is associated with poorer health. The study also reported a significant relationship between perceived social inequity and mental health challenges.

Migration is often not a simple move from one location to another. It usually involves transiting different locations, searching for suitable opportunities before arriving at a final destination

(IOM, 2018). Studies have also found a relationship between economic hardships of migrants and physical and mental health challenges. There are often negative attitudes towards migrants and other marginalised groups in society which may contribute to the course and outcome of mental illness (Evans-Lacko, Knapp, McCrone, Thornicroft, & Mojtabai, 2013). In a study by Kiely, Leach, Olesen, and Butterworth (2015) on how financial hardship is associated with the onset of mental health challenges over time, the authors found that cash flow problems increased the risk of mental health challenges.

#### 2.2.5.2 Migration Related Variables

Migration is linked to increasing risk of mental health challenges globally (Li, Stanton, Fang, & Lin 2006; WHO, 2016). The increase in the risk has been attributed to migration-related variables such as high morbidity, increased substance abuse, sexually risky behaviour, and illicit drug abuse among other factors. In a study of rural to urban migrants in China by Li et al. (2006), they found that increased mobility was significantly associated with substandard living conditions, worsened employment conditions, suboptimal health status, low health-seeking behaviour, higher numbers of depressive symptoms, and decreased life satisfaction. Another study conducted among 290 Syrian agricultural migrants in Lebanon by Habib et al. (2016) showed a positive relationship between poor housing and multi-morbidity. Their study further indicated that 20 per cent of the respondents had acute chronic illness, 15 per cent had two health problems, while 13 per cent reported three or more. In addition to the high morbidity among migrants, other studies have also linked migration to an increase in risky sexual behaviour and substance abuse. A cross-sectional study among 408 Polish migrants in the United Kingdom by Ganczak, Czubińska, Korzeń, and Szych (2017) reported that 56.9 per cent of the women had unprotected sex in the United Kingdom. The same study found that more respondents engaged in sexual contact after the use of alcohol in the host country more so than in their home country (10.0% vs. 2.2%; $p < 0.001$). The cultural and psychological changes that follow migration can be physically and mentally challenging (Buchanan & Smokowski, 2009; Horyniak, Melo, Farrell, Ojeda, & Strathdee, 2016). Buchanan and Smokowski further surmise that migrants might use drugs and other substances to conform to the norms of the host society and because migrants usually experience social and economic inequality, discrimination, and marginalisation that are all contributing factors to stress. This behaviour may in turn lead to substance abuse (Capps & Newland, 2015; Fozdar & Hartley, 2013; Viruell-Fuentes, Miranda, & Abdulrahim, 2012). It is widely accepted that issues of social and economic inequalities are implicated in the health outcome of various societies (Williams, Priest, & Anderson, 2016). A

study by Borges et al. (2012) among 3432 Mexican migrants in the USA showed that migrants who migrated at the age of 13 and older were more likely to use alcohol when offered. They also had more opportunities to use drugs and were more likely to use drugs when having the opportunity to do so in comparison with the Mexicans in their home country.

#### 2.2.5.3 Gender Differences and Mental Health

Gender differences in mental health has proliferated as a topic in academic research in recent years (Van de Velde, Bracke, & Levecque, 2010; Van de Velde, Huijts, Bracke, & Bambra, 2013). Studies have identified gender-specific risk factors associated with mental health outcomes. A study by Van de Velde et al. (2010), for instance, found a higher prevalence of depression among women than men. In a similar study, Jarallah & Baxter (2019) also found women reporting higher psychological distress than men. Furthermore, various studies on the impact of migration on mental health have indicated that after the initial health advantage of these rural-urban migrants, the migrants become vulnerable to multiple sources of stress, resulting in lower levels of mental health status (Chen, Davis, Davis, Pan, & Daraiseh, 2011; Liang, Mays, & Hwang, 2017; Wong, He, Leung, Lau, & Chang, 2008). Various research studies have attributed the gender differences in mental health challenges to an interplay of biological, social, and psychological factors (Hopcroft & Bradley, 2007; Kuehner, 2003). Venerable groups such as females, the widowed, and people with poor physical health are more likely to exhibit poorer mental health outcomes. Hopcroft & Bradley (2007) also found that younger women in countries with gender inequity have a higher prevalence of mental health problems than men. Migrant women especially play many roles in the workplace if they are employed. These women are also responsible for taking care of their own homes, thus putting so much pressure on them, leading to mental health challenges (Kirmayer et al., 2011).

Biological factors have also been found to play a role in gender differences in depression. Scholars such as Cairney and Wade (2002) and Mirowsky (1996), used evolutionary theory to explain gender differences in depression. The theory indicated that being male is inversely related to the feelings of sadness and depression, females on the other hand are more prone to depression and sadness.

There are gender differences in education attainment between males and females especially in sub-Saharan Africa where parents in traditional societies tend to favour sending boys to school rather than girls (Dube, 2015). Studies have however found that education is positively associated with better mental health status in most countries studied (Niemeyer, Bieda,

Michalak, Schneider, & Margraf, 2019; von dem Knesebeck, Pattyn, & Bracke, 2011). A study by von dem Knesebeck et al. (2011) covering 22 European countries concerning education and depressive symptoms found that individuals with lower education have higher risk of experiencing symptoms of depression. In another study, Crespo, López-Noval, and Mira (2013) showed that an extra year of education decreases the probability of depression by 6.5 percentage points. These findings highlight the importance of education in tackling issues of mental health challenges. There is therefore the need to develop interventions targeting migrant workers. These interventions are needed to target the risk factors of migration including economic hardships, physical harm, poor living conditions, social isolation, and poor living conditions (WHO, 2018). Despite the existence of risk factors associated with internal migration, the review of academic literature showed that most interventions have targeted asylum seekers and refugees (Craig, 2015; Giacco & Priebe, 2018; Meffert et al., 2014; Rahman et al., 2016; Stenmark, Catani, Neuner, Elbert, & Holen, 2013; Weinstein, Khabbaz, & Legate, 2016). Most of these interventions have focused on education, vocational training reducing social isolation with the aim of promoting social integration and better mental health outcomes.

In Ghana, there has not been any known comprehensive intervention programme that targets the psychosocial needs of vulnerable groups in society such as the Kayayei. Due to this, some organisations such as the IOM in 2016 provided 200 solar lanterns to the Kayayei association to help protect them against gender-based violence, sexual harm, theft, exploitation, and abuse (IOM, 2016). Furthermore, to make health care accessible to the Kayayei, the Pamela Bridgewater Project, a non-governmental organisation that supports Kayayei and their children, in collaboration with the National Health Insurance Scheme (NHIS), enrolled 200 Kayayei in Accra (Daily Graphic, 2016*)*. These interventions are, however, not sustainable in addressing the physical and mental health challenges of the Kayayei. There is, therefore, the urgent need to develop a compressive intervention programme targeting the needs of Kayayei and other vulnerable groups holistically, particularly the physical and mental health issues.

#### 2.2.6 Protective Factors /Coping Strategies

The migration process alone creates lots of stress for migrants notwithstanding issues such as isolation, lack of money, lack of accommodation and other socio-economic circumstances that they might find difficult in managing (Nyarko & Tahiru, 2018). Even though individuals go through these circumstances, the impact on their mental health differs due to the different

appraisal of the situation. Lazarus and Folkman (1984, p. 141), defined coping as "constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person." Lazarus and Folkman identified two strategies of coping including emotional focus coping which is the ability to control emotional response to stress, and problem focused coping, that is reducing the demand of the situation or increasing the resources handling it. Lazarus (1993) developed a model of stress and of ways individuals cope with stressful situations. He constructed two main approaches to coping. The first approach emphasises style and sees coping as a personality characteristic, coping is seen as a defence mechanism which deals with any threat to psychological integrity. The second way of coping emphasises a process, which is the effort to manage stress that changes over time and is shaped through the ability to adapt to the context in which it is generated. This means that coping changes over time and following the situational context in which it occurs. There are differences among individuals in how they deal with stressors of life.

*Religion:* According to Phinney and Haas (2003), coping mechanisms vary greatly in accordance with the nature of challenges and diversity of context. For instance, in a study among Philippine migrant workers in Hong Kong, by Nakonz, and Shik (2009), religion was found to be the main source of coping among migrants. The study further stated that many migrants had the belief that ''whatever the tragedy was in their lives, it was a plan of God and not a human being" (Nakonz & Shik 2009, p. 30), The study further stated that this belief system which represents an external locus of control, gives spiritual significance to events which makes it easier for them to be accepted by individuals. In a study to examine the relationships of religion, health status, and socioeconomic status to the quality of life of individuals who are HIV positive, Flannelly and Inouye (2001) found that religious affiliation was positively associated with quality of life. In another study, Ross (1990) examined the relationship between religion and psychological distress among 401 community respondents and showed that individuals with religious beliefs had lower levels of distress compared to individuals with weak belief or to those who belonged to their religion out of indifference rather than commitment. This finding is an indication that it is not enough just to know if an individual is religious or not, but to understand how that individual makes use of that religion will determine whether it will be beneficial or not.

*Social Support*: Social support plays an important role in enabling migrants to settle in their new environment. Scholars have identified three types of social support including emotional support (feeling of belonging, security, love, and ability to trust others), informational support (provision feedback, advice, and guidance), and instrumental support (provision of goods and materials, as well as provision of services) (Taylor, 2006; Wills & Fegan, 2001). To mitigate the migration challenges, internal migrants rely on their social networks to provide initial accommodation and assistance in finding a job. Studies show that these networks are usually made through place of origin or kin relations. New arrivals end up living and working in areas with people of the same origin or ethnicity (Awumbila et al., 2014). This collaborative network of friends and family will be there to provide the needed assistance in difficult times, and this can help to improve the health and wellbeing of the migrant. The support migrants receive from family and friends is linked to assisting them meet immediate needs that will enable them to settle, it also allows migrants to participate in social activities which contribute to better mental health outcomes (Heaney & Israel, 2008).

Though migrants receive interpersonal support from friends and family, this support is usually not sufficient to meet their needs (Neufeld, Harrison, Stewart, Hughes, & Spitzer, 2002; Wen & Hanley, 2016). Due to this, in Ghana for instance, in a bid to create a social support system for internal migrants in the city of Accra, the two main political parties have, over the years, adopted some positions. Kpessa-Whyte (2017) argued that the New Patriotic Party (NPP), for instance, in the 2017 national budget statement, ordered that market tolls imposed on Kayayei by some District Assemblies be abolished to make their lives easier. He further claims that the NPP regards Kayayei as free citizens who choose to pursue a career in head porterage as an economic enterprise. They know their interest and implications of the choices they make and as a result the abolishment of these tolls will ensure Kayayei engage in their choice of occupation without any taxation barriers. However, Ziblim (2013) recognising the need to empower Kayayei to reduce the need to engage in head porterage for survival, recommended that government through the Livelihood Empowerment and Social Development Programmes (LESDEP) and the Ministry of Women and Children Affairs (MOWAC) institute a programme targeting the young girls for vocational training. This he noted will equip the Kayayei with employable skills that will enable them to become self-employed in their home regions. This view was also argued by Kpessa-Whyte (2017) to be the position of the National Democratic Congress, which used a policy option of skills training and entrepreneurial support by unlocking the human potential of the Kayayei.

*Resilience:* when migrants face challenges during the migration process, they are more likely to cope if their resilience levels are high. Resilience is the ability to withstand a threatening and challenging situation successfully, to recover from a situation of extreme distress and/or trauma or even to prosper in the mist of adversity (Southwick, Bonanno, Masten, Panter-Brick, & Yehuda, 2014). It is the psychological quality that allows people who are knocked down by the adversities of life to bounce back and to prosper. Luthans (2002), defined resilience as "the capacity to rebound or bounce back from adversity, conflict, failure or even positive events, progress, and increased responsibility" (Luthans, 2002, p. 702). The individual's ability to bounce back from stressful events determines their health outcome (Smith, Tooley, Christopher, & Kay, 2010). In the face of difficulty, resilience is important to basic human survival, and it helps individuals adjust and establish a new life in their new environment (Kuo, 2014).

In an integrated review on the resilience of African Migrants, Babatunde-Sowole, Power, Jackson, Davidson, and DiGiacomo (2016) has established that migrants use personal values and skills to maintain stability to achieve positive outcomes during migration and settlements. For instance, in an earlier qualitative study by Schweitzer, Greenslade and Kagee (2007) on coping strategies of refugees from Sudan, they found that apart from social support and religious beliefs, the refugees also used personal qualities such as being strong and a resolution to fight for what they believe to be right helped them cope with the challenges faced. Other studies also found the use of cognitive resilience among migrants as a coping strategy. A study by Khawaja, White, Schweitzer, and Greenslade (2008), for instance, found that migrants used cognitive techniques such as reframing the situation and relying on their inner resources they focused on their future wishes and aspirations to cope with the present situation. Drawing on their psychological capital which includes optimism, hope, resilience and self-efficacy, migrant workers develop self-confidence, to take on the challenges they encounter and put in the necessary effort to succeed. They become optimistic about the future, and this empowers them to persevere towards achieving their goals. They are, therefore, able to remain resolute during adversity and to bounce back to attain success at the end (Luthans, Youssef, & Avolio, 2007).

The use of social comparison determines the ability of individuals to cope with their circumstances. The Theory of Social Comparison is proposed by Festinger (1954) to illustrate the inner drive of people to assess themselves in comparison to others. Studies show that individuals who use upward comparison are more likely to have lower self-esteem and are less

likely to be able to cope with situations (Wang, Wang, Gaskin, & Hawk, 2017) while those who compare downwards are more likely to cope well. A study by Schweitzer et al. (2007) found that migrants rely heavily on downward comparison with others who are less able than themselves to cope with their challenges. In realising that in spite of the circumstances they find themselves, they are still better than others, they will be able to cope better with the stresses of migration.

### 2.3 Theoretical Perspectives of the Study

This section of the study discusses the theoretical framework adopted for the study. Theories reviewed in this doctoral study are the bio-ecological, social isolation, and goal striving stress theory. The study is grounded on the broad bioecological framework of Bronfenbrenner and Morris (2006). This framework is deemed useful for understanding the factors that influence internal migration and the physical and mental health of Kayayei and is used as an interpretative guide. The framework explains the dynamic interactive relationship between a person and the processes that occur within a period. This model explains the multiple levels of influence that interact with each other across different systems (Bronfenbrenner, 1979, 1986, 1995) i.e., the microsystem, mesosystem, exosystem, macrosystem, and chronosystem. The interaction of these systems may have an impact on the physical and mental health of the Kayayei. To understand the physical and mental health challenges of Kayayei, the model proposes that we need to understand the different levels of influence and their interactions as outlined below:

The theory of social isolation examines the absence of social support and migrants' inability to cope with their circumstances due to systemic discrimination and isolation (Gibson, 2001; Barrett & Mosca, 2013; Bhugra, & Becker, 2005). The social isolation theory, just like the ecological theory, emphasises the importance of multiple external influences on the individual to provide social support to improve health and well-being. The Goal striving theory, other hand, focuses on the individual's aspirations. This theory links individual-level psychological realities with social realities. The theory explains the psychological consequences of differences in aspirations and achievements. This theory is also useful in understanding the physical and mental health of Kayayei as their aspirations in moving to Accra may be different from the realities which might result in physical and mental health challenges. All these theories indicate that the physical and mental health of the individual is based on an interplay between personal, situational, and environmental factors.

In this study, all the theoretical understandings have been reviewed to present a holistic understanding of how the social and developmental structures influence the decisions of Kayayei and their health challenges. These include the physical and mental health challenges of Kayayei. The influences include influence at the personal level such as goals, coping strategies, and resilience. Interpersonal level influences include family and friends, and the socio-environmental influences include culture, religion, and policies.

### 2.3.1 Bio-Ecological Model

Urie Bronfenbrenner in 1979, proposed a model for human development (the ecological model) in which an individual is impacted by a nested system of interactions (Hoffman & Kruczek, 2011). The set of nested systems entail personal factors, process factors, contexts, and time, this are used to integrated system of development for conceptualisation (Bronfenbrenner, 1994). Personal factors include the temperament, emotional or behavioural characteristics of individuals, which in this study is the Kayayei. In contrast, process factors refer to the dynamic interaction between the Kayayei and family, peers, and within the broader community which is referred to as the context by Bronfenbrenner (Bronfenbrenner, 1994).

Bronfenbrenner later modified the theory and named it Bio-Ecological Model. The model proposes that a person's development and behaviour is influenced by factors in his/her biology, immediate environment, and the broader community (Rosa & Tudge, 2013), which lay emphasis on the synergy of human development (Merçon-Vargas, Lima, Rosa, & Tudge, 2020). This modification further emphasises that the environmental context in which a person is raised influences his/her developmental outcomes, including their physical and mental health status. According to Bronfenbrenner (1994), there are different aspects of the environment that influences human development, these are microsystem, mesosystem, exosystem, macrosystem, and chronosystem. The Bioecological model was developed to de-emphasise the context and place where individuals are raised and rather it highlights the developmental context of the individual. The Bio-Ecological model highlights the importance of understanding bidirectional influences of the environmental context and the development of the individual. Bronfenbrenner and Morris maintain that both the individual and context change over time and these changes are crucial in the understanding how the different systems impact the individual in his or her development (Bronfenbrenner & Morris2006; Christensen, 2016). The bedrock of this model is Process-Person-Context-Time (PPCT) (Bronfenbrenner & Morris, 2006). To better understand the effect of migration on the physical and mental health of the Kayayei, the

bioecological theory gives an insight into the various ways in which the cumulative effect of the Kayayei business affects physical and mental health. Based on this theory, the physical and mental health of the Kayayei is the outcome of a process of reciprocal interaction with the event (time), the characteristics of the Kayayei, and the environment.

#### 2.3.1.1 Process

Bronfenbrenner and Morris further explained human development as a process. This model conceptualised the *process,* which is an interaction between an organism and the environment operating over time (Bronfenbrenner & Morris, 2006). They described the '*process*' as that which could explain the link between an aspect of the context or some aspect of the individual and an outcome of interest. Proximal processes are the primary mechanisms through development, which are the enduring forms of interaction with the environment (Hoffman & Kruczek, 2011; Merçon-Vargas et al., 2020; Rosa & Tudge, 2013). Proximal processes feature two propositions that define the properties of the bioecological theory. In the first proposition, the theory states that "Human development takes place through processes of progressively more complex reciprocal interaction between an active, evolving biopsychological human organism and the persons, objects, and symbols in its immediate external environment. To be effective, the interaction must occur on a fairly regular basis over extended periods of time. Such enduring forms of interaction in the immediate environment are referred to as proximal processes" (Bronfenbrenner & Morris, 1998, p. 996*).* These are the activities and interactions that individuals are engage in the developmental process which must occur over a sustained period of time. The nature of the proximal processes may vary based on the features of the individual and of the context (Bronfenbrenner & Morris, 2006, 1998).

In the second proposition, Bronfenbrenner and Morris identified four sources of dynamic forces that affect the nature of developmental outcomes (Bronfenbrenner & Morris, 2006). The proposition identifies the four sources of these dynamic forces (Bronfenbrenner & Morries, 2006, p. 798), stated as "the form, power, content, and direction of the proximal processes effecting development vary systematically as a joint function of the characteristics of the developing person, the environment—both immediate and more remote— in which the processes are taking place, the nature of the developmental outcomes under consideration, and the social continuities and changes occurring over time through the life course and the historical period during which the person has lived".

Based on the above proximal processes, the physical and mental health outcomes of the Kayayei is based on the outcome of the complex reciprocal interaction between the developing individual environment around her. For the physical and mental health of the individual to be impacted by these complex proximal processes, the interaction must happen on a regular basis. This implies that, among the Kayayei, the positive or negative physical and mental health outcomes is dependent on the variations in the proximal processes that result from individual characteristics, the environment, nature of the development outcome, and events in time (maltreatment, lack of accommodation).

#### 2.3.1.2 Person

Bronfenbrenner emphasised the importance of personal characteristics of the individual that are viewed prominently in social situations (Bronfenbrenner, 2005). He emphasised the importance of the biological and genetic aspects of human development. He divided the personal characteristics into three categories, *demand, resources, and forces* characteristics.

**Demand characteristics:** these are the characteristics that Bronfenbrenner referred to as 'personal stimulus' which acts as initial attraction and aids in social interaction. Examples are age, gender, skin colour and physical appearance. These characteristics have the propensity to either attract or repulse social interaction. The demand characteristics can encourage or discourage reactions from the social environment and can foster or disrupt the function of proximal processes (Bronfenbrenner & Morris, 2006). Each of these three characteristics have the likelihood of influencing the ways in which proximal processes operate (Xia, Li, & Tudge, 2020). These characteristics may explain how the gender of the Kayayei who all females are may affect social interaction and may impact on their mental health. Being female makes them vulnerable and exposes them to maltreatment by their patrons exposing them to the risk of mental health distress.

**Resource characteristics: "**experience, knowledge, and skill are required for the effective functioning of proximal processes at a given stage of development" (Bronfenbrenner & Morris, 2006, p. 796). "These are characteristics that relate partly to mental and emotional resources such as past experiences, skills, and intelligence and also to social and material resources" (Tudge, Mokrova, Hatfield, & Karnik, 2009, p. 200). Examples are access to food, education, accommodation. The resources are needed for the efficient functioning of the proximal process at a given stage of the developmental process. However, when some of these resources are defective, they may disrupt the optimal function of the organism. Some examples include

physical handicap, brain damage, and genetic defects. Among the Kayayei, upon their arrival in the capital city in Accra, their social abilities to integrate, their educational background, and necessary skills needed to acquire a decent job are associated with mental health outcomes whiles persistence of physical health challenges may also likely increase mental health challenges.

**Force characteristics:** these are characteristics that have to do with differences in motivation, temperament, persistence, and curiosity that can either sustain or prevent the proximal processes (Bronfenbrenner & Morris, 2006). Bronfenbrenner and Morris (2006, p. 810), referred to these characteristics as ***developmental generative*** and ***developmental destructive***. Developmental destructive characteristics are activities such as "impulsiveness, explosiveness, distractibility, inability to defer gratification, or, in a more extreme form, ready resort to aggression and violence, … difficulties in maintaining control over emotions and behaviour" (2006, p. 810), According to Bronfenbrenner and Morris (2006), it may be difficult for individuals displaying development destructive characteristics to engage in the proximal processes that require increasingly more complex patterns of reciprocal interaction over extended periods of time. On the other hand, developmental generative characteristics includes responsiveness to others, curiosity, ability to engage in productive activities, and the ability to initiate and engage in productive activities individual or in a group and being ready to postpone immediate gratification in order to achieve long term goals. These individuals can accommodate changes and are less vulnerable to mental health challenges. This implies that in the case of the Kayayei, although they may all be exposed the similar circumstances, the force characteristics may determine the extent of psychological challenge that an individual may experience.

#### 2.3.1.3 Context

The context or the environment includes four interrelated systems. According to Bronfenbrenner (1994), these systems conceptualise the environment from the individual's perspective. Bronfenbrenner explained the context as "… as a set of nested structures, each inside the other like a set of Russian dolls. Moving from the innermost level to the outside" (Bronfenbrenner, 1994, p.  39). The context consists of the microsystem, the mesosystem, the exosystem, and the macrosystem.

### *The Microsystem*

The microsystem is defined as "a pattern of activities, roles, and interpersonal relationships experienced by developing persons in a given face-to-face setting with particular physical and material features, and containing other persons with distinctive characteristics of temperament, personality, and systems of belief" (Bronfenbrenner, 1989, p. 227). The settings comprise the family, neighbourhood, and school, among others. At this level, relationships have effect in two directions; the family may have an impact on the individual while at the same time, the individual may also have an impact on the family. In the case of the Kayayei, due to the low socioeconomic background of parents, investments are made in the son's education, neglecting that of the daughters. As a result, most female children from these poor families have no better resort than to stop schooling and become school dropouts.

Besides, some of the female children must escape from outdated cultural practices such as female genital mutilation, forced marriages, and widowhood rites (Yeboah & Appiah Yeboah, 2009). Migration to the big cities, therefore, becomes the best and only survival option for these young women (Awumbila, Manuh, Quartey, Bosiakoh, & Tagoe, 2011). This observation agrees with various studies which have indicated that migration is a strategy for poor families to reduce the poverty burden because earnings from the destination will help improve household income (Awumbila, et al., 2014; Awumbila et. al. 2011; Kwankye & Anarfi, 2011). Families will therefore encourage their young women and girls to migrate to Accra to engage in the business. Furthermore, young women are also influenced by their communities to emulate other peers in the decision to go to Accra. For example, when the young women stay in a neighbourhood where there are conversations about the prospects of Kayayei, these discussions might influence the decision to migrate and be a kayayo (the singular for Kayayei). The actions and inaction of peers and the school environment will also affect the decision to be a Kayayo. After they decide and migrate, they often find themselves in urban slums. They are prone to being abused by their patrons, which can become a contributing factor for physical and mental challenges (Virupaksha, Kumar, & Nirmala, 2014).

### *The Mesosystem*

The mesosystem refers to how the microsystems relate to each other. Examples of these relationships are; the relationship between parents and neighbours, between teachers and parents. This means that the microsystems are being influenced and influence other systems within an individual's cycle (Swart & Bredekamp, 2009). According to Awumbila et al. (2011), huge differences exist in the income and living standards of migrant and non-migrant families.

For instance, neighbours who have children who migrated to the south to engage in the Kayayei business and receive remittance from them may influence other families to send their children to also engage in the Kayayei business. The migration of these women and girls will now be widespread. Most households will begin to appreciate the importance of remittances from the Kayayei thereby encouraging other young women to also migrate (Awumbila et al., 2014). These young women may be at higher risk of developing physical and mental health challenges. This might occur when there is disruption of the micro- and messo systems, such as putting so much pressure on the young women to migrate. At the same time, they are not prepared mentally, thereby creating social disorientation, which can cause mental health issues (Lakhan & Ekúndayò, 2013).

***The Exosystem***

The exosystem includes a specific social system that does not contain the individual and therefore do not play any role in the exosystem, the system can however have an impact on the individual's immediate environment and microsystem by impacting his/her mood. (Lakhan & Ekúndayò, 2013). Individuals do not have control over the system but are affected by it. Parents' workplace-related challenges such as loss of employment have the possibility of disrupting family life, which will, in turn (in the case of the Kayayei) make the girl decide to go out and fend for herself and that of the family (Yeboah & Appiah Yeboah, 2009). In effect, due to the low household income of parents, they do not find it necessary to send their children to school, particularly the girl child, which might make her turn to other sources of employment.

***Macrosystem***

The Macrosystem is the broadest level of influence on the mental health of individuals, which includes global and societal influences (Bronfenbrenner, 1994), the beliefs system, customs, and laws. The effects of these principles defined by the macrosystem influence all the other layers (Paquette & Ryan, 2001). In the northern part of Ghana, cultural practices such as female genital mutilation exist, i.e., the ritual cutting or removal of the clitoris of young girls. Some of these young women, for fear of being subjected to the harmful practice, will migrate to the south to escape the procedure. Many of these young women end up in the Kayayei business (Opare, 2003). These Kayayei are mostly uneducated and are often abused by their patrons leading to psychological distress and other related health concerns (Opare, 2003). Lack of a legal framework or an institutional policy that protects workers in the informal sector exposes

these women to all kinds of abuse. Furthermore, government laws and policies have failed to address the persistent inequalities that exist in the informal sector in Ghana. Coupled with poor infrastructural development and lack of employment opportunities in northern Ghana compels these young women to migrant to the south where infrastructure is most developed in the search for employment opportunities, but due to lack of education, most of them find themselves in the Kayayei business (Asante & Gyimah Boadi, 2004; Opare, 2003).

#### 2.3.1.4 Time

Time is the final element in the PPCT model. In human development, time in which the proximal processes take place plays an important role in the bioecological theory. Bronfenbrenner & Morris (2006) distinguished between three successive levels of time (1) "(1) micro-time: continuity versus discontinuity in ongoing episodes of proximal process (2) *Mesotime:* is the periodicity of these episodes across broader time intervals, such as days and weeks (3) *Macrotime:* focuses on the changing expectations and events in the larger society, both within and across generations as they affect and are affected by, processes and outcomes of human development over the life course" (Bronfenbrenner & Morris, 2006, p. 796). The **chronosystem** consists of the transitions and changes in one's lifespan. This may also include the socio-historical contexts that may influence a person. Even though people do not migrate anymore in search of fertile land or to escape conflicts and slave raids as it was in the colonial era, there is still tribal conflict in the three northern regions that drives people away from their homes, forcing them to migrate to other parts of the country (Ziblim, 2015). For instance, if something negative happened to a family member, it might create psychological stress for the individual and their family. Large numbers of young women and girls from the northern part of Ghana experience challenges including poverty and poor physical and mental health challenges due to inadequate social interaction because of parental stress which is born out of frustration and breakdown in social cohesion.

Based on the bioecological theory, this study focused on the individual level (the inherent qualities processed by the individual and the bioecological resources, including experiences, knowledge, and skills), the immediate environment, and the broader environment considering the interactions among them. The vital component of the process is that to be efficient, the interaction ought to occur frequently over an extended period (Bronfenbrenner & Morris, 2006), and the quality of the interaction is essential for development. A significant strength of the bioecological model is that it highlights the importance of understanding a person's

development from many aspects such as his/her health from the deepest perspective of the individual's broader environmental systems in which he/she is born, lives, and works. However, the model failed to detail the mechanisms for the development of the person and failed to provide the necessary reasons for a person's behaviour (Darling, 2007). Notwithstanding this criticism, the model provides a theoretical framework starting with the individual believing that it is impossible to develop without the influence and willingness of the individual to change (Christensen, 2016).

### 2.3.2 Theory of Social Isolation

The theory of Social Isolation is a theoretical concept proposed by Wilson in 1987 (Tigges, Browne, & Green, 1998; Young, 2003; Wilson, 1998, 2006). The theory of social isolation is explained as loneliness and the absence of a Social Support Network. Many items of empirical literature indicate that migration causes isolation among migrants, due to that fact migrants are trying to adjust to their new environment and might feel personal discomfort such as homesickness, or 'cultural bereavement'(loss of family, language, attitudes, values, social structures and support networks and at times face discrimination and hostile environments) (Barrett & Mosca, 2013; Li, Stanton, Fang, & Lin, 2006; Bhugra & Becker, 2005). Even though this theory has been used mostly in the developed world, in a study by Nyame and Grant (2007), the authors observed that to help mitigate isolation, migrants should be able to identify networks that help reduce the feeling of loneliness and isolation. This theory, therefore, helps to explain the social networks that are available to help mitigate feelings of isolation.

### 2.3.3 Goal Striving Stress Theory

Goal-striving stress is grounded in Hyman's (1942) and Merton's (1957) theory of reference group behaviour which is closely linked to the concept of anticipatory socialisation, this refers to the belief that current behaviour is influenced by situations in which people expect to become involved (Sellers & Neighbors, 2008). Goal-striving stress is a particularly appropriate mechanism for exploring the mental health of Kayayei because it links the psychological realities of individual with a structural perspective of the struggle for attaining socio-economic progress. The concept of goal-striving stress was first applied by Parker and Kleiner (1966) to a psychiatric epidemiologic investigation which they conducted among Black Americans. Goal striving stress was defined as "the distance between aspiration and achievement, weighted by the subjective probability of success and the level of disappointment experienced if goals were not reached" (Sellers & Neighbors, 2008, p. 93).

Parker and Kleiner (1966) adopted the striving scale to measure goal-striving stress. They showed the respondents a diagram of 10 steps, labelling the top "the best possible way and the bottom "the west possible way" (Parker & Kleiner, 1966, p. 57). The respondent will then indicate where they were located presently, which step they would accomplish in the near future, their chances of reaching that step, and the level of disappoint they will fill if they are unable to reach that future step. Parker and Kleiner (1966) further indicated that due to the possibility of opportunities being thwarted, individuals may experience low self-esteem and psychological distress because of high goal-striving. In their findings, Parker and Kleiner (1966) observed that individuals with low socio-economic status had lower goal-striving stress and higher rates of psychologic distress contradicting their initial assumption that the poor would have high goal striving. Also, the findings indicated that individuals with higher socio-economic status exhibited high goal striving stress accompanied by lower levels or symptoms of psychological distress contradicting their assumption. The Goal Striving Stress Theory, therefore, explains that when migrants' aspirations and achievements, weighted by the subjective probability of being successful and the various reasons for which they migrated were not reached as anticipated, they may experience psychological distress. However, there may be other opportunities for migrants to engage in any other economic activities that will help them make ends meet.

The adopted frameworks (Bioecological model, theory of social isolation, and goal striving stress theory) helped to provide a broad framework for this study to understand the physical and mental health challenges of Kayayei and to suggest intervention strategies. The goal striving theory indicating the discrepancies between aspiration and actual achievement may produce stress, which in turn will cause mental health challenges for the migrants (Eaton & Garrison, 1992; Neighbors, Sellers, Zhang, & Jackson 2011). The social isolation theory indicates isolation that cuts a person off from intimate social relations and this may lead to mental and physical health challenges (Thoits, 1983), and the bioecological model indicating a dynamic interactive relationship between a person, contexts, and processes that occur within a period (Bronfenbrenner & Morris, 2006).

From this perspective, there is the need to understand the personal and interpersonal level reasons for the Kayayei to travel from their hometowns to Accra to engage in the Kayayei business in the first place. Secondly, the Kayayei business is also likely to bring changes within the bioecological system which can cause physical and mental health challenges (Asante,

2015). The lived experiences of the Kayayei business can bring changes in beliefs and aspirations of the Kayayei as well as impacting on their physical and mental health. It is therefore necessary to develop guidelines for interventions targeting the empowerment of the Kayayei to take control over their general health and also their well-being and also to advocate for policy changes to ensure the protection of the Kayayei through better access to social and health care services particularly mental health promotion management.

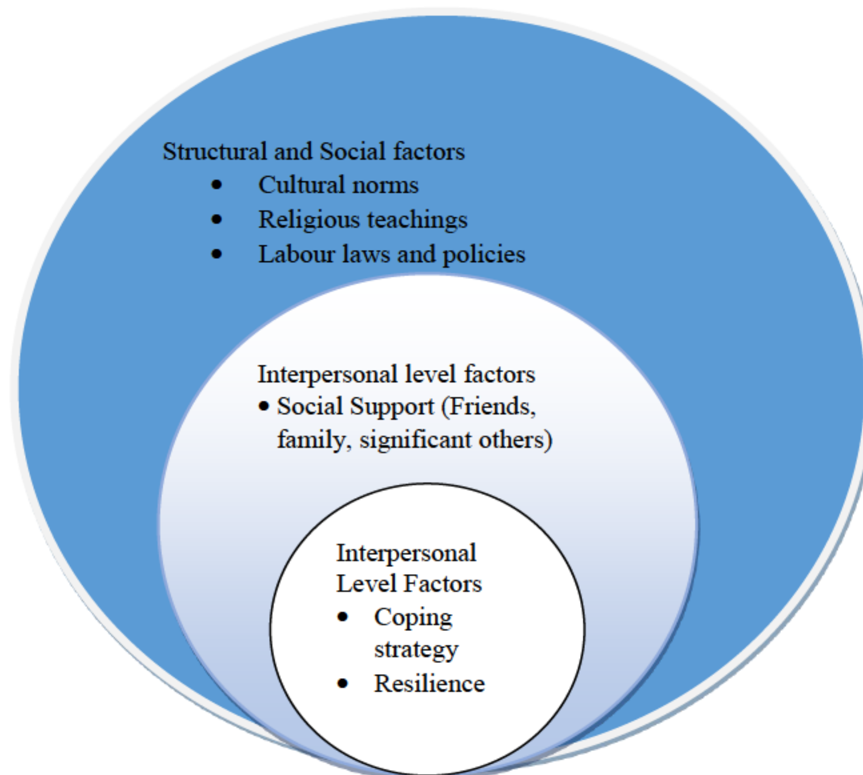


Fig. 1: An adapted bioecological level perspective applied to physical health and mental challenges of Kayayei (*Bronfenbrenner, 1990)*

## 2.4 Intervention Mapping Framework to Develop Guidelines for Health Promotion Interventions.

In health promotion, theories provide essential contributions for practice. It is however not always easy to bridge the gap between theory and practice (Kok, Schaalma, Ruiter, Van Empelen, & Brug, 2004) or between research findings and practice. Health promotion intervention programmes aim however to bridge the gap between theory and empirical evidence on one hand and practice on the other hand. These evidence-based health promotion programmes are designed to bring about the desired changes in the ecological system to improve the health and total wellbeing of individuals. These involve planning, evaluation, use

of social and behavioural theories, and the systematic application of empirical data (Kok et al., 2004).

In developing health promotion guidelines to improve the health and wellbeing of the Kayayei in Ghana, the Intervention Mapping (IM) Framework as proposed by (Bartholomew et al., 2016) was used to ensure a systematic process of development and relevancy for the Kayayei. IM in health promotion is a protocol for theory and evidence-based behaviour change programmes (Bartholomew et al., 2016). IM describes a series of six steps that address the whole process of developing, implementing, and evaluating a health programme (Bartholomew et al., 2016; Bartholomew, Parcel, Kok, & Gottlieb, 2006). Completing these different steps will create an outline which will be used to design, implement, and evaluate an intervention that is based on theoretical and practical foundation (Kok, Peters, & Ruiter, 2017). It should be noted that **only Steps 1, 2 and 3 are relevant for the thesis** as the design, implementation and evaluation of the interventions falls outside the scope of the study. The steps outlined are as follows:

### 2.4.1 Step 1: Needs Assessment

Needs assessment involves assessing the behavioural and environmental determinants of health problems. The determinants include biological, psychological, and social factors that are associated with the behaviour that has an influence on the health behaviour (Bartholomew et al., 2016; Green & Kreuter, 2005). Needs assessments help planners to identify and understand the problem and to "compare the current status to one that is more desirable in terms of quality of life, health, behaviour, and environment. A needs assessment of health problems includes an analysis of the physiological risk factors and behavioural and environmental risks to health, even when the actual health problems constitute a possible future event" (Bartholomew et al., 2016, p. 212). A needs assessment also involves the identification of barriers and facilitators of implementation which includes all those responsible for maintaining evidence-based intervention (Fernandez et al., 2019). This study used an exploratory mixed method approach to explore the physical and mental health challenges of the Kayayei in Ghana as outlined in chapters 4, 5, 6 and 7. Intervention needs to be grounded in empirical evidence, due to this, the findings of the present study are relevant to inform an intervention which could be useful in improving the physical and mental health of the Kayayei.

### 2.4.2 Step 2:  Programme Outcomes and Objectives

IM starts by stating the changes in individuals (behavioural outcomes) and environmental changes (environmental outcomes) with the aim of promoting health and increase general wellbeing of individuals. To achieve this aim, planners of health promotion need to identify actions and tasks to be adopted by the beneficiaries of the programme and the environmental agents in all levels to complete each outcome (Sabater-Hernández et al., 2016).

*Programme outcomes and Objectives*

The programme outcomes and objectives state changes to be made due to the intervention (Bartholomew et al., 2016). This is where "the problem-increasing behaviour and environmental conditions are transformed into problem-reducing behaviour and environmental conditions" (Kok et al., 2011: p. 8514).  The programme outcomes and objectives have been derived from the needs' assessments through the findings of this PhD study in chapters 4, 5,6 & 7. At the individual level, the expected health promotion behaviour will be translated into specific performance objectives based on the guidelines of IM as suggested by Kok et al. (2011). Further, agents at the environmental level who will be responsible for creating the required environmental condition for change will be identified. See chapter 8 for details of the programme outcome and objectives.

### 2.4.3 Step 3: Programme Design

This is the actual design of the programme where strategies are organised into deliverables. This stage converts theories into practice, and methods that will lead to behaviour change are identified.  The formulation of the performance objectives, as well as the change objectives in Step 2, will lead to the identification of appropriate theory-based methods and strategies. Theory based methods are the techniques and processes that should allow project implementers to achieve planned individual and environmental changes (Kok, 2018).  These theory-based methods are techniques and processes that are applied to achieve the intended individual and environmental changes. Theoretical methods intended to facilitate change at an individual level and needed to be applied differently when seeking to effect change at an ecological or environmental level. While the determinants may be the same, the techniques or delivery mode of the theoretical method may differ to achieve the intended change. Theory-based methods also inform the intervention activities of the intervention programme (Kok, 2018). This proposed intervention guideline will therefore be grounded in specific theories useful in promoting health-related behaviours.

### 2.4.4 Step 4: Programme Development/Production

In IM, programme development/production is where the various methods identified in step 3 are organised and produced (Bartholomew et al., 2016). In this step, programme planners design and produce culturally appropriate materials that are appealing in collaboration with other relevant stakeholders (Fernandez et al., 2019). The structure of the programme is refined, materials and messages are also drafted, pretested, and produced. As suggested by Fernandez et al. (2019), programme planners must ensure that theoretical methods are translated into practical applications using the parameters of methods. The development continuous linkages between programme developers and end users should ensure continuous interaction and information exchange which should guarantee the success of the programme (Kok et al., 2018).

### 2.4.5 Step 5: Programme Implementation Plan

Step 5 consists of the implementation plan of the programme. In this regard a proposed draft of the implementation programme is written showing a pilot phase where the programme will be tested using a similar population to show the feasibility and practicability of the proposed intervention. To change peoples' behaviour, programmes that are developed must be implemented correctly (Kok et al., 2011). IM provides a systematic process for the development of implementation strategies, that are evidence-based and are also based on programmes that have been developed and tested (Fernandez et al., 2019). The implementation plan should therefore enable programme implementers to anticipate from the beginning issues concerning programme adoption, implementation, and sustainability (Elsman et al., 2014).

### 2.4.6 Step 6: Evaluation Plan

In step 6, an evaluation plan is generated to consider the impact and process evaluations to measure programme effectiveness. Data collection instruments are developed and aligned to the evaluation aims of the intervention (Bartholomew et al., 2006; Fernandez et al., 2019). In IM, the performance objectives identified in step 2 will serve as the indicators for behavioural change for the individual and environmental agent while the programme objectives will serve as the indicators for changes in the determinants (Kok et al., 2011).

Intervention Mapping as proposed and developed by Bartholomew et al. (2006) has been used in various studies successfully across various domains of health promotion ranging from cervical screening, mammography, diabetes prevention, psychiatric services, and vaccination, among others. In a study by Elsman et al. (2014) pertaining to diabetes prevention, the IM programme promoted the health of participants by sustaining a healthy diet and a physical

activity plan by targeting their knowledge, attitudes, subjective norms, and perceived behavioural control. In another successful IM programme, Highfield et al. (2015), used IM to increase mammography among low-income women. In another IM intervention, Kok et al. (2011), promoted influenza vaccination by developing effective behaviour change interventions. Furthermore, Hesselink et al. (2014), employed IM successfully to change behaviour of patients and their carers by improving hospital discharge and reducing readmissions. In another successful IM intervention, Ammendolia et al. (2016), implemented workplace health promotion by promoting healthy behaviour including regular exercise, proper nutrition, adequate sleep, smoking cessation, socialisation, and work-life balance. In the current study, for the purposes of the development of HP guidelines to improve the health and wellbeing of the Kayayei, only steps 1, 2 and 3 are relevant as operationalised in Chapter eight. IM (Bartholomew, Parcel, Kok, & Gottlieb, 2001) will be used to design a programme with the aim of promoting the mental health and general wellbeing of the Kayayei and other vulnerable groups.

# CHAPTER THREE
# RESEARCH METHODS

## 3.1 Introduction

This chapter presents the research methods that guided the entire study. It starts with the description of the study setting, the justification for the research design, which is a sequential exploratory mixed method design. This entails conducting a qualitative study of the lived experiences of the Kayayei, after which a cross-sectional quantitative study was conducted among the Kayayei. This is followed by a detailed discussion of the methodology of enquiry relating to first the qualitative study followed by the quantitative study in terms of sampling strategy, selection procedure, selection criteria, data collection and procedures inclusive of ethical considerations followed by a description of the analyses of the study and integration of both studies.

## 3.2 Study Setting

Ghana is one of the West African countries with a projected population of about thirty million people (GSS, 2010). This study was conducted in Greater Accra, the capital city of the country. The region occupies an area of about 3.4 square kilometres and has a population of about 4,943,075 people (GSS, 2019). As the capital city of Ghana, Accra houses ministries, departments and agencies, and headquarters of corporate and international as well as financial institutions. The cosmopolitan nature of Accra attracts people from different economic and socio-cultural backgrounds including those from the northern part of the country from where the majority of the Kayayei originate.

The study setting was Agbogbloshie (Figure 2) in Accra. Agbogbloshie is located on the Central Business District of Accra with Ga as its indigenous ethnic group. However, Oteng-Ababio (2012) indicates that majority of the residents and workers within the area migrated from the northern part of Ghana. Agbogbloshie was founded in the late 1970s by migrants, predominantly traders from the rural north seeking job opportunities but they could not afford the rates of accommodation in the capital city (Ahlvin, 2012). Instead, they built sub-standard structures from waste materials and other resources on the available land. The population of Agbogbloshie increased rapidly in 1983 due to the famine that drove many people from the northern region to Accra to escape the hardship (Afenah, 2010). Agbogbloshie population continues to grow to date due to endemic poverty and tribal conflicts, and also due to the low cost of accommodation and its proximity to the city centre. Agbogbloshie has been classified

as one of the largest slums in Ghana due to its lack of decent accommodation, poor sanitation, and inadequate social amenities (Ahlvin, 2012). Pictures 2 and 3 below show maps of the Agbogbloshie market.

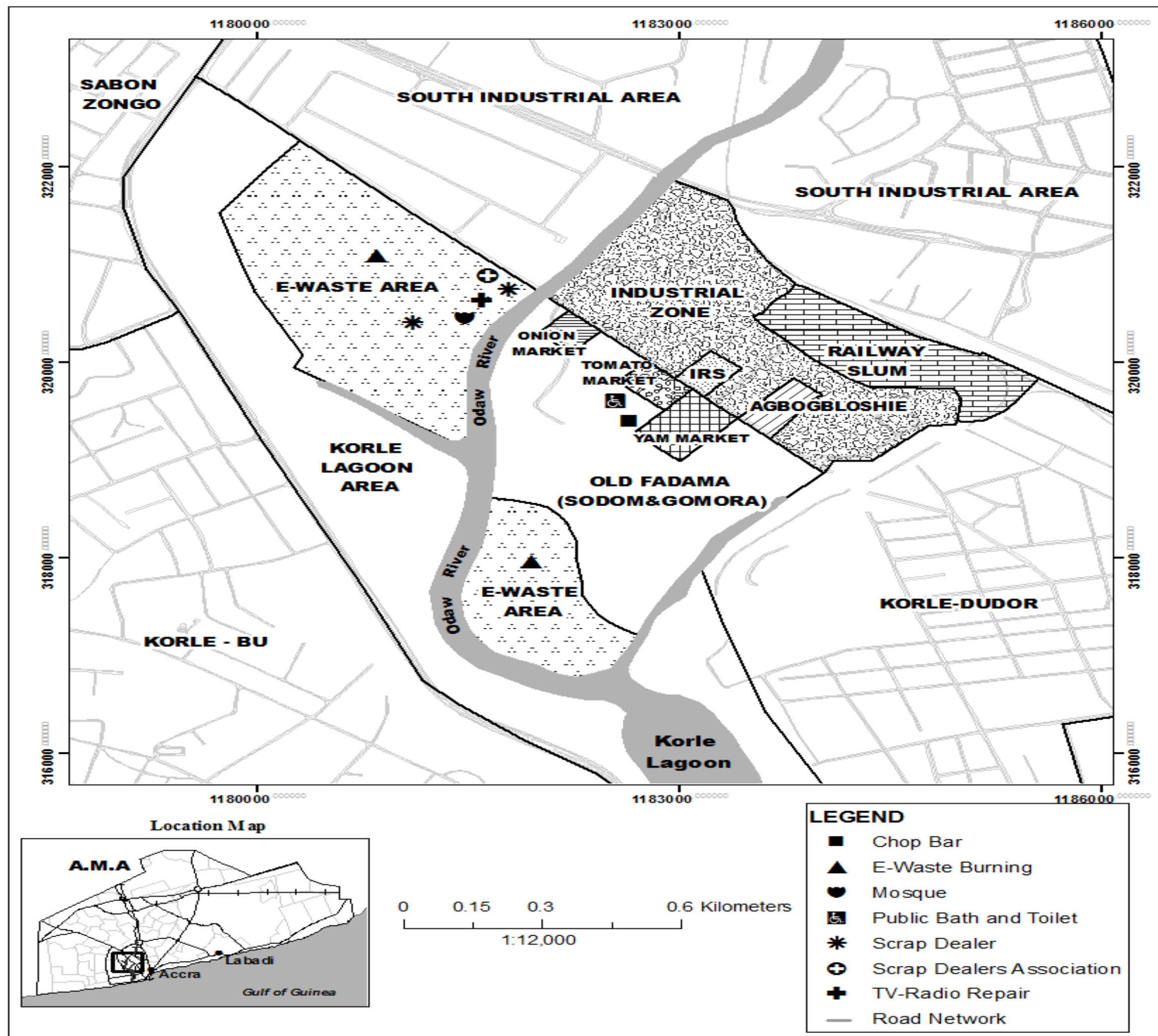


Fig 2 Map of Agbogbloshie market

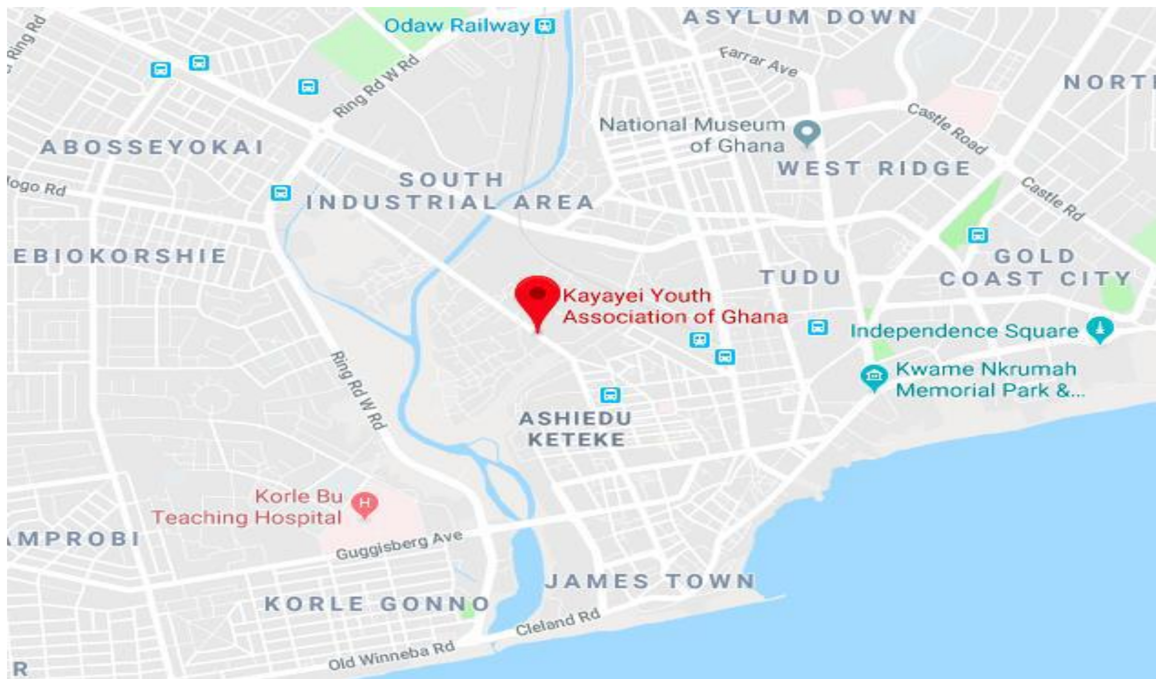

Fig 3: Google Map showing the Kayayei association office.

Figure 4 shows a refuse dump at the Agbogbloshie market. This shows the unsanitary conditions that the Kayayei operate their businesses which has the potential to cause physical health challenges among the Kayayei.

Figure 4: Rubbish dump at Agbogbloshie Market

Picture 5 shows a picture of the Agbogbloshie market. The picture depicts how crowded the market is. This is where the Kayayei mostly operates their businesses. They have to navigate through human and vehicular traffic to search for clients.

*Figure 5: Picture of Agbogbloshie Market*

Figure 6 show the Kayayei carrying headloads of yam from the Yam market at Agbogbloshie to their clients. This picture depicts how heavy the loads are which might cause all kinds of physical pain.

*Figure 6: Pictures of Kayayei carrying pans of Yam.*

Picture 7 depicts some of the Kayayei with babies at their backs carrying headloads to various destinations. These mothers usually carry their babies daily throughout the week and this might

cause physical pain and mental health distress for taking their children through this kind of difficult situation.

*Figure 7: Pictures of Kayayei carrying various types of Headloads.*

### 3.3 Study Permission and Ethical Principles

To conduct a study among the Kayayei, it was required to obtain permission from the Kayayei Association. The chairman of the Kayayei Association was consulted, and written permission was obtained to conduct the study among the members. After obtaining permission from the Association, a Memorandum of Understanding was signed between the Kayayei Association and the researcher for both the interviews and the survey to be conducted. Prior to signing the memorandum, the researcher spelled out the terms and conditions under which the research would be conducted among the Kayayei. The Permission letter and memorandum of understanding are attached as appendix 2 and 3. The Humanities and Social Sciences Research Ethics Committee (2018) of The University of KwaZulu-Natal, College of Humanities, granted approval (Ref: HSS/0404/018D) for the study. The approval document is presented in appendix 1. The anonymity of all the participants (Kayayei and key informants) was protected throughout the study. Participants were invited to participate voluntarily without the use of coercion. The researcher explained to the selected participants the aims of the study and its importance for policy and health promotion interventions. Participants were also taken through the data collection instruments to make sure they understood the questions and were assured of confidentiality, anonymity, and the ability to withdraw from the study at any stage without consequences. Written informed consent was obtained from participants of the study. Regarding the quantitative study, participants were also given informed consent forms to sign after the aims of the study had been explained to them. Participants were also informed that

there were no known risk involved in this type of study. The questionnaires for the cross-sectional surveys were administered during break periods of the Kayayei in order not to interrupt their work. The researcher informed them that their participation was voluntary, and they were able to withdraw from the study at any time. Participants were assured that the knowledge gained from this study will add to the existing body of knowledge regarding the impact of the Kayayei business on mental health in Ghana. It will also provide guidelines for policy development and will also contribute to the development of psychosocial interventions for Kayayei to improve their mental health (Please refer to Appendix 9). Audio recordings from respondents, files created and all the content from the in-depth interviews and focus group discussions have been submitted to the supervisor of the researcher for safe keeping at a secure compartment at the Discipline of Psychology, School of Applied Human Sciences, Howard College Campus, University of KwaZulu-Natal, Durban, South Africa. All electronic copies of the data are safely stored and only available to the researcher and her supervisor to ensure confidentiality. The files from the transcriptions and cross-sectional survey will be kept in the safe compartment for a minimum of five years before being destroyed.

### 3.4 Research Design

The aim of every scientific research is to answer questions and to acquire new knowledge (Marczyk, DeMatteo, & Festinger 2005). Every research is however unique with the methodological approach based on the aims of the specific study. The method gives a clear guideline for gathering, analysing, evaluating, and reporting on the findings of the research (Cozby, 1993; Marczyk et al., 2005). The present study adopted a sequential exploratory mixed method approach which combines both qualitative and quantitative approaches in the study.

#### 3.4.1 Sequential Exploratory Mixed Method

Mixed method has become very popular in social science research and has been defined as a research approach that sees researchers collecting qualitative and quantitative data, analysing, and integrating these studies in a single study inquiry to address their research questions (Teye, 2012). Johnson, Onwuegbuzie and Turner (2007, p. 123) defined mixed methods research as "the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e. g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration". The goal of mixed methods research is to combine qualitative and quantitative research components to strengthen validity of the study,

strengthen the study's conclusion, and therefore contribute to academic literature (Johnson & Christensen 2017; Schoonenboom & Johnson, 2017; Onwuegbuzie & Johnson 2006). Mixed methods research has been classified into four major types. These are triangulation design, embedded design, explanatory design, and exploratory design. According to Morse (1991, p. 122), "the purpose of the triangulation design is "to obtain different but complementary data on the same topic". Embedded design on the other hand is a mixed method design whereby one data set is used to support another data type by playing a secondary role to the main data (Creswell, Plano Clark, Gutmann, & Hanson, 2003). Cresswell et al. (2003) described an explanatory design as a two-phase design which starts by collecting and analysing quantitative data and subsequent collecting and analysis qualitative date. According to Berman (2017, p. 1), "an exploratory sequential mixed methods design is characterised by an initial qualitative phase of data collection and analysis, followed by a phase of quantitative data collection and analysis, with a final phase of integration or linking of data from the two separate strands of data". Qualitative and quantitative data can be collected concurrently or sequentially based on the priority and they are then integrated into the research process (Creswell, 2013).

The present study adopted a sequential exploratory mixed method design which is usually adopted when relatively little or nothing is known about the study phenomenon (Gray, 2014). This sequential exploratory mixed method design was appropriate as limited research exists on the physical and mental health challenges of the Kayayei. Using both qualitative and quantitative data should provide a better understanding of the issues under investigation by allowing researchers to test theoretical models and to modify them based on the feedback received from participant (Hanson et al., 2005). The qualitative data was collected and analysed first to gain a better understanding of the physical and mental health of the Kayayei in Ghana. This was followed by a quantitative study to augment the qualitative data. The sequential exploratory mixed methods design was, therefore, appropriate in exploring the lived experiences of the Kayayei, ascertaining the prevalence of physical and mental health challenges among the Kayayei, investigating the risk factors for mental health challenges among the Kayayei, and examining the coping strategies that the Kayayei adopt to cope with stressors of daily living. This study therefore combined elements of both qualitative and quantitative approaches to elicit both depth and breadth as suggested by (Johnson et al., 2007). The diagram below depicts steps taken in the study.

**Phase 1: Qualitative Study**

*Step 1:* Conducted a qualitative pilot study

*Step 2:* conducted a qualitative study on the lived experiences of the Kayayei

*Step 3:* Used IPA to analyse data and discuss findings

**Phase 2: Quantitative Study**

*Step 4:* Develop research instrument based on literature and identified aspects and constructs in

*Step 5:* Conducted a pilot study among the Kayayei

*Step 6:* Conducted a cross-sectional survey among 352 Kayayei

*Step 7:* Analysed data using descriptive and inferential statistics, and discussed findings

*Step 8:* Integration of findings from both studies

### 3.5 Phase 1: Qualitative Study

Qualitative methods are used to answer questions about the experiences, meanings, and perceptions, from participant's point of view (Hammarberg et al., 2016). The method allows for exploring previously unknown procedures and provides explanations of why and how certain phenomena occur and the scope of their effect (Pasick et al., 2009). In this study, a phenomenological approach was used to gain an in-depth understanding of the challenges the Kayayei go through, and the coping strategies adopted to face the challenges. The aim of adopting this approach is to describe as accurately as possible the daily lived experiences of the Kayayei without any predetermined framework as suggested by (Groenewald, 2004). The findings from the qualitative study therefore helped in selecting and adopting the appropriate instruments for the quantitative study.

#### 3.5.1 Research Paradigm and Design

An interpretative paradigm was considered appropriate for this phase of the study. According to Smith and Osborn (2015, p. 41), Interpretative Phenomenological Analysis (IPA) is a "type of qualitative approach that aims to provide for detailed examination of personal lived experience". It does not generate accounts based on pre-existing theoretical preconceptions that have already be prescribed, but rather the accounts are generated based on the lived experiences in their own terms. According to Neuman (2011), this approach allows individuals to create meanings in their own worlds. These meanings are created through interaction with other people within their environment. Although the IPA focuses on how individuals make meanings of their word, the research is dynamic with the researcher taking an active role in the process where the researcher tries to get close to participants' personal world (Smith & Osborn, 2007). This allows the researcher to make sense of participants comments through a process of interpretative activity (Smith & Osborn, 2007). This study adopted a qualitative research design with IPA approach which enabled the researcher to explore in detail how participants make meaning of their personal and social worlds (Smith & Shinebourne 2012). The interpretative phenomenological analytic approach to qualitative research was deemed to be relevant for the current study as it allowed the researcher to examine the Kayayei daily lived experiences from their personal perceptions by taking an active role in the Kayayei personal world as suggested by Smith and Shinebourne (2012). By using IPA, the researcher was able to ask participants critical questions about their daily lived experiences such as "what does your typical day look like? IPA therefore connects participants to their emotions, cognition, and to their linguistic and emotional states. The approach therefore brought a deeper understanding

of the Kayayei business, the challenges they face, and what coping strategies were adopted by the women. This design employed in-depth interviews and focus group discussions as well as observations for generating detailed data on the lived experiences, insights, feelings, beliefs, and behaviour of respondents as outlined by various authors (Mack. Woodsong, MacQueen, Guest, & Namey 2005; Teye, 2012).

### 3.5.2 Sampling Population, Sampling Strategy, Sample Size

The Agbogbloshie market was selected as the site for the study. The Agbogbloshie market was selected because it has the highest number of Kayayei in Ghana. The Kayayei have an association which is headed by leaders. A permission letter was written to the Kayayei association for permission for the study to be conducted which was granted through a letter. The population in a research study refers to events, things, or people that the researcher is interested in investigating (Sekaran & Bougie, 2016). The target population in this study was Kayayei, who plied their trade in the Agbogbloshie Market in Accra, Ghana. The total population of Kayayei in Agbogbloshie (total registered by the Kayayei Association) market is about 3000 (Kayayei Association of Ghana, 2017). Therefore, the total population of the current study (represented by *N.*) was 3000.

*Inclusion Criteria:* To be included in the study, one must have been a Kayayo, 18 years of age or older and had been in the Kayayei business for at least three months. Additionally, the individual must have come from one of the three northern regions and of sound mind.

*Exclusion Criteria:* One was not included to participate in the study if she was sick, or physical not present at the time of data collection.

A sampling strategy is a technique used to select participants for a study (Sekaran & Bougie, 2016). The qualitative nature of the study determined a non-probability sampling method, that is considered to be a sampling strategy whereby the researcher selects the sample arbitrarily (Battaglia 2011). While non-probability sampling includes various strategies such as purposive, snowball, convenience, and judgment sampling, the purposive sampling technique for the selection of the participants was selected. Mack et al. (2005) argue that a purposive sampling strategy is often used to group or select participants according to preselected criteria relevant to a particular subject matter being studied. Furthermore, purposive sampling is used when events, settings or people are known to provide important information that might not be obtained from other sampling methods (Maxwell, 1996). In this regard the researcher used her judgement and

decided who was qualified to provide an accurate perspective of the phenomenon under investigation. The Kayayei were approached through their leadership to participate in the study. The president of the Kayayei association called them for a meeting and allowed the researcher to explain the purpose of the meeting to them. After the detailed explanation about the aim of the study, a few declined to take part with the explanation that they do not have time but most of them agreed to take part but only convenient day on which they do not work or one that would be less busy will be chosen. Phone numbers of those who were not available were collected and were subsequently called and those who were reached through the phone were briefed on the purpose of the study. After participants agreed to take part in the study, the date, time, and locations that were most convenient to them were decided on for the interviews.

Two groups were formed for focus group discussions (FGDs). The first group consisted of five (5) Kayayei who had been engaged in the trade for less than one year and who shared their lived experiences, and the second group consisted of five Kayayei who had been in the trade for one year or more to compare the living experiences of the two groups. To be included in the (FDGs), one had to meet the inclusion criteria of the study. There were no special characteristics distinguishing participants in the two focus groups. Interviews were also conducted with two key informants to get their perspectives on the Kayayei business. One of the key informants was the president of the Kayayei Association, who had worked with the Kayayei for an extended period and therefore, had in-depth knowledge on the Kayayei business. The other key informant was a professor of migration studies, who had conducted several research into migration and was able to provide his perspective on the dynamics on internal migration in Ghana. With the observational study, the researcher went through the Agbogbloshie market with the intention of observing how the Kayayei ply their business (the distance they cover, interaction with clients, the nature of loads they carry, and risks involved in the business)

### 3.5.3 Interview Schedule, Focus Group Discussion, and Observation

The aim of phenomenology qualitative researcher is to investigate and interpret the lived experiences of research participants (Alase, 2017). During the interview, the researcher has to listen attentively to participants as they describe their experiences and probed where necessary to elicit more descriptions of the phenomenon of interest (Giorgi, 2010).

#### 3.5.3.1 In-depth Interviews

An in-depth interview and FDG guides were used to guide the interviews and focus group discussions aligned to the objectives of the qualitative phase as outlined above such as the lived experiences of Kayayei in Ghana, the psychosocial and environmental risk factors that cause physical and mental health challenges, among others. According to Turner (2010), personal interview is a procedure of data collection in which the interviewer asks participants or interviewees specific questions based on the topic under investigation. Two in-depth interview guides were used in this study; one for the Kayayei and the other for the key informants. Furthermore, an FDG guide was used for the FDG discussion. The guides were designed based on the objectives of the study guided by literature and a theoretical framework. While some key questions appeared in the interview guide, it was flexible enough to allow the researcher to probe with follow-up questions. The issues explored included demographic characteristics such as age, level of education, marital status, and the number of years in the business. Other issues included reasons for migration, lived experiences as a Kayayei, risk factors associated with the business, physical and mental health status, coping strategies, and social support. The interview guide use for the study can be found at Appendixes 4, 5, and 7.

#### 3.5.3.2 Focus Group Discussion

Focus group discussions (FGD) are discussions that are organised to explore specific set of related issues and experiences (Kitzinger, 1994). The group should be focused since it involves a collective activity and should provide an added dimension of the interactions among members (Wong, 2008; Kitzinger, 1994). The group members should encourage each other, exchange ideas and comment on each other's experiences (Wong, 2008). In this study, an FGD guide was used for the discussion. The purpose of the FDG is to ascertain whether participants behave differently when they are in a group setting as compared to the one-on-one interview with the researcher. The FGD was used in generating broad overviews of issues concerning the physical and mental health of the Kayayei.

#### 3.5.3.3 Observation

This study also employed observation of the Kayayei in their natural setting. Observation is a method in the social sciences used in collecting data about people, processes, and culture (Kawulich, 2012). According to Marshall & Rossman (1989, p. 79), "Observation is the systematic description of the events, behaviour, and artifacts of a social setting". Observation helps and guides the researcher to identify and to form relationships with informants

(Kawulich, 2012). In this study an unstructured observation was used to understand and interpret the behaviour of the Kayayei in their natural setting. Unstructured observation helps the researcher to acknowledge the importance of the context in the construction of knowledge as suggested by Kawulich (2012). An observation guide was constructed to observe the Kayayei at the Agbogbloshie market. The guide consisted of six main items including, time of arrival at the market, the market environment, interaction with clients, negotiation with clients, distances to clients' destination, and general attitude of the general population towards the Kayayei. Please refer to Appendix 6 for the instrument for observation.

#### 3.5.3.2 Pilot Study

Pretesting in qualitative research is seen as an effective technique used to improve the validity of the procedure for data collection and subsequently the interpretation of the research findings (Brown, Lindenberger, & Bryant, 2008; Hurst et al., 2015). A small pilot study was conducted among 5 Kayayei to assess the suitability and viability of the research instrument but also the viability of the study before the main study was conducted. This is important because according to Gumbo (2014), a pilot study will enable the researcher to test the general methods of the study and to get specific background information before the start of the main research. During the pilot study it was realised that just few of the Kayayei had formal education and could speak English while the majority of them spoke a variety of languages such as Kokumba, Dagomba, Mamprusi etc. hence interpreters for the various languages were employed and subsequently trained to translate the interviews.

#### 3.5.3.3 Data Collection and Procedures

After ethical clearance was obtained from the Ethics Committee of the University of KwaZulu-Natal (Ref HSS/0404/018D), two persons with extensive research background were recruited to assist in the data collection process. The assistants had worked with vulnerable groups before and therefore had experience with data collection among this population. One of the assistants is a clinical psychologist who was able to help when cases of psychological distress were identified. See section below for more information on the use of research assistants.

The Kayayei were approached through their leadership to participate in the study. The president of the Kayayei called them for a meeting and allowed the researcher to explain to them the purpose of the meeting. As reported above, after the detailed explanation about the aim of the study, a few declined to take part. Phone numbers of those who were not available were

collected, and they were subsequently called to explain the purpose of the study. After the Kayayei acceded to participate in the study, the date, time, and places most convenient to the them were decided on for the interviews. For the work of the Kayayei not to be disrupted, the interviews were conducted during their lunch break. Permission was asked from the President of the Kayayei and most of the interviews were conducted in his office. For those Kayayei who could not meet the researcher at the presidents' office, the researcher arranged for the interviews to be conducted at their places of residence on Sundays. Before the interview was conducted, the aims and objectives of the study were again explained to the participants as well as ethical procedures to be followed i.e., confidentiality, voluntary participation, and anonymity of data and rights to withdraw from the study at any stage and permission to audiotape the discussion. After signing or thumb printing the informed consent forms, the interviews were conducted at the natural settings of the Kayayei in the Agbogbloshie market or in their homes, reflecting their lived experiences. The researcher and assistants spent a suitable amount of time with each participant during the interview process which provided an opportunity for interim data analysis, probing further for points that are not so clear and subtly challenging inconsistencies in respondent's accounts, it also allowed for comparisons and justifications and to filter ideas and opinions as indicated by (Harding 2013; McMillan & Schumacher, 2010). The interviews lasted for about 50 to 60 minutes, while the focus group discussions lasted for about two hours (2 hours). Participants were given bottles of water during the interviews. Interviews were further conducted from two key informants who were purposively selected based on their knowledge and experiences of migration and of the Kayayei business. An arrangement was made to meet them at their places of work, and after explaining the aims of the study to them, they agreed, signed the informed consent form and the interviews were then conducted.

#### 3.5.3.4 Observation Study

Permission was obtained from the Kayayei Association to observe the Kayayei in their natural environment (Agbogbloshie market). Even though the observation was unstructured, a checklist of things to observe was created to guide what to observe. During the observation, the researcher took an observation guide and a pen, and a note pad to take notes whilst walking through the market. The physical environment of the market was observed including the nature of the market, trading activities, sanitation issues aa well as vehicular movements. The researcher also observed how the Kayayei interacted with their clients including negotiation of prices. The researcher also followed some of the Kayayei as they carried loads of their clients to their various destinations and determined how long they walked carrying loads. Finally,

observation was also done on the attitude of the general population towards the Kayayei. The researcher took notes during the observation to triangulate the findings to the interviews and focus group discussions. Triangulation is very important in qualitative studies because it helps to develop a comprehensive understanding of the phenomenon under study (Patton, 1999). By triangulating the data from the in-depth interviews, focus group discussion, and observation, the researcher, was able to get an in-depth understanding of the physical and mental health challenges of the Kayayei through their daily lived experiences.

#### 3.5.3.5 Use of Research Assistants

Research assistants were recruited for the data collection process to minimise researcher bias. In a qualitative study, "a very highly trained and skilled field force is required since initiative and judgment will be required ... in deciding which issues to follow up and probe and which to let go ..." (Tamblyn & Shelton, 1996, p. 74). Bias exists in qualitative studies, such as researchers bringing their own experiences, ideas, philosophies, and personal prejudice into the study (Smith & Noble, 2014) but with more than one person conducting the interviews, the research assistants helped the process to be as objective as possible. It is therefore important for the researcher to train the research assistants with the necessary skills to collect quality data. For this purpose, a training manual was adapted from Eaton (2017) to train the research assistants. The research assistants were first given an overview of the study, including the aims and objectives. They were subsequently trained to use the data collection instruments and guidance on ethics in data collection and the data collection process. The assistants were trained to assist with participants recruitment, obtain informed consent, keep accurate records of data collected, conduct in-depth interviews, conduct focus group discussions, and assist with clerical work when needed. During the data collection, frequent discussions were held with the assistants to discuss emerging themes, new ideas and changes in strategy to elicit more information from the participants.

### 3.5.4 Data Analysis

According to Smith and Shinebourne (2012), IPA allows the researcher to learn about the psychological world of respondents. Smith, Flowers, and Larkin (2009) argue that the IPA allows the researcher to explore participants' lived experiences in their own terms. The IPA was adopted to analyse data collected from participants because it enabled the researcher to interpret the participants' lived experiences from their own accounts (Smith et al., 2009). The aim of IPA approach is to get a better understanding and better explain the lived experiences

of the study participants being investigated (Alase 2017). “The role of an IPA researcher is to explore and maximise the potential opportunities and possibilities that the traditional (approach) affords him/her” (Alase 2017, p. 12). The researcher therefore focused on context and explored the deep-rooted causes of the phenomenon (Kayayei business) and gave explanations of what happened as suggested by (Peat, Rodriguez, & Smith, 2019).

The audiotapes were transcribed verbatim with the exact details pertaining to voice intonation and meaning. Steps were taken to minimise bias by using multiple people in the coding process, checking for alternative explanations, and by reviewing the findings with peers. The interviews conducted in English were transcribed by playing the audio recordings over and over to make nothing was missed. Interviews conducted in the other languages were transcribed into English. NVivo version 12 software was used for the data analysis by writing down and coding differences and similarities and contradictions in what a participant said. The analysis followed the guidelines stipulated in IPA as outlined by Storey (2007) in three steps. Step one entailed initial reading and re-reading of transcripts to identify initial codes which were combined to form sub-themes within the data. In step two, the individual themes were linked to create thematic clusters. Step three involved the creation of a thematic table that had the various themes.

During the first stage of the data analysis, the researcher and her assistance read the whole transcript to get an initial understanding of the material. This resulted in the identification of the overall theme of the data by the research team and in making meaning of the participant’s narratives and actions. This was done through detailed examinations of each participant’s interview to make meaning of their lived experiences and employed the similarities and differences in the lived experiences as suggested by Smith et al. (2009). The transcripts were read several times, with each reading bringing out new insights. This was followed by writing down notes on emerging themes titles and the initial notes were transformed into phrases that captured themes found in the transcripts (Smith & Osborn, 2007). Emerging themes were listed, and connections between them were identified, patterns of meaning across the datasets were identified to provide in-depth understanding. Patterns were identified through a thorough process of data familiarisation, coding, and theme development and revision. After this, the researcher identified thematic clusters and subordinate concepts. In the third stage, a summary table was created to illustrate the emerging main themes and sub-themes identified with quotes to substantiate the issues as suggested by Clarke and Braun (2013).

### 3.5.5 Data Quality Control /Validity and Reliability/Trustworthiness

The concept of validity and reliability in research is rooted in the positivist paradigm. Their use has been redefined in a naturalistic perspective (Clarke & Braun, 2013). Validity determines whether the research truly measures what it intended to measure (Joppe, 2000). The term reliability, on the other hand, is used in testing quality in quantitative research. It helps to generate understanding in a qualitative study (Clarke, & Braun, 2013; Winter, 2000). Validity in qualitative studies indicates the appropriateness of the tools, the process followed, and the quality of data collected (Leung, 2015). In qualitative research, trustworthiness is used instead of validity and reliability. Trustworthiness is the extent of similarity between the explanation of a phenomenon and the actual reality. It establishes the extent to which observations and recordings are interpreted to have the same meanings to the researcher and to the participants (McMillan & Schumacher, 2010). Trustworthiness entails credibility, transferability, dependability, and confirmability (McMillan & Schumacher, 2010; Hennink, Hutter, & Bailey, 2020). Credibility is concerned with truth-value and is measured with strategies such as triangulation. In the current study, investigator triangulation was the main type of triangulation adopted. Two researcher assistance and the researcher developed the codes using NVivo statistical software. The fact that two different researchers were involved in the coding ensured investigator triangulation and inter-coder reliability. Transferability was ensured by giving vivid accounts of the participants' lived experiences as Kayayei, and this was reinforced using quotes presented from the participants verbatim. Transferability has to do with thick description and involves the description of not just the lived experiences and behaviour of study participants, but also a detailed account given on the context in which the study was conducted (Korstjens & Moser, 2018). In the current research, it was ensured by describing the study setting, providing the sample size, and sampling procedure used, and describing the socio-demographics of the study participants in addition to the themes generated a priori. Transferability was also ensured in the present study by providing the coding frames and samples of the interview guides used in collecting data from the participants. Dependability and confirmability focus on the audit trail (Korstjens & Moser, 2018). The audit trail is about transparency. Transparency was ensured by documenting the entire research process from the background to the conclusion. Regarding analyses for instance, coding and analytical frames were provided.

Trustworthiness requires the use of different forms of data collection strategies from diverse range of individuals and settings which aims to help the researcher validate her findings through

the triangulation of the data collected as suggested by Clarke and Braun (2013). According to Maxwell (2012), this allows for validity and generality of the explanations that were developed. To achieve trustworthiness, Individual interviews were combined with focus group discussions, key informants' interviews, and the researcher's observations. The research also recruited Kayayei from different age groups and educational backgrounds to enhance diversity. Additionally, the interview questions were asked in respondents' local language with the aid of registered translators for a better understanding by not changing the meanings. Another way of ensuring validity was by respondent validation whereby the researcher and the research assistants systematically solicited feedback from respondents about the data collected that guarded against misinterpreting the meanings of what the participants had said about their lived experiences. The feedback from participants further guarded against the researcher's own biases, as highlighted by Maxwell (2012).

Confirmability in qualitative research ensures that findings are a product of the participants responses and that they do not reflect personal biases of the researcher (Treharne & Riggs, 2014). This can be achieved through 'Bracketing', the concept of bracketing obliges researchers to put aside their personal theories, research assumptions, and intrinsic knowledge separately from observations from the research process (Baksh, 2018; Creswell, 2009). Bracketing could be a challenge in qualitative research where researchers are encouraged to practice reflexibility requiring researchers to be mindful of their personal ontology and its impact on the research (Baksh, 2018; Creswell, 2009). The researcher found herself turning between bracketing and reflexibility. To ensure confirmability, the researcher recognised her own value system and was conscious of her own reflexivity and biases and made conscious efforts not to allow her values to influence the findings, making the findings as objective as possible. Authenticity ensures the representation of key informants. Recommendations and suggestions were made for intervention to improve their health and well-being.

Field notes in qualitative research are essential component of thorough research, the use of field notes helps enhance data provides rich context for analysis (Creswell, 2013; Phillippi & Lauderdale, 2018). According to Phillippi and Lauderdale (2018, p. 381), "field notes serve many functions. Predominately, they aid in constructing thick, rich descriptions of the study context, encounter, interview, focus group, and document valuable contextual data". In this regard, a field logbook was used to keep records of observations and interviews systematically together with other events in the field. The information recorded included the date and time

spent on each participant and time spent at each location. Records were also kept on decisions made during the emergent design and rationale behind it. This enabled the researcher to justify the modifications of the research strategies. Records were kept on data management techniques, including the codes used for the study, categories, and themes used in the description and interpretation as well as drafts and preliminary diagrams that were kept during the study.

### 3.6 Phase II – Quantitative Phase

The aim of quantitative research is to quantify data, and this is useful for generalisation of findings. It also helps in eliminating or at least minimising subjectivity of judgment (Matveev, 2002; Kealey & Protheroe, 1996). It also has the ability to determine model specifications and to establish the nature of relationships between different variables such as daily experiences, physical health, mental health, psychosocial support and coping strategies. The quantitative data therefore allows the researcher to have quantitative insight into the extent of mental distress and factors that impact on their mental health.

The quantitative aspect of the study employed a cross-sectional quantitative survey in which a sample was drawn from a population at one point in time to achieve the objective of the study as noted by Shaughnessy, Zechmeister, and Zechmeister (2012). Using cross-sectional design enables researchers to collect information that describes, compares, or explains knowledge, attitudes, and behaviour of the participants at a particular point in time (Gray, 2014; Myers & Hansen, 2006). A cross-sectional survey also enables the researcher to understand respondents' behaviour, experiences and beliefs and the relationships between specific variables (Myers & Hansen, 2006; Neuman, 2006). Despite the advantages of cross-sectional survey design, it takes cognisance of a set in a population making it difficult to measure cause-effect and may also produce varied results in different times. A cross-sectional study may also be prone to non-response bias in cases where participants who agreed to participate in a study are different from non-participants which may result in a sample that do not represent the population (Sedgwick, 2014).

In this study, steps were taken to improve the effectiveness of the survey design. To reduce the non-response rate personal contacts were made with respondents as suggested by Dillman (2011). This allowed the researcher to have face-to-face interaction with respondents and the surveys were conducted on the same day that participants were recruited, and the survey was also conducted at the respondent's convenience. This design was therefore used to: Ascertain

the prevalence of physical and mental health challenges among the Kayayei in Ghana; Investigate the risk factors for mental health challenges among the Kayayei in Ghana; and (3) Examine the social support available and coping strategies the Kayayei adopt to cope with the stressors of daily living.

### 3.6.1 Sampling Strategy and Sample Size

In this study, both probability and non-probability sampling techniques were employed to select the sample population. The non-probability sampling method was used to select Agbogbloshie market for the study. According to Neuman (2006) a non-probability sampling strategy is utilised when the researcher has limited knowledge of the population in which the sample is chosen. Convenience sampling is suitable for this study because it allows the researcher to collect data from the Agbogbloshie market which is easily accessible and available as suggested by Sekaran (2003). Agbogbloshie market was also chosen purposively because it has the largest number of Kayayei in Ghana. This technique also offered the researcher the opportunity to collect data within the limited time frame available for the PhD Study.

A probability sampling was utilised in selecting the locations as well the participants for the study. In a quantitative study, a probability sampling strategy is used to select many participants to take part in the study as it allows every member of the population an equal chance of being selected (Battaglia, 2011). A stratified sampling technique was used to select the locations at the Agbogbloshie market. Stratified sampling is a technique of selection in which a widely distributed population is kerbed into different stratum (Manjunath, Hegadi, & Archana, 2012: Odoh, 2015). Using this sampling technique, the Agbogbloshie market was classified into two strata: ‘the main market’ and the yam market. Since the researcher did not know the proportion of the Kayayei operating in both markets, the researcher assumed a conservative distribution of 50 per cent distribution at both markets in each stratum. After this, a probability sampling procedure was used to select participants for the study using systematic sampling procedure. “A systematic sampling is a design in which only the first unit is randomly selected, and the rest are automatically selected according to a predetermined pattern” (Sayed & Ibrahim, 2018, p. 1). This technique was used as it gave participants an equal opportunity of being selected. The research team went to a vantage point at the market (the main entrance to the market) and the first person who was approached and agreed to participate in the study was indexed as 1. Based on data, every eighth person was recruited to participate in the study.

#### 3.5.1.1 Sample Size Determination

Based on the registry at the Kayayei Association the total number of registered Kayayei at the time of data collection (2017) was 3000. According to Salaria (2012), a sample size is a fraction, portion, or unit of the population which the researcher selects for participation in a specific study. The sample size was determined based on the population of the study as recommended by Krejcie and Morgan (1970), using a sample size formula of,

s=required sample size
$X^2$=the table of the chi-square for 1 degree of freedom at the 0.05 confidence level (3.841)
N=the population size (Which is 3000)
P=the population proportion (assumed to be 0.50 of kayayei experiencing physical and mental health challenges)
d=degree of freedom of accuracy as expressed as a proportion (0.05)
Hence,

$$s = \frac{(3.841)(3000)(0.50)(1-0.50)}{(0.05)^2(3000-1)+(3.841)^2(0.50)(1-0.50)}$$

$$s = \frac{(2880.75)}{(7.4975)+(0.96025)}$$

$$s = \frac{(2880.75)}{(8.45775)}$$

$$s = 340.605$$

Therefore, the desired sample size selected was 341 respondents. Adjusting for a ten percent non-response rate, 375 Kayayei were contacted and 352 agreed to participate in the survey. Based on the stratification, 50 percent (171) were selected from the main market while the rest 50 percent (171) were also selected from the Yam market for the survey.

### 3.6.2 Research Instruments

Data were collected through an interviewer administered questionnaire due to the varied literacy levels of the Kayayei. The questionnaire consisted of a section on Bio demographic characteristics and general information about the work experience. The scales used for the study were the Depression, Anxiety and Stress Scale (DASS-21), Situational Brief Cope, Multidimensional Scale Perceived Social Support (MSPSS) Health Status Questionnaire (HSQ). Refer to Appendix 8 for the questionnaire used for the study. All the scales were developed in the developed world using their own cultural perspective which is different from the African context. According to Borsa, Damásio, and Bandeira (2012), adapting a psychological instrument is a complex process which requires planning to maintain the

psychometric properties, and the validity for the intended population. The study adapted these instruments based on literature on their validation and usage in the African context.

*Background data:* the background data were collected and used to understand the characteristics of the Kayayei including life experiences. These questions were related to age, education, marital status, parity, religion, duration of stay in Accra, accommodation, daily work duration, daily income, patron treatment, and daily income.

*Depression, Anxiety, and Stress Scale (DASS-21)*

The DASS-21 was developed by Lovibond and Lovibond (1995), which is a shorter version of the original 42-item version. Lovibond and Lovibond selected 7 out of 14 items in their depression, anxiety, and stress scales. The DASS-21 is made up of three sets of self-reported scales that intend to measure emotional states of depression, anxiety, and stress. There are seven items in each of the sub-scales with similar content. The depression scale measures devaluation of life, lack of interest / involvement, dysphoria, anhedonia, self-deprecation, hopelessness, and inertia. The anxiety scale assesses skeletal muscle effects, subjective experience of anxious affect, autonomic arousal, and situational anxiety. The scale measures being easily upset / agitated, irritable/over-reactive and impatient, difficulty relaxing, and nervous arousal (Lovibond & Lovibond, 1995). The DASS-21 scale is rated on a 4-point Likert scale (did not apply to me, applied to me some of the time, applied to me a considerable degree, and applied to me most of the time). The score for the total sub-scale is then multiplied by 2 to get a final score. The score for depression ranged from normal (0-9), mild (10-13), moderate (12-20), severe (21-27), and extremely severe (28+). The score of anxiety on the other hand ranged from normal (0-7), mild (8-9), moderate (10-14), severe (15-19), and extremely severe (20+). The score for stress also ranged from normal (0-14), mild (15-18), moderate (19-25) severe (26-33), and extremely severe (34+) (Lovibond & Lovibond, 1995).

The DASS has been used in different populations all over the world. In a clinical group, Antony, Bieling Cox, Enns, and Swinson (1998), indicated that "the DASS showed good convergent and discriminant validity, and high internal consistency and reliability, with Cronbach's alpha reported at 0.94 for Depression, 0.87 for Anxiety and 0.91 for Stress. Studies have shown that while both the DASS and DASS-21 displayed excellent factor structures, the DASS-21 solutions were more interpretable in terms of lower intercorrelations of factors, higher mean loadings, and fewer cross-loading items" (Antony et al., 1998, p. 179). The DASS-

21 was therefore adopted for the current study. The DASS 21 has been used in several studies worldwide and some in the African context. In a study by Coker, Coker, and Sanni (2018) among college students in Lagos-Nigeria, they found a Cronbach alpha of 0.81, 0.89, and 0.78 for depression, anxiety, and stress, respectively. Another study among working adults in South Africa by Dreyer, Henn, and Hill (2019), showed that the DASS-21 was a valid and reliable instrument for measuring depression, anxiety, and stress in the African context. Their study showed a strong evidence for discriminant and convergent validity. The Cronbach alpha for the present study for depression, anxiety and stress were 0.90, 0.88, and 0.87, respectively. The language in the DASS-21 did not pose significant challenges since most of them were clear. However, two words were changed 'wind down' was replaced with 'calm down' while 'blue' was replaced with 'dejected'.

*Situational Brief COPE*

The situational brief cope was developed by Caver (1997) and is one of the most frequently used self-report measures of coping responses (Monzani et al., 2015). It is a self-evaluated scale that was created to assess the ability of individuals to cope with stress. One important characteristic of the situational brief cope is that it differentiates between situational coping responses and dispositional coping (Carver, Scheier, & Weintraub, 1989). The Original cope is a 60-item instrument with 4 items per scale (Carver et al.,1989), which was burdensome for patient samples to complete due to the length and redundant items. The situational brief COPE is an abridged version of the COPE and was developed by Carver (1997). The Brief COPE measures 14 theoretically identified coping responses: Self-distraction, Active coping, Denial, Substance use, use of Emotional support, Use of instrumental support, Behavioural disengagement, Venting, Positive reframing, Planning, Humour, Acceptance, Religion, and Self-blame. These coping responses were further grouped into two broad categories of coping strategies, namely approach (active coping, use of emotional support, use of instrumental support, positive reframing, and planning) and avoidant coping (self-distraction, denial, substance use, behavioural disengagement, and venting). Religion and Humour however do not belong to any of these broad categories and are therefore assessed separately (Carver et al., 1989). The scale represents a way to rapidly measure coping responses using a short 28-item self-report questionnaire with two items for each of the measured coping strategies. The situational brief cope is measured on a 4-point Likert scale with answers such as (1= I haven't been doing this at all; 2 = I've been doing this a little bit; 3 = I've been doing this a medium

amount; 4 = I've been doing this a lot). The reliability value of the original scale ranges between (α= 0.54-0.90). The brief cope has been used in different populations in different contexts around the world. The brief cope has been used among pregnant African American women (Peters, Solberg, Templin, & Cassidy-Bushrow, 2020; α= .74–.89), women with postpartum depression in rural Ethiopia (Azale, Fekadu, Medhin, and Hanlon, 2018; α=0.72 and 0.74.). Because the items in the brief cope are written in clear language, it was adopted in its original form and did not pose any significant challenge.

*Multidimensional Scale Perceived Social Support (MSPSS)*

The multidimensional scale of perceived social support (MSPSS) was developed by Zimet, Dahlem, Zimet, and Farley (1988). The aim of the MSPSS was to measure perceived social support along three dimensions namely support from family, support from friends and support from significant others in a twelve-item questionnaire. The original version of the MSPSS was made up of 24 items, scored on a 7-point Likert scale. Zimet et al. (1988) after conducting content analysis, the scale was reduced to 12 items in the final version. The scale is rated on a 5-point Likert type ranging from 7 (very strongly agree) to 1 (very strongly disagree). The questions on the scale include: 'There is a special person who is around when I am in need', 'I get the emotional help and support I need from my family', 'My friends really try to help me' and 'I can count on my friends when things go wrong'. The possible score range is between 12 and 84, the higher the score the higher the perceived social support. The scale has reliability value between 0.84 to 0.91 (Zimet, Powell, Farley, Werkman, & Berkoff, 1990). The MSPSS has been found to be reliable in different samples including postpartum mothers in Uganda (Nakigudde, Musisi, Ehnvall, Airaksinen, & Agren, 2009; α=.83), youth in south Africa (Bruwer, Emsley, Kidd, Lochner, & Seedat, 2008; α=.0.86 to 0.90), paramedic trainees in South Africa (Fjeldheim *et al.,* 2014**;** α = 0.93), and adolescents in Ghana (Wilson, Yendork, & Somhlaba 2017; α=.81). In the current study the overall scale has a reliability of α=0.67, while the sub-scales are: significant others support (α= 0.92), family support (α= 0.81), and friends support (α= 0.79). For this present study, the scale was adopted in its original form without any changes since the items were written in clear language.

*Health Status Questionnaire (HSQ)*

The health status questionnaire was developed by Arlington (2008) to measure health status with the original questionnaire measuring (physical status (10 sub items), mental / emotional status (10 sub items), stress evaluation (10 items), life enjoyment (10 sub items), and quality

of life (14 items). For the purpose of this doctoral thesis, the physical status items were adapted. This questionnaire was adapted based on the findings of the qualitative study. The items in the questionnaire capture the physical health challenges of the Kayayei. The items are rated on a 5-point Likert scale with answers such as 1 never; 2 rare; 3 occasionally 4 regular; 5 constant. The physical health variables include physical pain, feelings of tension, incidence of fatigue, among others. Eight out of the ten item that were deemed to measure the physical health challenges of the Kayayei were selected (ref to appendix 7 for the questionnaire). There was no known reliability test for the instrument, therefore a reliability test was conducted with a Cronbach alpha of 0.82. The instrument was therefore seen as being appropriate to measure the physical health challenges of the Kayayei.

### 3.6.3 Pilot Study

Before the start of the main study a pilot study was conducted to determine the suitability of the research instruments as suggested by (van Teijlingen, Rennie, Hundley & Graham, 2001). A Pilot study is a crucial part of research design as it aims to increase research quality by pretesting research instruments and the stated questions (Gudmundsdottir & Brock-Utne, 2010; van Teijlingen & Hundley, 2002). A pilot study was therefore conducted before the start of the main study to test the suitability of the research instruments and the stated research questions. A pilot study was conducted among 30 Kayayei at the Madina market who were conveniently selected. The sample was used to explore the psychometric properties of the research instruments which supported most of the findings of the qualitative findings. Although the number of participants in the pilot study were relatively small, the researcher found the instruments suitable as they captured the relevant information required. The following modifications were made after the pilot study:

- A few words in some of the instruments were modified for better understanding, this was done without compromising the meaning of the words involved;
- It was also decided for the questionnaires to be administered through the interviewer since some of the respondents are not educated and the psychological concepts in the questionnaires needed to be explained well for better understanding;
- The Likert response of the Multidimensional Scale Perceived Social Support (MSPSS) was reduced from a 7-point scale to a 4-point for participants to understand and respond appropriately; and

- The questions in the Health Status Questionnaire (HSQ) were reduced from 10 to 8 as two of the questionnaires were deemed not to be relevant to the present study.

### 3.6.4 Recruitment of Participants and Data Collection Procedure

As stated earlier, permission was obtained from the Kayayei Association for data to be collected among its members. After that, ethical clearance was obtained prior to the data collection. The respondents for the quantitative study were Kayayei who were recruited from the Agbogbloshie market. Detailed ethical procedure was observed during the data collection. Respondents were first briefed about the aim and objective of the study and were assured of the confidentiality and anonymity of the data to be collected. They were also informed about voluntary participation, and that they could also withdraw at any point during the data collection without any adverse consequences. They were also made aware that the study is for academic purpose and there would be no reward for participation. The Kayayei who agreed to take part in the study subsequently signed or thumb printed the informed consent form (refer to appendix 11).

Two research assistants fluent in the local languages spoken by the Kayayei who assisted with the qualitative data collection were trained to use the data collection instrument. They were trained on how to interpret a question, how to build rapport with respondents and how to administer a questionnaire since data were collected through interviewer administered questionnaires. This study was not psychologically harmful to participants, however, one of the research assistants was a trained clinical psychologist and participants were informed that in case they experienced any psychological distress, counselling services would be available to them. Throughout the data collection, none of the participants showed any form of psychological distress. Data were collected throughout the week from Monday to Sunday. On each of the days, the researcher and assistants meet at the office of the Kayayei Association to plan for the day. The research team would then proceed to the main entrances of the market and approach the Kayayei to take part in the study. The team made a concerted effort to establish rapport with the Kayayei and to establish trust at times with the assistance from the president of the Kayayei Association. For those who agreed to take part in the study, some offered to take the survey on the same day at selected locations while others met the team at the office of the Association at a preferred date and time. Each participant was given bottled water for their participation. The data collection process was completed within three months.

### 3.6.5 Data Quality Control

Data were collected using CSpro softwear and later exported to Stata 15 for data analysis. The data collected were subjected to a thorough quality control process to ensure that the data were as accurate and complete as possible. Descriptive statistics on both continuous and categorical variables were obtained using Stata 15. Descriptive analysis for plausibility checks was performed to address any inconsistencies. Furthermore, minimum, and maximum scores were generated for each item to ensure that all the measures were within the expected range of the possible score as suggested by Pallant (2015), this helped in identifying missing values and errors, and in cleaning duplicates.

*Recoding of some variables*

Some variables were recoded to improve the response categories for analysis:

1. Participants' ages were recorded to ensure equal distribution between the ages. The ages were recorded as 18-24, 25-34, and 35 and above;
2. Level of education was recoded as 'no education' 'primary education' and senior high education;
3. Marital status was recoded as 'unmarried' and 'married';
4. The number of years being in Accra was recoded as 'less than 1 year', '1to 2years' and 'more than 2 years;
5. Difficulty of work was recoded as 'difficult' and very difficult;
6. Treatment by patrons was recoded as 'nicely', 'normal', and 'badly'.;
7. The DASS-21 scale was recoded as 'psychological normal' and psychological distress (Al Saadi, Addeen, Turk, Abbas, & Alkhatib, 2017; Masiran et al., 2018; Ramlan et al., 2020)). The participants with scores in the normal and mild range were classified as 'psychologically normal', while those with scores in the moderate to extremely severe range were classified as 'psychologically distressed'.
8. Physical health problems were recoded as 'never', 'occasionally', and 'constantly'.

### 3.6.6 Data Analysis

Three hundred and fifty-two questionnaires were used for the final analysis. The analysis used frequencies to describe the background characteristics of the participants and the prevalence of physical and mental health challenges. The psychometric properties of all the measures and sub-scales were determined using inter-item reliability coefficients, i.e., Cronbach's alpha. In this study the assumption of normality of the scores and homogeneity of variances were tested.

The Shapiro-Wilk test for normality was conducted to examine the normality of all measures. The results indicated most of the scores were fairly normal ($p > 0.05$). The Levene's test for homogeneity of variance did not reveal much variance in the score of the various measures. It is, therefore, concluded that the data is fairly normally distributed and the assumption of homogeneity of variance was not violated.

**Table 1**

**Descriptive Statistics and measures used for the study.**

| Variable | Measure | Items | Scale Range | Mean | SD | Cronbach alpha | Skewness | Kurtosis |
|---|---|---|---|---|---|---|---|---|
| **Mental Distress** | DASS-21 | | | | | | | |
| Depression | | 7 | 0-28 | 10.28 | 3.71 | 0.872 | -0.061 | 2.373 |
| Anxiety | | 7 | 0-20 | 9.06 | 3.32 | 0.874 | 0.167 | 2.584 |
| Stress | | 7 | 0-34 | 9.22 | 3.45 | 0.874 | 0.248 | 2.596 |
| **Social Support** | MSPSS | 12 | 12-60 | 2.54 | 0.50 | 0.814 | -1.649 | 7.90 |
| Significant others Subscale | | 4 | 4-28 | 2.75 | 0.55 | 0.883 | -1.845 | 8.058 |
| Family Subscale | | 4 | 4-28 | 2.37 | 0.64 | 0.883 | -0.728 | 3.546 |
| Friends Subscale | | 4 | 4-28 | 2.50 | 0.64 | 0.884 | -1.173 | 4.448 |
| **Coping** | BRIEF COPE | | | | | | | |
| Self-distraction | | 2 | 2-8 | 4.98 | 1.19 | 0.874 | -0.698 | 4.423 |
| Active coping | | 2 | 2-8 | 4.83 | -0.20 | 0.874 | -0.198 | 4.905 |
| Denial | | 2 | 2-8 | 4.68 | 1.26 | 0.873 | -0.120 | 3.846 |
| Substance | | 2 | 3-9 | 2.23 | 0.86 | 0.885 | 3.544 | 18.175 |
| Emotional support | | 2 | 2-7 | 4.61 | 1.07 | 0.876 | -0.617 | 4.784 |
| Instrumental support | | 2 | 2-8 | 4.77 | -0.29 | 0.877 | -0.291 | 4.062 |
| Disengagement | | 2 | 2-7 | 4.62 | 1.10 | 0.874 | -0.526 | 4.540 |
| Venting | | 2 | 2-7 | 4.61 | 1.13 | 0.876 | -0.343 | 4.271 |
| Positive reframing | | 2 | 2-8 | 4.80 | 1.14 | 0.873 | -0.266 | 4.610 |
| Planning | | 2 | 2-8 | 4.93 | 1.14 | 0.872 | -0.729 | 4.190 |
| Humour | | 2 | 2-8 | 5.34 | 1.49 | 0.876 | -0.139 | 3.224 |
| Acceptance | | 2 | 2-8 | 5.07 | 1.16 | 0.874 | -0.378 | 4.519 |
| Religion | | 2 | 2-8 | 6.42 | 1.38 | 0.878 | -1.031 | 5.366 |
| Self-blame | | 2 | 1-8 | 4.41 | 1.39 | 0.876 | -0.040 | 2.895 |
| **Physical Health** | NA | 8 | 12-39 | 6.84 | 1.71 | 0.889 | -0.522 | 4.807 |

### 3.6.7 Study Objectives and Statistical Tests Used.

Based on distribution of the responses both non-parametric (e.g., Chi- square tests) and parametric analyses (e.g., binary logistic regression) techniques were used to determine the relationship between background characteristics and the physical and mental health of the Kayayei. Chi-square and binary logistic regression were used to identify the relationship between the background characteristic and mental health challenges (Depression, Anxiety, and Stress). Analysis was also conducted to determine the risk and protecting factors impacting the mental health of the Kayayei. Cohen's (1988) criteria were used for indicating the strength of the correlation i.e., r = 0.10 to 0.29 as small correlation, r = 0.30 to 0.49 as medium correlation and r = 0.50 to 1.0 as a strong correlation. Furthermore, Stepwise Logistic Regression models were fitted by using the backwards selection methods to predict the mental health challenges of the Kayayei. To determine the Goodness of fit for the models, the Hosmer-Lemeshow goodness of fit test was used. The model is said to have a good fit when the p-value is more 0.05. The McFadden's Pseudo R-Square was used to explain the percentage of contribution of the variables in the final model. A rule of thumb is that a pseudo $R^2$ ranging from 0.2 to 0.4 indicates very **good** model fit.

**Table 2**

**Stated Objectives and the Statistical Test Used.**

| Objectives/Socio-demographic characteristics | Statistical test |
|---|---|
| • Socio-demographic characteristics of respondents | • Descriptive statistics (frequencies, percentages) |
| • Ascertain the prevalence of physical and mental health challenges among the Kayayei | • Descriptive statistics (frequencies, percentages) |
| • Investigate the risk factors mental health, social support and coping strategies adopted by the Kayayei | • Descriptive statistics (frequencies, percentages)<br>• Inferential (Chi-square, binary logistic regression). The Cramer's V were applied for effect size. |

# CHAPTER FOUR
# LIVED EXPERIENCES OF THE KAYAYEI

## 4.1 Introduction

Migration comes with numerous challenges, especially for migrant women. Exploring the lived experiences of internal migrants will foster a better understanding of the challenges these migrant women have to face and the impact on their physical and mental health. Based on a thorough review of existing literature, it came to light that few studies have been conducted on the lived experiences of internal migrants in the Ghanaian context. The qualitative study was, therefore, conducted to answer this question: What are the lived experiences of Kayayei in Ghana? To help answer this question, in-depth interview guides were used to interview 21 Kayayei and two key informants. Additionally, a focused group discussion guide was used to interview two groups of Kayayei. Triangulations were carried out in the analysis regarding the daily lived experiences, coping strategies, and reasons for migration, which emanated from the various interviews. To differentiate the responses of the Kayayei from the key informants in the findings, the Kayayei were referred to as 'participants' while the informants referred to as stakeholders. Transcripts were transcribed precisely, and data were analysed using NVivo version 12 software.

## 4.2 Results

### 4.2.1 Background Characteristics of Participants

Table 3 presents the socio-demographic characteristic of participants. The findings show that the oldest participant was 40 years old while the youngest was 18 years. The findings further indicated that 38.1 per cent (n=8) of the participants had completed Senior High School (SHS), 7 (33.3%) had completed Junior high School (JHS), 3 (14.3%) had completed Primary school while the rest 3 (14.3%) had no formal education. Most of the participants 19 (90.5 %) were Muslims. More than half of the participants 11 (n=11; 52.3%) were married while the rest 10 (n=10; 47.6%) were single. The findings further revealed that 8 (38.1%) of the participants were Mamprusi, 6 (28.6%) were Sisala, 5 (23.8%) were Dagomba and the rest 2 (9.5%) were Dagbani. The table also presented the demographic characteristics of the participants in two focus group discussions. Table 3 further presents the demographic characteristics of the two key informants interviewed. One key informant is the president of the Kayayei Association (referred to as stakeholder 1) and the other, a professor with in-depth knowledge of migration (referred to as stakeholder 2). The results show that both informants' 100 percent (n=2) are above 40 years, and both had formal education 100 (n=2).

**Table 3**

**Background characteristics of the participants**

| Characteristics | In-depth Interviews with Kayayei | | Focus Group Discussions with Kayayei | | In-depth Interview with Key informants | |
|---|---|---|---|---|---|---|
| | Frequency [N=21] | Percentage [%] | Frequency [N=10] | Percentage [%] | Frequency [N=2] | Percentage [%] |
| **Age** | | | | | | |
| 18-19 | 5 | 23.7 | 3 | 30 | 0 | |
| 20-29 | 14 | 66.7 | 4 | 40 | 0 | |
| 30-39 | 1 | 4.8 | 2 | 20 | 0 | |
| 40+ | 1 | 4.8 | 1 | 10 | 2 | 100 |
| **Mean age** | | | | | | |
| **Education** | | | | | | |
| No formal education | 3 | 14.3 | 2 | 20 | 0 | |
| Primary | 3 | 14.3 | 2 | 20 | 0 | |
| JHS* | 7 | 33.3 | 3 | 30 | 0 | |
| SHS* | 8 | 38.1 | 3 | 30 | 1 | 50 |
| Tertiary Education | | | | | 1 | 50 |
| **Marital status** | | | | | | |
| Single | 11 | 52.4 | 6 | 60 | 0 | |
| Married | 10 | 47.6 | 4 | 40 | 2 | 100 |
| **Ethnicity** | | | | | | |
| Sisala | 6 | 28.6 | 3 | 30 | 1 | 50 |
| Dagomba | 5 | 23.8 | 2 | 20 | 1 | 50 |
| Dagbani | 2 | 9.5 | 1 | 20 | | |
| Mamprusi | 8 | 38.1 | 4 | 40 | | |
| **Religion** | | | | | | |
| Muslim | 19 | 90.5 | 9 | 90 | 1 | 50 |
| Christian | 2 | 9.5 | 1 | 10 | 1 | 50 |

**SHS-Senior High School, JHS- Junior High School*

#### 4.2.2 Findings

The themes identified through the qualitative analyses are presented in table that lists four. Major themes were realised. These were reasons for migrating to Accra, daily lived experiences, and coping strategies for everyday life. Sub-themes were further identified within themes, the primary reasons for moving to Accra were economic and culture-related aspects. Sub-themes for daily lived experiences entailed their daily routine and psychosocial challenges. Finally, the sub-themes identified for coping strategies were religion, recreation, social support, self-medication, and resilience.

**Table 4**

**Themes and Sub-Themes from the Qualitative Study**

| Theme | Sub-Theme | Code |
|---|---|---|
| Reasons for Migration | Economic | Remittance<br>Need for money to continue schooling<br>Poverty |
| | Cultural | Preparations for marriage<br>Escape from cultural practices |
| Daily Lived Experiences | Daily routines | Obtaining clients<br>Price negotiation |
| | Psychosocial challenges | Physical challenges (Physical nature of work, physical health)<br>Mental health challenges (stress, anxiety, depression)<br>Sexual exploitation, physical assault, sexual abuse<br>Kidnapping/abduction<br>Accommodation |
| Coping strategies | Religion<br>Recreation<br>Social support<br>Resilience<br>Self-medication | Multiple strategies |

### 4.3 Reasons for Migrating to Accra

The most common reasons for migrating to Accra seemed to pertain to economic and cultural reasons as outlined below. Those that migrated for economic reasons viewed migration as a temporary situation, they stay in Accra and engage in the Kayayei business and hope to acquire the capital needed to either continue their education, learn a trade, or start a business. While those that moved away due to the influences of religious and or cultural aspects seemed not to refer to time

#### 4.3.1 Economic Reasons

**Poverty** was a very strong push factor, and the expected economic gains played a role in the decisions to migrate to the major city of Accra. The participants stated that due to prevailing poverty in the Northern part of Ghana, they were encouraged by their parents and other relatives to move to Accra to earn a better living to support themselves and the family back home. This sentiment is narrated by a single 18-year-old Kayayei "*I came to work to get money to help my family members"*.

Below are some of the narratives from some of the Kayayei.

> *Hmmm, there is no money in the north, we only farm and my family is suffering. Any money I get, I send some home and trying to save some so I could start a business.*
>
> (Single, 22 years old)

> *Some of my friends came to Accra and made lots of money, when my family heard of it, it was decided I should also come to Accra and end some money.*
>
> (Single, 19 years old)

The reason to migrate was further explained by stakeholder 2. In his opinion, the north-south migration is caused by the combination of many factors, including poverty, political, and environmental factors. Below is how he expressed his opinion:

> *So many reasons account for why these women decide to come to Accra and go through this hardship. There is endemic poverty in the north due to land tenure systems and inconsistent rainfall. Various governments too, have failed in their mandate to create job opportunities for these people.*
>
> (Stakeholder 2)

The hope of earning enough money to save to further their education was raised by a few participants. They stated that they had completed Junior High School (JHS) and the family could not afford to send them to Senior High School (SHS), so they migrated to Accra to earn income to further their formal education. The following quotes sums up some of the views expressed by participants:

> *I came to Accra to work to finance my education. If I see that education is not possible, I will learn a trade.*
> (Single, 18 years old)

> *I came here to make money to go back to school because there's no business to do back in my hometown.*
> (Single, 18 years old)

> *Anytime we're on vacation, I come here to engage in the Kayayei business to save enough money and go back to school. I just completed my SHS examination last month and I am back here.*
> (Single, 20 years old)

Migration to Accra is also necessitated by some a resolve to do whatever it takes to work and save enough money to either support an existing business or start a new business. The felt responsibility to take care of family and own children has been mentioned as an important push factor. In this instance the move to Accra was considered necessary but a temporary move with the aim of using the proceeds to learn a trade or start a business when they return. These sentiments have been captured in the following narratives:

> *I came here to get capital for my business and return. That is what I have been doing….I want to establish a provision (grocery) store.*
> (Married, 25 years old)

> *Hmmm, I am here on a temporary basis, as soon as I make enough money, I will go back to the north and maybe start a business so I can take care of my family especially my children's education.*
> (Married, 40 years old)

Some of the participants stated that they migrated to Accra to save enough money to get married. They explained that to get married, they needed to separate themselves from their families back home to come to Accra and work to acquire the basic needs before marriage.

*I used to stay with my aunty back in my hometown, but I am matured now, and I came here to work to get money in preparation for marriage.*
(Single, 20 years old)

### 4.3.2 Cultural Reasons

Even though poverty was identified as the primary determinant for migrating, discriminatory and stifling cultural practices that perpetuate gender inequality was another push factor for migration from the Northern Region to Accra and thus to engage in the informal employment sector – the Kayayei business. One of the participants explained how she had to abscond from a forced marriage at a tender age, while others also narrated their own experiences.

*I ran away from my community because of forced marriage when I was about 13 or 14 years. The person to whom I was about to be given to was 47 years old and he had three (3) wives. I did not understand at the time why I should be married to a 47-year-old man, so I ran to Kumasi. The man gave money to his kinsmen to come look for me in Kumasi and I had to run away from Kumasi too. They chased me down to Accra too and I ran back to Kumasi. There, I hid for some time to protect myself before moving back to Accra to have a life of my own.*
(Married, 33 years old)

*I came here because of my husband. In my town, men are allowed to have multiple wives and he maltreats me. I sometimes feel like ending the marriage but because of my child, I am still in the marriage. I needed to work to be able to take care of myself and my family.*
(Married, 29 years old)

*My mother stopped me from attending school because she does not have money to cater for me in school, but she allowed my brothers to stay in school. I came here to work for money so that I can purchase a sewing machine to become a seamstress.*
(Single 19 years old)

### 4.4 Daily Lived Experiences

The participants in the study shared their typical working days. In this regard, four sub-themes emerged pertaining to daily routines involving psychosocial challenges.

#### 4.4.1 Daily Routine

The daily routine of the Kayayei starts from the time they start work in the early morning and ends with attention being paid to obtaining clients and price negotiation. All the participants mentioned that they start work at dawn, very early in the morning, mostly after their morning prayers (for Muslim participants) and ends around 6pm. However, some added that they could begin and stop the day's work at any time they wished or depending on 'how the market goes.

> *I wake up by 5am, do the morning prayers and come to work by 6am and closes by 7pm.*
>
> (Single, 18 years old)

> *Me, specifically, I don't have a time. I can come at any time and close any time depending on the Market- how the market is moving. Sometimes you can even come in the night 2 O'clock, sometimes 1 O'clock at night. Sometimes, you can decide to come 6 O'clock in the morning or you can come 7 O'clock too.*
>
> (Single, 22 years old)

> *It depends on how busy the day is. Sometimes when I come, I do not get a lot of clients, I leave early. But If I gets a lot of clients, it gets late, I will go home around 6pm.*
>
> (Single, 22 years old)

After the Kayayei arrive at the market early in the morning, they have to seek and identify potential clients that would need help in carrying their goods. The Kayayei explained that they obtain their clients either by being stationed at a particular point or roam the streets to seek clients, meaning they are either mobile or stationed at one place. Some of the Kayayei explained that they station themselves at some stores where they provide their services to individuals who come to purchase from these stores. It seems that clients are aware of the services the Kayayei provide and are being called randomly to assist with carrying goods. However, a few indicated that they do have some specific clients. Other participants said that they roam the markets and stations for potential clients who may need their services, adding

that after getting to a client's destination, they sometimes get clients at the destination and therefor do not have to return to their starting place. The following quotes summarize their activities:

> *When I come to work at 6am, I sweep around the shops where the loads will be removed from the trucks. When the loads are removed then I start to carry them to where I am supposed to carry them. There is a particular woman that I have been helping.*
>
> (Married, 26 years old)

> *I do not have a particular place I stay and work. When I come to work, I roam and whenever someone calls for my services, then I carry it (client's items) for the person.*
>
> (Married, 40 years old)

> *I carry my pan (a metal bowl that the Kayayei carry on the head to load goods) and roam around and whenever someone needs my services, I am called. After I am done with one person, I keep roaming until someone else calls me.*
>
> (Single, 18 years old)

Costing is done in a very flexible way when charging for their service. According to the participants the price charged for work depends on the type of load and distance they need to carry the load to the client' destination. Some participants however, noted that some clients may negotiate with them and sometimes refuse to pay the exact charge or even refuse to pay them at all upon reaching their destination.

> *The charges depend on the load you're going to carry. If it is heavy, from here to CMB we take 5 cedis, sometimes you can take 3 cedis if the customer agrees to pay you. But sometimes too they won't pay the 5 cedis. The person will even let you carry when you reach there, she will say I will give you 2 cedis ($0.36). From the yam market to this roadside, you can charge 2 cedis. Sometimes, they can pay you 1 cedi ($0.18). Somebody can even give you 50 pesewas and you will take because if you don't take, you will lose.*
>
> (Single, 22 years old)

*If the place is not far, we charge 3 cedis ($0.55) or 4 cedis ($0.74). If the place is far, we charge about 5 cedis ($0.92) or 7 cedis ($1.29). If the person likes that work, we've done, he/she can give us 10 cedis ($1.85) or 12 cedis ($2.22). There are some people who pay exactly what I charge and there are people who pay less. Some people also see that the work is tedious, and they offer more money than I charge.*
(Married, 25 years old)

It seems that the participants do not really have strong bargaining power and at times resign themselves to accept whatever is offered them. The following narratives sum up their views:

*I do not charge them so much. I tell them to pay what they think my service is worth.*
(Married, 26 years old)

*hmm… If you can carry, someone can even give you 50 pesewas ($0.9), but it depends on where we are going. Maybe I am carrying something from here to CMB, let us say Kasoa Station. If the load is big, maybe I can charge 5 cedis ($0.92). I can say give me 5 cedis. If I see that it is not much, I can say 3 cedis ($0.55). It all depends on what we are carrying. And here, if you carry yam from the market to the roadside, someone can give you 1 cedi. If you carry about 20 pieces of yam or twenty-something, someone can give you 1 cedi. The price depends.*
(Single, 22 years old)

*There are some customers who feel empathy for us, and they pay us well. …. There are some customers who make us carry our pans and follow them all through the market as they purchase items. This can be very tiring since this can go on for so long. Some of them do not discuss pricing with us at the point of contact. They wait until we reach the destination with their loads and they just give us any amount that they like, and they tell us that such amount was all the money that they have left on them*
(Married, 33 years old)

### 4.4.2 Psychosocial Challenges

The psychosocial challenges faced by the Kayayei includes lack of affordable accommodation, sexual exploitation, verbal, and physical abuse as well as abduction/kidnapping impacting on their physical and mental health.

*Accommodation*

Challenges around accommodation contributed to daily struggles for the Kayayei. The participants indicated that they either have accommodation but then it is very poor or no accommodation at all. For participants with accommodation, it was explained that these were predominantly wooden stores and are mostly overcrowded with as many as 8-13 Kayayei having to share a space/room. There is apparently little security in these places, as they are sometimes attacked by armed robbers or have their savings stolen by thieves or even fellow Kayayei. Most notable is the fact that the accommodation does not come with toilet facilities. Below are some of the quotes from participants,

> *We are 10 in a room and each person pays 5 cedis, about ($1) each week. The roof of where we sleep leaks, and the ground gets wet when it rains. We pay separately to access toilet and bath.*
> (FDG 1, single, 18 years old)

> *Where we sleep is a problem. The rooms are not enough, and some rooms accommodate about 10 to 15 people. Usually, someone will put his belongings in the room and sleep outside or on the veranda if one is available. The room owners too, some are difficult. Even if the rooms develop a fault, they will not mend it. Fan and light for instance, we used our own money to purchase one. We help ourselves.*
> (Single, 22 years old)

Others also explained that they did not have accommodation and either sleep outside or rent rooms that are not suitable for habitation. This view is highlighted in the quote below:

> *Accommodation is very difficult to come by. Some people sleep outside because of congestion in the room. Some of the rooms are not proper rooms and mosquitoes and heat disturb us - but we don't have any option than to stay there. Some Landlords are difficult but ours isn't like that. If one does not have money to pay for the accommodation, he/she is thrown out. The person doesn't know you so he will sack you. Payment depends on the*

*number of people who sleep in the room, we are 8 and the room is 50 cedis ($9.2) a week so we all share and pay.*
(Single, 22 years old)

*I have been sleeping outside for the past 15 years. After the commercial vehicles have left the station, we prepare the place and sleep. During rainy seasons, store owners allow us to sleep in front of their stores and collectively pay 50 cedis ($9.2) at the end of every month. There are some store owners who give the place out for free.*
(Married, 29 years old)

For participants without accommodation, it was explained by some that they sleep in front of shops at night when they are closed. In some cases, they had to pay tokens to the shop owners for sleeping in front of their shops after opening hours or sweep the front of the shops early in the morning before opening hours as a way of payment. Below are some of their narratives;

*We sleep at the front of the store, but we don't pay. We just fix the mosquito net, and we sleep under it. Money and phones are stolen here a lot. We pay and bath somewhere else.*
(Married, 25 years old)

*I sleep here (points to a shop) where the yellow carpet is. In the night we fix the mosquito net and use a large black rubber to cover the whole place, light some mosquito coils and we sleep inside. Every week, we pay 5 cedis ($1) each. When we wash our clothing and put them on the drying line to dry, they get stolen. Other belongings such soaps, sanitary pads, monies and many other things also stolen, sometime by our colleagues.*
(Single, 20 years old)

*I sleep outside. When it's raining, we run into people's veranda until it stops then we return to prepare the place before sleeping. We pay the owner.*
(Married, 22 years old)

Other participants added that their accommodation is infested with bed bugs, forcing them to sleep outside most times. An 18-year-old single Kayayei stated "*there are bed bugs and rats there. So, we mostly sleep outside*". Below is a response from another participants.

*Accommodation is not good at all. About eight (8) to ten (10) people sleep in one room. Rain and mosquitoes disturb us so much. There are rats and cockroaches in the room, but we do not have any other choice but to stay there.*

(Married, 33 years old)

The Kayayei are vulnerable to sexual abuse, physical assault, and verbal abuse. The inability to afford accommodation is one thing but there is also the need for survival, Kayayei are at risk of being sexually exploited just to make ends meet. For instance, an 18-year-old participant puts it this way, *"If one comes here (Accra) to work and do not have a place to stay or people to depend on, one is tempted to move from man to man for survival".*

There are also issues of sexual and physical harassment by male clients. Three participants mentioned that they had experienced sexual harassment by male clients. The women explained:

*As we sleep outside, we are prone to rape. Recently, a child was raped. The rapists have some chemical that they spray into the air that causes us to sleep very deeply and they rape some people even before other people wake up.*

(Married, 33 years old)

*Men like touching female porters. Sometimes, you carry load to the station and the 'loading boys' touch you and tell you how nice you are. Anytime someone tries that, I warn the person and leave because I don't know them.*

(Single, 22 years old)

Participants in this study further expressed their frustration at the verbal abuses they endure at the hands of their patrons and the public at large. They explained that due to their vulnerability in society, they are sometimes subjected to verbal and physical assault by clients for the smallest misunderstanding or when breaking goods because of a fall. The following are some of the expressions by the Kayayei:

*Sometimes after offering your services to someone, the person can verbally assault you, and if you reply, the person can beat you up because there is no one to report to.*

(Single, 22 years old)

*Some customers end up insulting you with the slightest provocation, by describing you like you are not even somebody. Somebody will even tell*

*you that it's because you don't have food to eat in your hometown, that is why you are here.*

(Single, 22 years old)

*Some people go on to say that if our parents had the kind of money we are charging, we would have stayed with them in the northern region and not come to Accra to suffer.*

(FDG 2, single 20 years old)

The uncertainty of the precise destination when carrying goods for a male client seems to be a stressor as there have been reports of women being abducted or kidnapped. These do not only pose a physical danger but also impact on their psychological health negatively. The following quotes explain their concerns:

*There are some people who are in search of people. They will deceive you to carry a load and when you do, they will take you to a certain house. It's like they are spiritualists who will not allow you to leave the house. We have seen some of these things.*

(Married, 25 years old)

*Due to stories that we have heard about people being adopted. I get scared when I follow a man to a distance place. I always pray to come back safely.*

(Single, 22 years old)

**4.4.3 Physical Challenges**

With regards to the physical nature of the Kayayei work, the Kayayei mentioned that their work exposes them to all kinds of injury through motorcycles and vehicles accidents as well as falling due to the weight of the load and walking long distances causing fatigue.

For those who noted the danger of motor vehicle accidents, they explained that carrying heavy loads along or across the busy roads of the city puts them at risk of being knocked over by speeding vehicles and motorcycles. Some of their narratives are capture in the following quotes:

*Sometimes when I carry heavy loads, and walk along the street, I get scared that a car may knock me down and if one does not take time, a car will knock him/her or if one is not careful, another person may push him/her down.*

(Single, 18 years old)

*We face dangers in the work. At the roadside, a motorbike or car can hit you. Someone can get hit and she will get injured or she will die. The riders don't stop when they hit you. If you're lucky and nothing happens to you then that's good. Sometimes, we organize and take some money from the rider and give to the victim to treat him/herself.*
(Single, 22 years old)

With regards to falling due to weight of load and fatigue being a danger associated with the work of Kayayei, the participants explained that sometimes due to the weight of the load, distance covered with the type of load and efforts to avoid getting knocked down, they lose their balance and fall. These falls sometimes lead to muscle strain that results in pain and wounds which impact negatively on their ability to work. Direct quotations are as follow:

*There are times when the load gets so heavy that one even falls with the load. If something bad happens to the load in the process, the owner asks us to pay for the damages.*
(Married, 25 years old)

*We get really tired carrying heavy loads along long distances, but they are normal. Our problem is getting knocked down by vehicles. Some people get fractured and some even died through this.*
(Single, 18 years old)

*My body could ache such that I could not work for about three months. Motor bikes and cars could knock a person down and drivers or users will ask the victim whether he/she has eyes.*
(Married, 29 years old)

The Kayayei also referred to the physical health-related challenges that they experience daily. The physical health concerns by the Kayayei are primarily body pains, and falls leading to injuries and overall physical health challenges. With regard to body pains, it was shown that most of the participants experience pains in the neck, backache, legs and joints as a result of the strenuous work of carrying heavy loads, climbing footbridges and walking long distances with such loads. A 22-year-old single Kayayei stated "*Sometimes the load can make one fall and break one's leg. Sometimes, the fall also causes pain in my chest"*. Furthermore, another

Kayayei, 20-year-old single Kayayei narrated "*I get very weak as a result of working. I feel pains in my legs, backbone, thighs, and arms".*

Concerning falls leading to injury, the Kayayei narrated that they either fall and injure themselves due to the heaviness of the load they carry, or they are at times pushed by motorcycles or vehicles causing them injuries. Some of their views are captured in the following quote:

> *The work is very risky. Sometimes you could carry something and fall. Last week for instance, I fell into the in gutter and injured myself.*
> (Single, 22 years old)

The participants also expressed frustration at the effect of the work on their overall physical health. Some of them stated that the difficult nature of the work can make them so sick to the extent that they will be absent from work for months or their strength will be reduced making it difficult work. They consequently attribute this to the negative physical health outcomes such as chest pains and difficulty to sleep. The following quotes summarise their views:

> *For me, it's my chest that's paining. More than three (3) weeks in the last month I have not come to work because of my chest pain. It makes it very difficult for me to breath. It's like something is pressed on my heart when I try to breath.*
> (Single, 22 years old)

> *We get very tired after work ….. Last Monday for instance, I didn't go to work because I was sick.*
> (Married, 33 years old)

> *There are times that we get sick and tired and don't go to work for two months. When someone sees us in that situation and the person has pity on us, he/she gives us money to buy medication. Some nights I vomit some yellow substances.*
> (Single, 20 years old)

Others are however able to continue with the work after a health scare. The Kayayei work seems to gradually weaken the physical health of the participants, especially the older ones. They seem not to have a choice but to continue working. This is how one participant put it:

*I feel pains in my chest whenever I carry loads. I cannot carry from here to Makola anymore. Now when I get to Makola, I have to rest for about an hour before I will have more energy to carry another load.*
(Married, 40 years old)

Most of the participants noted that due to the physical nature of the Kayayei business and the physical pain they experience frequently, they often resort to self-medication to cope with the pain. These are some of the quotes used to explain their situation:

*I get tired from work to the extent where I sometimes cannot wake up from bed. The only thing that can enable me work to the following day is the use of drugs. The work sometimes makes me very dizzy.*
(SDG 1, Married, 20 years old)

*Currently, I have chest pains. I was given a medicine that I put on fire and used the smoke over the area. It started last year.*
(Married, 26 years old)

*The work is risky because the loads we carry make us get ill sometimes. We lose our strengths sometimes and if you don't use medicine, you might not be able to get strength for the next day's work.*
(Single, 22 years old)

### 4.4.4 Mental Health Problem

It seems that the participants have experiences of stress, anxiety, and depression. The Kayayei explain that the nature of their work and the treatment by some of their patrons results in them experiencing mental distress. The study participants talked about their experiences of stress. Most of the participants stated that due to the nature of the Kayayei business, they are always stressed because of the abuse by some customers and at times not getting enough money for the day to even buy food to eat. The struggle for daily livelihood brings great uncertainty and is thus very stressful. The following quotes explain of the views of participants:

*I come to market to work to make money, and after going around the whole day and come home with virtually nothing, I lie down and cannot sleep I think about this life I am leading now. How do I feed my children?*
(Married, 40 years old)

*After the close of work, I feel tired and want to sleep but sometimes you'll only roll on the bed but cannot sleep.*

(Single, 22 years old)

*Yes. I do overreact but, on some occasions, I do nothing but go sit somewhere and cry and try not think about the problem, but it is very difficult.*

(Married, 25 years old)

It seems that many do experience symptoms that could be related to anxiety**. S**ome participants experienced trembling of hands, rapid heartbeats and feel fearful without obvious reasons. The following quotes relate to their experiences:

*I will be going about my normal day-to-day activities and suddenly, my heart will start pounding like 'fufu'.*

*(*Married, 40 years old)

*I will just sit and feel fear although I know no one is coming to do anything to me.*

(Single, 22 years old)

*For me I experience trembling in my hands like twice a week and I do not know why it happens to me.*

(Single, 22 years old)

The Kayayei spoke about the daily fluctuations of their moods from happiness to despondency and depression. While some of the Kayayei said they are always happy, a few stated that they were unhappy, and some were not feeling content with their lives. Those who were not always happy explained that their happiness is affected by financial issues of the day i.e., whether they have made enough money or not. The following narratives summarise some of their feelings:

*my happiness is mixed. For instance, I can be happy today but not tomorrow when I don't get anything out of my work.*

(Married, 40 years old)

*I'm happy but sometimes I'm not happy due to financial problems and health problems.*

(Married, 26 years old)

Those who were not content with their lives said they are not happy with the life they lead and particularly because of the conditions under which they live and the situation they find themselves in. It seems that not being in a position to make some money to make the daily sacrifices they endure worthwhile and being unable to return home is at the core of their despondency. Below are some of their quotes that reflect their emotions:

> *no (not content). I think so much about the things I want to gather before moving back to my hometown and how long it will take me.*
> (Single, 18 years old)

> *I'm not happy with my life. Me being here doing this work, I am not happy at all. I don't know what will come one day.*
> (Single, 18 years old)

> *If I say I am happy, I would be lying. Its money that we're working to get and once we get the money, we will be happy in our lives. If we were living in our hometowns, we wouldn't be going through some of the things we are going through here.*
> (Married 25 years old)

Some participants experienced suicidal thoughts and explained that this is often triggered by daily events. It is then that they sometimes wish that they had never been born and feel like ending their lives. This was particularly noted among the younger women. The have however shared that they have never attempted suicide before. Their quotes illustrate their desire for an end to their misery:

> *Yes. There are some things that when they happen to one, at times I think it would have been better if one didn't come into existence.*
> (Married, 25 years old)

> *Sometimes when people do bad things to me, I question my existence and the reason why God created me. Like when someone insults me in a way that I don't like, it makes me feel that if I end my life, it would have been better.*
> (Single, 18 years old)

*Yes. Sometimes when something bad happens to me, I ask "God what wrong have I done to deserve this?". I feel like if death was being sold, I would have gone to buy it and die.*

(Single, 22 years old)

### 4.5 Coping Strategies

The Kayayei use various coping strategies such as taking refuge in religious teachings, engaging in recreational activities, and seeking social support from family and friends. Some participants mentioned using multiple strategies to cope with the problems associated with their work as head porters. From the findings, it is clear that religion is the primary source of coping with daily living and finding solace and hope. Their resilience is also evident from the positive emotions and hopes they experience despite acknowledging their daily challenges. Religion also seems to be an important coping strategy as many participants explained that they put all their hope and trust in God in their prayers, which helps them cope with challenges related to their work. A 40-year-old married kayayei expressed her opinion in the following quote "*I take my support from God. We don't really have a support group".* Below are some of the quotes from participants:

*Whenever I don't get any money after a hard day's work, I just go home and look up to God for help. All I do is just pray with the hope that things will change.*

(Married, 22 years old)

*Being a Christian has been beneficial to me because I don't have to indulge in alcoholism in order to forget my problems. If things get difficult, I pray to God to help me against sickness and excess anger.*

(Married, 22 years old)

Recreational activities are used as coping mechanisms. Some of the participants said they engage their friends in conversations and listen to music or watch movies to cope with challenges associated with their work. For instance, a 19-year-old Kayayei stated, "*I join people who are watching movies and laughing.* Some of their narratives are captured in the following quotes:

*I stay among friends, and when we converse, I get back happy.*

(Married, 26 years old)

> *if things happen to me, I always go and sit by someone who is playing music or with my sister and friends and these take my thoughts and worries away from the problem.*
>
> (Single, 18 years old)

This study also found that the presence of social support helped the Kayayei to cope with their situation even though only a few of them stated that they had social support. It was revealed that sometimes family members and friends play an important role in helping the Kayayei to manage their difficulties through words of encouragement. A 25-year-old married Kayayei stated *"So sometimes too I speak to my mother on the phone to tell her my problems and she advise me"* Furthermore, an 18-year-old participant put it this way, *"I have a friend so anytime I am in difficulty, I call her"*.

In narrating their daily struggles and coping strategies, it was evident that the Kayayei demonstrated some level of resilience which enabled them to persevere in the difficult situations they find themselves in. They shared their positive emotions and hope for each day:

> *I know that even though the work I am doing is very difficult, I know my life will change if there is long life, so I take it just like that.*
>
> (Single, 22 years old)

> *God has given me strength to live. There are people who don't feel fine unless they go to the hospital, but I'm fine. I get my strength renewed whenever I wake up, and I am able to work, and this gives me happiness.*
>
> (Married, 33 years old)

It seems that a few of the participants use self-care techniques as a coping strategy by deliberately involving themselves in activities that enhance their emotional, mental, and physical health. One participant shared her self-care strategy:

> *At times my health will not allow me to work, or a client will make me angry, I just sleep and do not go to work that day, and when my friends ask for the reason, I tell them I came to look for money and not money looking for me, so I will take things easy.*
>
> (Married, 29 years old)

Regarding the use of multiple strategies, this study found out that participants most of the time applied multiple strategies to cope with issues related with their work, The participants

explained that they employ other strategies aside from praying to or placing hope in God. For example, a 29-year-old married participant stated:

> *I watch entertaining videos on phone when I'm tensed up. I pray to God to get me back to normal life.*
>
> *(*Married, 29 years old)

The following quotes further explains their narratives:

> *I pray to God for a good day before I start work and whenever I face difficulty. I converse with colleagues. We could converse for a long time. We play the game of Ludu as well.*
>
> (Married, 26 years old)

> *It's been a long time that I'm not getting the money and one of my friends told me that little by little I will get it. She said when my time comes, no one will tell it that my time has come. I pray about this. We don't have television or radio here, so we don't watch or listen to any of those.*
>
> (Single, 20 years old)

Even though the Kayayei use various coping strategies to help them navigate the daily struggles they go through, for some of them, it is only once a week that they are able to relax and socialise because they work for six days in the week.

> *We don't have television or radio, so we don't watch or listen to them. Even if we had ludu or 'oware' (pit and pebble game) in our homes, we would not get the time to play them. It's only on Sundays that we sit around and converse and laugh.*
>
> *(*Married, 22 years old)

The president of the Kayayei Association expressed his frustration in the following way:

> *One bag of corn is selling at 80 cedis. Do I sell all three or four bags and start fasting? I cannot do that. The girl then says, "father, I'd like to continue my education and if you can't afford, let me go to Accra and work for money" while the boys stay back and go to school. ……These women do not talk about the reasons because they feel shy to talk about the real issues, but I am here with them and to tell you the truth, another issue is marriage problems. These girls are too young and someone else*

*feels that the parents of the girl are poor and with his money, he can marry the girl, the girl then runs away.*
(Stakeholder 1)

**4.6 Findings from Researchers Observation**

This section provides the results of the researcher's observation at the Agbogbloshie market. The observation focused on (1) The physical environment of the Agbogbloshie market (2) the nature of load the Kayayei carry (3) the distances the Kayayei usually cover (4) vehicular traffic at the market (5) attitudes towards the Kayayei and (6) how much the Kayayei usually charge their clients.

*Physical environment of the Agbogbloshie market:* the researcher's observation of the Agbogbloshie market indicated that the market environment is not conducive to be walking throughout the day. The market is very dusty, congested, and a lot of rubbish is dumped there. Below are observations made at the market:

*The nature of loads the Kayayei carry:* the researcher observed that the Kayayei usually carry heavy loads including yam from the yam market, groceries for their patrons, and sacks of charcoal, among others.

*The distances the Kayayei usually cover:* it was also observed that the kayayei usually walk the whole day carrying goods from one location to another.

*Vehicular traffic at the market:* during the observation, the researcher found out that there was heavy vehicular and motto cycle congestion at the market making it very difficult to move around in the market.

*Charging clients*: the researcher observed that the average charge for a pan load as of 2017, the time of data collection, was one (GHS1) Ghana cedi ($0.20).

**4.7 Discussion**

This chapter explored the lived experiences of Kayayei in Agbogbloshie the capital city of Ghana. In this qualitative study, participants indicated that the main reasons for migrating to Accra to engage in the Kayayei business were economic and cultural. They further narrated their lived experiences, including their daily routine and psychosocial challenges. The study found that the Kayayei work is very tedious, involving waking up early in the morning, moving about to obtain clients for the day, and going back home very late at night. The study revealed that the Kayayei are at times maltreated and are physically and mentally abused.

### 4.7.1 Reasons for Migration

Demographic factors such as age, level of education, and marital status play a crucial role in determining the reasons that force migrants to decide to migrate from their original abode as suggested by various scholars (Anarfi, Kwankye, Ababio, & Tiemoko, 2003; Kwankye, Anarfi, Tagoe, & Castaldo, 2009). In recent times most young females are becoming more autonomous in their decision-making regarding migrating to new destinations, they therefore migrate independent of their relations to new destinations confirming the findings of Awumbila and Ardayfio-Schandorf (2008).

Findings of this study indicate that the Kayayei had two main reasons for migrating to Accra to engage in the Kayayei business. The primary reasons given were economic and cultural. This study found that most Kayayei decide to migrate from their home region (Northern) due to the deteriorating economic conditions and cultural reasons that prevail in the Northern region. The Northern Region of Ghana is considered one of the country's poorest regions, with most of its residents living in extreme poverty (Castaldo, Deshingkar, & McKay, 2012; Fuseini, Enu-Kwesi & Sulemana, 2019). The increasing rate of migration from the northern to the southern region reflects various governments inequitable distribution of infrastructure and resources along with lack of planning and implementation of rural development programmes in the country (Nisar, Akram, & Hussain, 2013). This finding has further been supported by a study by Awumbila and Ardayfio-Schandorf (2008) on gendered poverty, migration, and livelihood strategies of female porters in Accra, where the authors noted that the Kayayei had migrated to Accra to due to harsh financial conditions in the north.

Although various studies have found varied reasons for migration, such as political upheaval, including armed conflict, political and religious oppression (Zimmerman et al., 2011; Bhugra, 2004; Adger et al., 2015). The main reason for migration identified by the qualitative aspect of this study is economic and cultural, as stated earlier. Most of the Kayayei stated that they migrated to Accra due to various economic reasons including earning income to further their education. The migration of the Kayayei is mostly temporary since they have an intention and concrete plans to return to their places of origin. This aspiration underscores the increasing number of young women and girls migrating from the northern part of Ghana to Accra to engage in various businesses in Accra. This finding contradicts some assumptions that Kayayei are mostly uneducated young women whose life choices are limited (*Leadership and Advocacy for Women in Africa-Ghana* [LAWA-Ghana] 2003). In this doctoral research, out of the thirty-

one participants who took part in the qualitative study, only five had no formal education. The findings of this study reinforce the indication of a new trend where increasingly educated young women who one way or the other lack funds to further their education are engaging in the Kayayei business with the hope of saving enough money to further their education (Awumbila et al., 2017; Awumbila & Ardayfio-Schandorf 2008). The studies revealed that most of these women were of the view that because of their limited educational background, society looks down on them, and they are not able to gain employment in the formal sector of the Ghanaian economy to earn a decent living. These women are, therefore, marginalised in society due to their low socio-economic background, the kind of work they do, and the perceived low/lack of education. Education is an important factor in empowering women to make decisions and make informed choices on issues that affect their lives (Bhat, 2015). This might explain why most of these women were determined to work and end income to further their education. Their determination is explained by the individual's force characteristics, as illustrated by Bronfenbrenner and Morris (2006), that motivates them to pursue an intended goal during the developmental process.

### 4.7.2 Economic Reasons

Independent female migration has become a major survival strategy in response to deepening poverty to augment meagre family income (Yaro, 2008). A study conducted among 213 Kayayei in Accra by Shamsu-Deen (2015) found out that over two-thirds of the respondents (64.8 %) migrated to Accra to look for money. The present study where the economic factor is noted to be the main factors that influence migration flow supports the view by Castelli (2018) that environmental and socio-economic may contribute to both internal and international migration, and mainly out of control of individuals. The implication of this is that the Kayayei might not have a better option than to migrate to the Accra the capital city that offers the chance of getting a better job with high wages, good health care, and strong educational systems as indicated by Simpson (2017).

In this study, the Kayayei leave their villages and travel to Accra seeking for a better life so they could send remittances to their relatives in the northern part of Ghana to alleviate their poverty. This finding is consistent with the argument by Orozco (2013) that remittances represent the central economic activity of migrants. This finding is also in agreement with this study's conceptual framework, which indicated that interpersonal level factors, in this case, the need to support family, constitute a vital goal in the decision by Kayayei to migrate to the city.

By so doing the Kayayei help in improving the household's income and indirectly reduce poverty. Family remittances are savings that Kayayei transfer to their families to cover the regular up-keep of their households (Hagen-Zanker, 2015; Orozco, 2013). Due to the level of poverty of the families, the money sent by the Kayayei constitutes a major income for these families. This further confirms a study by Lokshin, Bontch-Osmolovski, and Glinskaya (2010) which noted that one-fifth of the poverty reduction in developing countries is due to increased number of migrants who send remittances home. This implies that the delay or the failure of the migrant to send these monies at the expected time could exacerbate the suffering of these families who have many mouths to feed each day. According to Straubhaar and Vâdean (2006), the frequency of remittances by a migrant depends on the amount of money they earn and the savings from that income and mostly on the willingness or the motivation of the migrants to remit their hard-earned savings back home. The present study found that the Kayayei earn an average of about fifteen Ghana Cedis a day (GHS 15), which is about 3 US Dollars ($3) (at the time of data collection in 2017). Their income is therefore inadequate to take care of themselves before remitting to their families back home.

These findings imply that if the necessary reform programmes and policies are instituted by the government to protect and facilitate better working conditions and remuneration of the Kayayei, the remittances sent regularly to their poor family living in the less economically developed part of the country could help the country to achieve Sustainable Development Goal (SDG) One (United Nations, 2015). Goal one is one of the 17 goals that require the reduction at least by half the proportion of men, women and children of all ages living in extreme poverty in all its dimensions in accordance with the national capacity by 2030. It also has a target to ensure that the vulnerable in society have equal rights and access to economic and basic services, support people that have been affected by climate-related events, disasters, and environmental and social shocks. The SDGs were adopted by all the states in the UN in 2015 as a universal call to action to alleviate poverty and to protect the planet by the year 2030 (Carter et al., 2018; Griggs et al., 2013; Kenny, 2015; Sachs, 2012).

Another economic reason that forces the young Kayayei to migrate is their ambition to further their education. The study noted that younger women who have completed the basic education successfully but due to poverty could not continue, decide to leave their villages and travel to the city (Accra) to work and to save money and then to go back to school to further their education. This finding supports the view by Dako-Gyeke (2016) that migrants leave their

homes and travel to a new destination with the desire to further their education through self-financing. Before the introduction of free education at the senior high school level by the Government of Ghana in 2017 (Abdul-Rahaman, Rahaman, Ming, Ahmed, & Salma, 2018), families needed to pay for everything from fees, dormitory costs to the uniforms before their ward could be accepted in any of the secondary schools either private or public. This situation puts a strain on family income, especially on the poor households (Asumadu, 2019). The implication of this is that children from poor families that could not afford to pay for their education drop out of school and follow other paths such as migrating to the city. Those who have not chosen to migrate end up on the streets, with some of them engaging in antisocial behaviour such as prostitution, armed robbery, and substance abuse (Asante, 2015; Bender, Ferguson, Thompson, & Langenderfer, 2014).

The study also revealed that the dream of a future business or entrepreneurship pushes young women to migrate to Accra. Establishing a new business in the rural area involves a minimum amount of capital and getting this amount is never easy for most people coming from villages where the major economic activity is farming. Farming in the rural setting of Ghana is basically for household consumption. This implies that the only possibility available for these women to achieve their ambition of starting a new business is to migrate to Accra where they can work and save money. This is in accordance with the study by Démurger, and Xu (2011) that argues that migration experience may enhance financial capital, and thus enable individuals to set up their own businesses upon return. The finding of the current study also supports the findings by Sinatti (2011) which noted that migrants migrate intending to accumulate money in the host destination and return home to set up a local business from which family and relatives can benefit from the profit. The implication of this is that the income will contribute to the economic development of the region and improve the living standard of the populaces of the region which was known for its poor economic development. This is also supported by a study by Klagge, and Klein-Hitpaß (2010) which argues that the migrants will return to their home countries may bring financial capital with some becoming small skill investors and entrepreneurs who contribute to the economic development of their region. It therefore implies that when these investments by migrants in their hometown continue in the same trajectory, it could help the country in achieving its SDG target by 2030.

### 4.7.3 Cultural Reasons

This study found that although economic reasons are paramount determinants for migration, discriminatory, and stifling cultural practices that perpetuate gender inequality also force most migrants out of their places of origin to their current destination. For instance, the study found that cultural practice like forced marriages compel some of the young female Kayayei to migrate from the northern region to Accra, the political and economic capital of Ghana, to escape. Forced marriage is a cultural practice in some parts of Ghana, where children who are too young to make informed decisions are given into marriage without their consent (Adjei, 2015). These young females are compelled by their parents to get married to older men who are already married to multiple wives (Domfe & Oduro, 2018). Some of these parents use this practice as a mechanism to preserve the dignity of the family against premarital sex, and teenage pregnancy that could bring shame to the family (Ahonsi et al., 2019). The higher rate of underage marriages in rural areas was reported by Ahonsi et al. (2019), where more than one fifth (20.68%) of the women first married before age 18. Although marriage is supposed to bring stability to these women, the conditions of the marriage are rather driving them away from their homes to seek for greener pastures in Accra.

The findings of this study show that cultural practices in the northern part of Ghana push some young female migrants from their homes in search of independence. The result of the present study validates the conceptual framework, specifically the macrosystem, where societal influences such belief systems and cultural practices influences all other factors in the bioecological system as noted by Paquette & Ryan (2001). In Ghana, where there are no specific laws prohibiting these kinds of practices, the only way out is to run away. In Accra, exposure to sexual violence increases the likelihood of pregnancies. Various research studies have shown a higher probability of child mortality among first-born children, poorer health status, and a higher illiteracy rate among young women in the northern region (De Groot, Kuunyem, & Palermo, 2018).

### 4.7.4 Daily Lived Experiences

Regardless of the reasons for migrating to Accra to engage in the Kayayei business, these women go through similar experiences in their quest to earn income. These lived experiences include their daily routine and psychosocial challenges. The conceptual framework of this study recognises the impact of bioecological context on the overall wellbeing of the Kayayei migrants. The interaction between the individual, interpersonal and structural factors impact

negatively on the physical and mental health of the Kayayei. The study found that the daily routine of the Kayayei entailed the time they start work in the early morning, how they obtain clients, and negotiate their prices. Working as a Kayayei demands waking up very early in the morning to go to areas in the market where they can obtain clients who have arrived in the market and help carry their wares to their prospective destinations which confirms the findings by other studies (Abukari & Al-hassan, 2017; Nyarko & Tahiru, 2018). This implies that the time the Kayayei wake up in the morning will determine the number of clients she gets and proportionally the income she will earn at the end of the day. This time factor compels Kayayei to have a shorter sleep almost every night, affecting their health in the long term. Waking up early to get the client does not end the daily routine of a Kayayei, adding to that is the negotiation of the price of the load to be carried from one point to the next destination. This is consistent with findings by Ahlvin (2012) where the author argued that the Kayayei walk up and down in market centres nearly fifty times a day before they close, go back home, and return the following day to continue this daily routine. Getting a client is not just about walking alone while carrying a pan but one must be aggressive by contacting potential clients to offer services to them as suggested by Azinga (2015).

The study found that negotiation of the price depends on the type of load and distance to the clients' destination. This negotiation sometimes ends with the clients refusing to pay the exact agreed-upon amount or even refusing to pay all together upon reaching their destination. In contrast, only a few generous clients show empathy on the Kayayei by paying them more than they have earlier negotiated. This indicates that the Kayayei are not self-assured and therefore do not have the bargaining power to demand what is due to them. A study by Hettige, Ekanayake, Jayasundere, Rathnayake, and Figurado (2012) suggested that migrant workers suffer from abuse, exploitation, neglect, and marginalisation, and are often deprived of the support services they needed.

Studies by various researchers such as Lu (2010), Kirmayer et al. (2011), and Buchanan and Smokowski (2009) found that migrants face arduous life circumstances such as economic hardship, poor housing, and substance abuse to conform to social norms. The findings of the present study confirm previous studies by Azinga (2015), who reported the aggressive nature of the Kayayei business, where the women had to struggle for potential customers to identify them and have potential customers who contact them anytime they come to the market centres for shopping. The finding showed that the Kayayei go through a hectic time in obtaining clients and in negotiating for the price for their services. Considering how big the Agbogbloshie

market is and its congested nature, it implies that these women had to walk for hours to obtain clients. The finding of this doctoral thesis, however, contradicts an earlier study by Hiralal (2017), that migrant women face obstacles in finding employment, thereby depending on their male counterparts for their livelihoods. In his view, this dependence exposes them to violence and abuse. In this present study, Kayayei are rather the primary source of income for their families, and in some cases, some husbands stay home for them to go to work and bring all their earnings to them to manage. The findings of this present study suggest that women suffer from various forms of abuse in most cultures no matter their status in society.

#### 4.7.4.1 Physical and Mental Health Challenges

This section explored the narratives of Kayayei concerning the impact of the Kayayei business on their physical and mental health and the social support available to them to cope with their situation. The conceptual framework of this study is in line with the study's findings which discovered a proximal process which is the interaction of the Kayayei with the environment. Thus, the Kayayei interaction with the hostile environment has a negative impact on the physical and mental health. For instance, the study found that the physical nature of the work of the Kayayei exposes them to all sorts of injuries through motorcycles and vehicular accidents and falling due to the weight of the load and walking long distances causing fatigue. The present study found that the prevalent physical health challenges the Kayayei face are due to the nature of their work. The physical health challenges include body pains such as pains in the neck, chest pains, backache, legs, and joints due to the strenuous work of carrying heavy loads, climbing footbridges, and walking long distances with heavy loads. The direct implication of this that, the majority of the daily earnings of the Kayayei are spent in buying medication to mitigate the pains they feel to get ready for the next day. This subsequently leads to a high prevalence of self-medication or even other illegal drug abuse among Kayayei. Most Kayayei, are unable to access regular medical care from qualified health professionals due to time constraints and inability to afford basic health care, as indicated by Sánchez (2014).

The findings of the present study further indicated that most of the participants lack decent accommodation coupled with mistreatment by their patrons and society in general. The above-mentioned risk factors have subsequently led to mental health challenges such as stress, anxiety, and depression among the participants. Other studies have also reported mental health challenges among migrant workers, for example, Li, Dai, Wu, Gao, and Fu (2019), reported higher levels of depression among migrants than non-migrants. Similarly, a high prevalence of

mental health challenges among migrants were also reported by Yang, Dijst, and Helbich (2020). The study reported a 26.8 per cent prevalence of mental health problems among internal migrants in China. In Ghana, however, the prevalence of mental health challenges among internal migrants specifically the Kayayei has not been measured quantitatively. This doctoral thesis conducted a quantitative measurement of the levels of mental health challenges and their risk factors among the Kayayei. This should help in developing intervention programmes that target the mental health of the Kayayei and other vulnerable groups in society.

#### 4.7.5 Coping Strategies

The present study found that the Kayayei adopted multiple coping strategies in dealing with their daily lived experiences. This current study found out that the Kayayei sometimes used recreational activities such as sharing their lived experiences with their friends and listening to music or watching movies. These findings confirm the results of a study by Henneh and Amu (2019) that creative arts play a significant role in health promotion. In their study, the authors found that many of their participants used the creative arts such as movies, music, drama, and dance as a form of health promotion and resorted to them for psychological well-being (Henneh & Amu, 2019). The adoption of creative art like movies or comedy clips seems to play a crucial role in the lives of migrants and is actively used as ways of replenishing the emotional and cognitive exhaustion they have gone through (Reinecke, 2009).

The study also found some of the Kayayei receive support from their family members (parents and siblings) and friends and this helps them to cope during difficult times. They receive words of motivation and encouragement and are advised to pray to God and continue doing their work with passion and honesty. The use of family and friends as a coping strategy in dealing with excruciatingly difficult situations points to the role of families and friends in the life of every individual in the Ghanaian culture. Further, it was realised that religion is a major coping strategy adopted by most Kayayei in dealing with their daily living conditions and experiences.

The results show that participants internalised religious beliefs to cope with stressful situations. Praying to God by the Kayayei thus puts their suffering in the hand of God with the trust and hope that He [God] who created them will surely help them through the difficulties and end their predicaments one day. This finding confirms a previous study by Aflakseir and Mahdiyar (2016) who found that women who used religious coping strategies were less likely to experience depression symptoms. The findings of the present study further demonstrated an orientation that individuals acquire to show tolerance to suffering and to make it understandable

and bearable (Pargament, Exline, & Jones, 2013). Besides, it was noted that the majority of the Kayayei had developed some level of resilience, which enabled them to persevere in the difficult situations they find themselves in and with the hope that one day their lives will change for the better.

The conceptual framework of the present study is justified in its assertion that personal processes such as resilience and other coping strategies determine the physical and mental health of an individual (Singh, 2011; Záleská, Brabcová, & Vacková, 2014). A finding of this study was that most of the Kayayei adopted prayer as an essential coping strategy for their daily lived experiences. Religion plays a significant role in Ghanaian society, in Ghana, Christianity is the dominant religion, followed by Islam and then traditional worship (Murray & Agyare, 2018). Religious coping refers to religious beliefs or practices to cope with stressful life situations (Aflakseir & Mahdiyar, 2016). It is worth noting that due to the physical nature of the Kayayei work, most of the participants employ maladaptive coping strategies such as self-medication to cope with the daily physical pain they go through.

In this study, the Kayayei showed tremendous resilience in the face of the challenges they face. This study found that some of the Kayayei were still in school but come to Accra during the vacation period to work. This ability shows strength and the capability to bounce back in difficult situations, determining health outcomes (Smith, Tooley, Christopher, & Kay, 2010). Instead of the Kayayei focusing on their present circumstances, most of them instead look beyond and think about the future, and about how their income will help them have a better future. They see migration as providing financial and material gains which they lacked before migrating (Fu Keung Wong, & Song, 2008).

### 4.8 Limitations of the Qualitative Study

A major limitation of a qualitative study is that the findings cannot be generalised to the whole population with the degree of certainty that quantitative data analysis can (Ochieng, 2009). Further, due to the small sample size and the non-probability sampling method used, the findings cannot be generalised to all Kayayei and other internal migrants in Ghana. Quantitative data was therefore collected to augment the qualitative data.

### 4.9 Conclusion

This chapter employed the narratives of Kayayei concerning the impact of the Kayayei business on their physical and mental health and the social support available to them to cope

with their situation. There was evidence of physical health challenges, including accidents, pain, and fatigue. The majority of the participants also lack decent accommodation coupled with mistreatment by their patrons and society in general. There also seemed to be mental health challenges such as stress, anxiety, and depression. The results indicated that the prevalent coping strategies used by participants are their internalised religious beliefs and recreational activities. Most participants draw on social support from friends and family to cope with a stressful situation. It is worth noting that due to the physical nature of the Kayayei work, many of the participants employ maladaptive coping strategies such as self-medication to cope with the daily physical pain they go through. The findings of this study are an indication of the important role of religion in mitigating the impact of challenges in Ghanaian society. Further, social support and resilience also enhance the coping and survival of the Kayayei. It is, therefore, essential to develop intervention strategies aimed at strengthening social interventions targeted at the Kayayei to improve their wellbeing. The implication of the findings is discussed in Chapter eight.

# CHAPTER FIVE
# PREVALENCE OF PHYSICAL AND MENTAL HEALTH CHALLENGES AMONG THE KAYAYEI IN GHANA

## 5.1 Introduction

This chapter examined the prevalence of physical and mental health challenges among the Kayayei. A review of the literature in chapter two showed a paucity of empirical literature on the physical and mental health of the Kayayei in Ghana. Previous studies among the Kayayei are limited in scope and focus primarily on the general work conditions and access to health care. No known studies have investigated the prevalence of both the physical and mental health challenges among the Kayayei. This quantitative aspect of the thesis, therefore, sought to examine the extent of physical and mental health challenges among the Kayayei. This was considered necessary to address one of the study's overall objectives which was to provide guidelines for health promotion interventions needed to promote the physical and mental health of the Kayayei. In this chapter, the results of the statistical analysis performed (as explained in chapter 3) are presented. The first aspect presents an overview of the socio-demographic characteristics of the study participants, followed by physical health challenges. Conclusions are then drawn based on the key findings made. The demographic mean/median group differences are also presented for age and income.

## 5.2 Background Characteristics of Respondents

Table 5 presents the socio-demographic characteristics of Kayayei. A total of 352 Kayayei were recruited for the study. The median age of the study participants was 25 (IQR=18-65). Majority (n=191, 54.6%) were 18-25 years old. The majority of participants had no education (n=136, 38.5%) while (n=112, 31.7%) had primary education followed by JHS (n=83, 23.5%) and SHS (n=21, 6.2%). Most (63.1%, n=222) were married, and 40.5 per cent (n=143) had given birth to one to two children. The Kayayei primarily belonged to the Islamic religion (86.7%, n=305). While 28.7 per cent (n=101) of the Kayayei had stayed in Accra for less than a year, 36.9 percent (n=130) had been living in the city for at least three years. The results further indicate that majority of the Kayayei (66.8%, n=235) rated their work as very difficult while the rest (33.2%, n=117) rated their work as difficult. Majority also indicated having accommodation (51%, n=179) in the city. Most (52.4 %, n=184) of the Kayayei usually worked up to eight hours a day and generally earned GHC 11-20 (54.3%, n=191) ($1 = GHC 4.9 [in 2018 when data was collected). The mean income was 14.63±6.78 and median income was

GHC 15. clients, according to majority of the Kayayei treated them as ‘normal’ (53.1%, n=187).

**Table 5**
**Background Characteristics of Respondents**

| Characteristic | Frequency [N=352] | Percentage [%] |
|---|---|---|
| **Age** | | |
| 18-24 | 166 | 47.2 |
| 25-34 | 139 | 39.5 |
| ≥35 | 47 | 13.3 |
| Median (IQR) | 25 (18-65) | |
| **Education** | | |
| No Education | 136 | 38.6 |
| Primary Education | 112 | 31.7 |
| JHS | 83 | 23.5 |
| SHS | 21 | 6.2 |
| **Marital status** | | |
| Unmarried | 130 | 36.9 |
| Married | 222 | 63.1 |
| **Parity** | | |
| No child | 95 | 27.0 |
| 1-2 children | 143 | 40.5 |
| ≥3 | 115 | 32.5 |
| **Religion** | | |
| Christianity | 47 | 13.3 |
| Islam | 305 | 86.7 |
| **Duration of stay in Accra (In years)** | | |
| <1 | 101 | 28.7 |
| 1-2 | 121 | 34.4 |
| ≥3 | 130 | 36.9 |
| **Accommodation in Accra** | | |
| No | 172 | 49.0 |
| Yes | 179 | 51.0 |
| **Daily work duration (In hours)** | | |
| 1-8 | 184 | 52.4 |
| 9+ | 167 | 47.6 |
| **Daily income (GHC)*** | | |
| 1-10 | 133 | 37.8 |
| 11-20 | 191 | 54.3 |
| ≥21 | 28 | 7.9 |
| Mean(±SD) | 14.63 (±6.78) | |
| **Difficulty of work** | | |
| Difficult | 235 | 66.8 |
| Very Difficult | 117 | 33.2 |
| **Patron treatment** | | |
| Nicely | 87 | 25.0 |
| Normal | 187 | 53.1 |
| Badly | 78 | 22.1 |

*$1=Ghc 4.9=ZAR 14.2 (in 2018 when data was collected)

### 5.3 Physical Health Challenges among the Kayayei

Table 6 presents results the of the physical health challenges of the Kayayei. The table show the percentages of participants who stated they either never, occasionally, or constantly experienced certain kinds of physical health challenges. The highest response for physical pain was constant (51%) followed by occasionally (43%). In the case of feeling of tension and stiffness, the highest response was occasionally (52.4%), followed by constantly (37.4%). Furthermore, the highest response for incidence of fatigue or low energy was occasionally (51.9%), followed by constantly (36.1%). The most common response for incidence of colds and flu was occasionally (40.7%) followed by constantly (37.0%). In the case of incidence of headaches, the most common response was occasionally (40.6%) followed by regularly (37.0%). The results found the most common response for incidence of nausea and constipation to be rarely (47.3%), followed by occasionally (29.2%). In the case of allergies or eczema however, the most common response was rarely (46.1%), followed by never (26.6%). Finally, for the incidence of dizziness or light-headedness the most common response was regularly (38.1%, followed by occasionally (30.7%).

**Table 6**
**Physical Health Challenges among the Kayayei**

| **Physical Health (M=0.44, SD=0.50** | **1** | | **2** | | **3** | | **Total** |
|---|---|---|---|---|---|---|---|
| | **N** | **%** | **N** | **%** | **N** | **%** | **N** |
| 1. Presence of physical pain (neck/back ache, etc) | 1 | 0.1 | 154 | 44.1 | 194 | 55.8 | **349** |
| 2. Feeling of tension, stiffness, or lack of flexibility in your spine | 2 | 0.6 | 186 | 53.3 | 161 | 46.1 | **349** |
| 3. Incidence of fatigue or low energy | 5 | 1.4 | 200 | 57.3 | 144 | 41.3 | **349** |
| 4. Incidence of colds and flu | 5 | 1.4 | 159 | 45.6 | 185 | 53.0 | **349** |
| 5. Incidence of headaches (of any kind) | 5 | 1.4 | 155 | 44.4 | 189 | 54.2 | **349** |
| 6. Incidence of nausea or constipation | 47 | 13.5 | 267 | 76.5 | 35 | 10.0 | **349** |
| 7. Incidence of allergies or eczema or skin rash | 92 | 26.4 | 248 | 71.0 | 9 | 2.6 | **349** |
| 8. Incidence of dizziness or light-headedness | 14 | 4.0 | 129 | 37.0 | 206 | 59.0 | **349** |

*1 never, 2 occasionally, **3** constantly*

### 5.4 Prevalence of physical health challenges among the Kayayei

Figure 9 shows that the most prevalent physical health challenge among the Kayayei was dizziness (59%), followed by physical pain (55%), and the third highest physical health challenge was headaches (54%). Most of the Kayayei (59.9%) reported that they suffer from poor physical health while the rest (40.1%, n=141) reported enjoying a good physical health status (See figure 8).

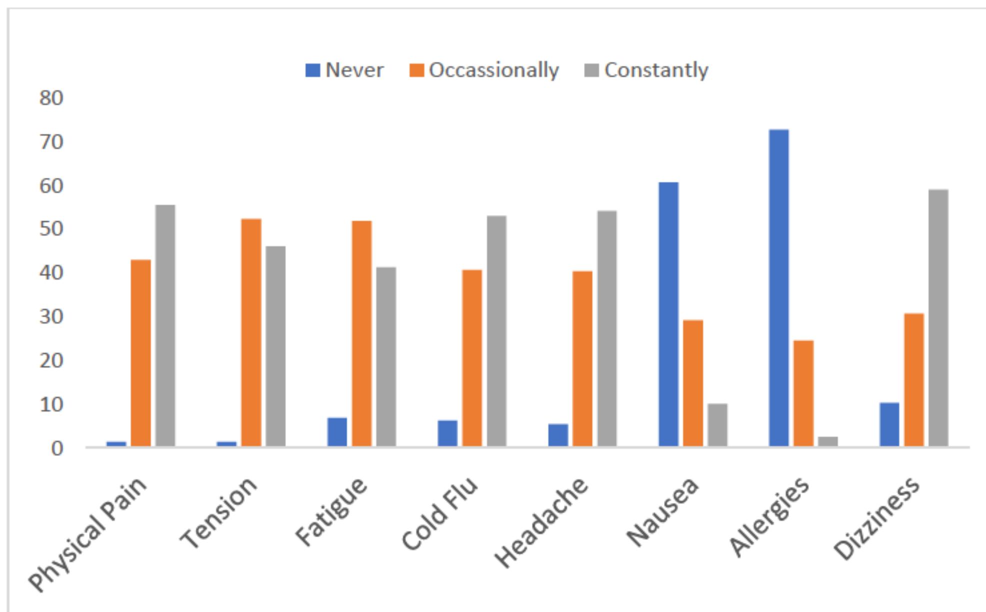


Fig 8: Prevalence of physical health challenges among the Kayayei

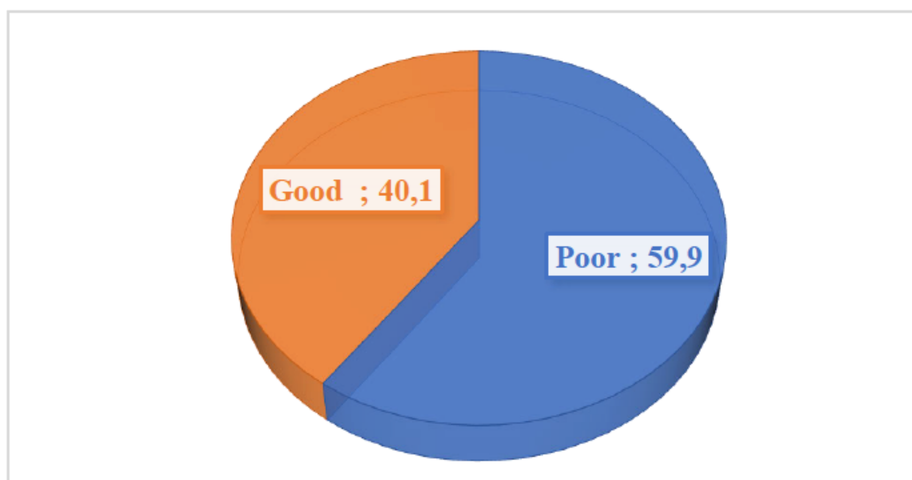


Figure 9: Overall physical health

### 5.5 Mental Health Challenges among the Kayayei

Table 7 shows details recorded on the DASS-21 scale. The table shows percentages of participants who indicated the statements 'Did not apply to me at all', 'Applied to me to some degree, or some of the time', 'Applied to me to a considerable degree or a good part of time', and 'applied to me very much or most of the time'. The most common response for questions concerning incidence of depression, anxiety and stress were '*Applied to me to some degree, or some of the time' and 'Applied to me to a considerable degree or a good part of time'.*

**Table 7**
**Mental Health Challenges among the Kayayei**

| **Depression (M=10.28, SD=3.71)** | **0** | | **1** | | **2** | | **3** | | **Total** |
|---|---|---|---|---|---|---|---|---|---|
| | **N** | **%** | **N** | **%** | **N** | **%** | **N** | **%** | |
| 1. I couldn't seem to experience any positive feeling at all | 45 | 12.8 | 197 | 56.13 | 100 | 28.50 | 9 | 2.6 | 351 |
| 2. I found it difficult to work up the initiative to do things | 27. | 7.7 | 191 | 54.40 | 131 | 37.3 | 2 | 0.6 | 351 |
| 3. I felt that I had nothing to look forward to | 20 | 5.7 | 182 | 52.0 | 132 | 37.7 | 16 | 4.6 | 350 |
| 4. I felt downhearted and dejected | 7 | 2.0 | 137 | 39.1 | 168 | 40.7 | 38 | 10.9 | 350 |
| 5. I was unable to become enthusiastic about anything | 11 | 3.1 | 207 | 59.1 | 127 | 36.3 | 5 | 1.4 | 350 |
| 6. I felt I wasn't worth much as a person | 30 | 8.6 | 165 | 47.91 | 122 | 34.7 | 33 | 9.4 | 350 |
| 7. I felt that life was meaningless | 22 | 6.3 | 117 | 33.2 | 84 | 23.9 | 128 | 36.4 | 351 |
| **Anxiety (M=9.22, SD 3.45)** | | | | | | | | | |
| 1. I was aware of dryness of my mouth | 130 | 37.0 | 162 | 46.2 | 51 | 14.5 | 8 | 2.2 | 351 |
| 2. I experience breathing difficulty | 54 | 15.4 | 157 | 44.7 | 121 | 34.5 | 19 | 5.4 | 351 |
| 3. I experienced trembling (e.g. in the hands) | 28 | 8.0 | 153 | 43.7 | 136 | 38.9 | 33 | 9.4 | 350 |
| 4. I was worried about situations in which I might panic and make a fool of myself | 13 | 3.7 | 197 | 56.3 | 121 | 34.6 | 19 | 5.4 | 350 |
| 5. I felt I was close to panic | 18 | 5.1 | 184 | 52.6 | 134 | 38.3 | 14 | 4.0 | 350 |
| 6. I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat) | 42 | 2.0 | 165 | 47. 0 | 124 | 35.3 | 20 | 5.7 | 151 |
| 7. I felt scared without any good reason | 10 | 2.9 | 180 | 51.3 | 149 | 42.5 | 12 | 3.5 | 351 |

**Table 7 Continuation**

| Stress (M=9.06, DS=3.32) | 0 | | 1 | | 2 | | 3 | | 4 |
|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | Total |
| 1. I found it hard to calm down | 54 | 15.4 | 174 | 49.6 | 107 | 30.5 | 16 | 4.6 | 351 |
| 2. I tended to over-react to situations | 30 | 8.6 | 212 | 60.6 | 99 | 28.3 | 9 | 2.6 | 350 |
| 3. I felt that I was using a lot of nervous energy | 13 | 3.7 | 186 | 53.1 | 132 | 37.8 | 18 | 5.1 | 349 |
| 4. I found myself getting agitated | 11 | 3.1 | 182 | 52.0 | 138 | 39.4 | 19 | 5.4 | 350 |
| 5. I found it difficult to relax | 36 | 10.3 | 156 | 44.6 | 137 | 39.1 | 21 | 6.0 | 350 |
| 6. I was intolerant of anything that kept me from getting on with what I was doing | 6 | 1.7 | 198 | 56.6 | 135 | 38.6 | 11 | 3.1 | 350 |
| 7. I felt that I was rather touchy | 131 | 37.4 | 148 | 42.3 | 68 | 19.4 | 3 | 0.9 | 350 |

***0** Did not apply to me at all, 1 Applied to me to some degree, or some of the time,  **2** Applied to me to a considerable degree or a good part of time,  **3** Applied to me very much or most of the time*

### 5.6 Background Characteristics and Depression among Kayayei

From table 8, 18-24 years olds have the highest prevalence of moderate to extreme levels of depression. In this age group, 46.1 percent (n=65) indicated moderate depression, 45.9 percent (n=34) indicated severe depression while 52.2 percent (n=47) also indicated extreme depression. Regarding education, the results indicate that participants with primary education had the highest levels of severe and extreme depression, 37.8 percent (n=27) and 38.9 (n=35), respectively. Furthermore, the result show that married Kayayei had high prevalence of depression. The married women had moderate depression of 74.5 percent (n=105), severe depression 66.2 percent (n=49), and extreme depression of 62.2 percent (n=56). The results further indicate that participants who had 1-2 children indicated higher levels of depression, and that the prevalence of depression was moderate (47.5%, n=67), severe (39.2%, n=29), and extreme severe (37.8%, n=34). Regarding difficulty of work, the analysis showed higher prevalence of depression among the Kayayei who rate their work as very difficult (59.6%, n=84) were moderately depressed (79.7%, n=59), were severely depressed, and (83.3%, n=75) were extremely depressed. Participants with no accommodation showed a high prevalence of moderate depression of 70.9 percent (n=100). However, participants with accommodation showed high levels of extreme depression 88.9 percent (n=80). Concerning how the Kayayei perceived being treated by their clients, the analysis indicated the prevalence of depression was highest among those who perceived their treatment as normal, with moderate depression accounting for 44.0 percent (n=62), severe depression of 51.3 percent (n=38), and extreme depression of 77.8 percent (n=70). Furthermore, the results show higher moderate depression

among participants who earned between 11-20 Ghana cedis accounting for 61.0 percent (n=86) However, there was high extreme depression among those who earned between 1-10 Ghana cedis (56.7%, n=50). Regarding the length of stay in Accra, the results indicate a higher moderate depression among the Kayayei who stayed in Accra for more than three years (39%, n=55), however, higher prevalence of extreme depression was reported for those who were there less than one year (43.3%, n=39).

**Tables 8**
**Background Characteristics and Depression Among the Kayayei**

| Characteristic | Normal [16] | Mild [31] | Moderate [141] | Severe [74] | Extremely severe [90] |
|---|---|---|---|---|---|
| **Age** | | | | | |
| 18-24 | 7 (43.7) | 13 (41.9) | 65 (46.1) | 34 (45.9) | 47 (52.2) |
| 25-34 | 4 (25.0) | 11 (35.5) | 53 (37.6) | 30 (49.5) | 41 (45.6) |
| ≥35 | 5 (31.3) | 7 (22.6) | 23 (16.3) | 10 (13.5) | 2 (2.2) |
| **Education** | | | | | |
| No formal education | 11 (68.7) | 17 (54.8) | 67 (47.5) | 17 (23.0) | 23 (25.6) |
| Primary education | 1 (6.3) | 9 (29.0) | 39 (27.7) | 28 (37.8) | 35 (38.9) |
| JHS | 3 (18.8) | 4 (12.9) | 26 (18.4) | 21 (28.4) | 28 (31.1) |
| SHS | 1 (6.3) | 1 (3.2) | 8 (5.7) | 8 (10.8) | 4 (4.4) |
| **Marital status** | | | | | |
| Unmarried | 5 (31.3) | 6 (19.4) | 36 (25.5) | 25 (33.8) | 34 (37.8) |
| Married | 11 (68.7) | 25 (80.6) | 105 (74.5) | 49 (66.2) | 56 (62.2) |
| **Religion** | | | | | |
| Christian | 2 (12.5) | 11 (35.5) | 21 (14.9) | 13 (17.6) | 3 (3.3) |
| Islam | 14 (87.5) | 20 (64.5) | 120 (85.1) | 61 (82.4) | 87 (96.7) |
| **Number of children (Parity)** | | | | | |
| No child | 5 (31.2) | 6 (19.3) | 32 (22.7) | 24 (32.4) | 28 (31.1) |
| 1-2 children | 3 (18.8) | 10 (32.3) | 67 (47.5) | 29 (39.2) | 34 (37.8) |
| 3 and above | 8 (50.0) | 15 (48.4) | 42 (29.8) | 21 (28.4) | 28 (31.1) |
| **Difficulty of work** | | | | | |
| Difficult | 11 (68.8) | 19 (61.3) | 57 (40.4) | 15 (20.3) | 15 (16.7) |
| Very Difficult | 5 (31.3) | 12 (38.7) | 84 (59.6) | 59 (79.7) | 75 (83.3) |
| **Accommodation** | | | | | |
| No | 7 (43.8) | 23 (74.2) | 100 (70.9) | 32 (43.2) | 10 (11.1) |
| Yes | 9 (56.2) | 8 (25.8) | 41 (29.1) | 42 (56.8) | 80 (88.9) |

**Table 8 Continuation**

| Characteristics | Normal [16] | Mild [31] | Moderate [141] | Severe [74] | Extremely severe [90] |
|---|---|---|---|---|---|
| **Treatment by patrons** | | | | | |
| Nicely | 8 (50.0) | 16 (51.6) | 45 (31.9) | 17 (23.0) | 1 (1.1) |
| Normal | 7 (43.8) | 10 (32.3) | 62 (44.0) | 38 (51.3) | 70 (77.8) |
| Badly | 1 (6.2) | 5 (16.1) | 34 (24.1) | 19 (25.7) | 19 (21.1) |
| **Work duration per day (hours)** | | | | | |
| 1-8 | 6 (37.5) | 9 (29.0) | 64 (45.4) | 45 (6.7) | 61(67.8) |
| ≥9 | 10 (62.5) | 22 (71.0) | 77 (54.6) | 29 (39.2) | 29 (32.2) |
| **Daily income (GHC)** | | | | | |
| 1-10 | 2 (12.5) | 7 (22.6) | 43 (30.5) | 30 (40.5) | 51 (56.7) |
| 11-20 | 11 (68.8) | 23 (74.2) | 86 (61.0) | 35 (47.3) | 36 (40.0) |
| ≥21 | 3 (18.7) | 1 (3.2) | 12 (8.5) | 9 (12.2) | 3 (3.3) |
| **Duration of stay in Accra (In years)** | | | | | |
| <1 | 8 (50.0) | 4 (12.9) | 26 (18.4) | 24 (32.4) | 39 (43.3) |
| 1-2 | 2 (12.5) | 9 (29.0) | 55 (39.0) | 23 (31.1) | 32 (35.6) |
| ≥3 | 6 (37.5) | 18 (58.1) | 60 (42.6) | 27 (36.5) | 19 (21.1) |

### 5.7 Background Characteristics and Stress Among the Kayayei

In table 9 below, the results show that most of the participants did not report extreme levels of anxiety. The results indicate that the kayayei aged 18-24 had higher prevalence of moderate stress of 46.9 percent (n=38) and severe stress of 44.6 percent (n=29). The results also indicate that participants with primary education had higher prevalence of moderate and severe stress (40.7%, n=33), and (38.5%, n=25), respectively. Regarding marital status, the results indicate high prevalence of stress among married Kayayei (moderate stress of 56.1 percent [n=56], and severe stress of 64.6 percent [n=42]. The results further indicated that participants with 1-2 children had a higher prevalence of stress, indicating moderate stress of 39.5 percent (n=32) and severe stress of 35.4 percent (n=23). Regarding difficulty of work the results indicated higher prevalence of stress among participants who rated their work as very difficult with moderate stress of 75.3 percent (n=61), severe stress of 78.5 percent (n=51). The results also found a higher prevalence of moderate and severe stress among participants who reported having accommodation 55.6 percent (n=45), and 86.1 percent (n=56) respectfully. The results further showed a high prevalence of moderate and severe anxiety among participants who rated their treatment by patrons as normal represent 50.6 percent (n=41), and 75.4 percent (n=49) respectively. Furthermore, the results show that participants who earned between 11-20 Ghana cedis daily had higher prevalence of moderate stress of 53.1 percent (n=43), while those who earned 1-10 Ghana cedis daily had higher prevalence of severe stress of 49.3 percent (n=32). Regarding duration of stay in Accra, the results show that the Kayayei who had been in Accra for more than 3 years had higher prevalence of moderate stress (34.6%, n=28), while the Kayayei who had been in Accra between 1 and 2 years had higher prevalence of severe stress (36.9%, n=24).

**Table 9**
**Background Characteristics and Stress Among the Kayayei**

| Characteristics | Normal [137] | Mild [66] | Moderate [81] | Severe [65] | Extremely severe [3] |
|---|---|---|---|---|---|
| **Age** | | | | | |
| 18-24 | 61 (44.5) | 37 (56.1) | 38 (46.9) | 29 (44.6) | 1 (33.3) |
| 25-34 | 54 (39.4) | 20 (30.3) | 35 (43.2) | 28 (43.1) | 2 (66.7) |
| 25-34 | 22 (16.1) | 9 (13.6) | 8 (9.9) | 8 (12.3) | 0 (0.0) |
| **Education** | | | | | |
| No formal education | 69 (50.4) | 23 (33.3) | 27 (33.3) | 16 (24.6) | 1 (33.3) |
| Primary | 34 (24.8) | 19 (28.8) | 33 (40.7) | 25 (38.5) | 1 (33.3) |
| JHS | 26 (19.0) | 18 (27.3) | 14 (17.3) | 23 (35.4) | 1 (33.3) |
| SHS | 8 (5.8) | 6 (9.1) | 7 (8.6) | 1 (8.6) | 0 (0.0) |
| **Marital status** | | | | | |
| Unmarried | 38 (27.7) | 20 (30.3) | 25 (30.9) | 23 (35.4) | 0 (0.0) |
| Married | 99 (72.3) | 46 (69.7) | 56 (69.1) | 42 (64.6) | 2 (66.7) |
| **Religion** | | | | | |
| Christian | 21 (15.3) | 10 (15.2) | 9 (11.1) | 7 (10.8) | 0 (0.0) |
| Islam | 116 (84.7) | 56 (84.8) | 72 (88.9) | 58 (89.2) | 3 (100.0) |
| **Number of children (Parity)** | | | | | |
| No child | 36 (26.3) | 16 (24.2) | 25 (30.9) | 18 (27.7) | 0 (0.0) |
| 1-2 children | 54 (39.4) | 32 (48.5) | 32 (39.5) | 23 (35.4) | 2 (66.7) |
| 3 and above | 47 (34.3) | 18 (27.3) | 24 (28.6) | 24 (36.9) | 1 (33.3) |
| **Difficulty of work** | | | | | |
| Difficult | 63 (46.0) | 18 (27.3) | 20 (24.7) | 14 (21.5) | 2 (66.7) |
| Very difficult | 74 (54.0) | 48 (72.7) | 61 (75.3) | 51 (78.5) | 1 (33.3) |
| **Accommodation** | | | | | |
| No | 84 (61.3) | 42 (63.6) | 36 (44.4) | 9 (13.9) | 1 (33.3) |
| Yes | 53 (38.7) | 24 (36.4) | 45 (55.6) | 56 (86.1) | 2 (66.7) |

**Table 9 Continuation**

| Characteristics | Normal [137] | Mild [66] | Moderate [81] | Severe [65] | Extremely severe [3] |
|---|---|---|---|---|---|
| **Treat by patrons** | | | | | |
| Nicely | 45 (32.9) | 16 (24.2) | 18 (22.2) | 8 (12.3) | 0 (0.0) |
| Normal | 61 (44.5) | 34 (51.5) | 41 (50.6) | 49 (75.4) | 2 (66.7) |
| Badly | 31 (22.6) | 16 (24.2) | 22 (27.2) | 8 (12.3) | 1 (33.3) |
| **Work duration per day (hours)** | | | | | |
| 1-8 | 97 (41.6) | 40 (60.6) | 45 (55.6) | 41 (63.1) | 2 (66.7) |
| ≥9 | 80 (58.4) | 26 (39.4) | 36 (44.4) | 24 (36.9) | 1(3.3) |
| **Daily income (GHC)** | | | | | |
| 1-10 | 41 (29.9) | 27 (40.9) | 31 (38.3) | 32 (49.3) | 2 (66.7) |
| 11-20 | 86 (62.8) | 34 (51.5) | 43 (53.1) | 27 (41.5) | 1 (33.3) |
| ≥21 | 10 (7.3) | 5 (7.6) | 7 (8.6) | 6 (9.2) | 0 (0.0) |
| **Duration of stay in Accra (In years)** | | | | | |
| <1 | 34 (24.8) | 18 (27.3) | 27 (33.3) | 21 (32.3) | 1 (33.3) |
| 1-2 | 44 (32.1) | 25 (37.9) | 26 (32.1) | 24 (36.9) | 2 (66.7) |
| ≥3 | 59 (43.1) | 23 (34.8) | 28 (34.6) | 20 (30.8) | 0 (0.0) |

### 5.8 Background characteristics and anxiety

In table 10, Kayayei, ages 18-24, recorded the highest moderate and severe anxiety prevalence of 50 percent (n=60) and 62.3 percent (n=38), respectively. However, those 25-34 recorded the highest prevalence of extreme severe anxiety of 47.0 percent (n=71). Regarding primary education, the results indicate that participants with no education had the highest prevalence of moderate and severe anxiety account for 49.2 percent (n=59), and 32 percent (n=20), respectively. The results, however, show that participants with primary education had the highest prevalence of extreme anxiety of 41.1 percent (n=62). Concerning marital status, the finding indicated a high prevalence of anxiety among married participants with moderate anxiety of 72.5 percent (n=87), severe anxiety of 54.1 percent (n=33), and extreme severe anxiety of 74.2 percent (n=112). The results further indicated that participants with 1-2 children had a higher prevalence of moderate and extreme severe anxiety of 44.2 percent (n=53) and 44.4 percent (n=67), respectively. However, participants with no children had the highest prevalence of severe anxiety of 42.6 percent (n=26). With regards to difficulty of work, the results indicated that participants who rated their work as very difficult had higher prevalence of anxiety with moderate anxiety of 55.0 percent (n=66), severe anxiety of 72.1 percent (n=44), and extreme severe anxiety of 78.2 percent (n=118). Furthermore, the results showed that the Kayayei with no accommodation indicated higher prevalence of moderate and severe anxiety of 70.0 percent (n=84), and 59.0 percent (n=36). However, those with accommodation had higher prevalence of extreme anxiety of 72.2 percent (n=109). The results also indicate that the Kayayei who were treated normally by their patrons had higher prevalence of moderate anxiety (43.3%, n=52), severe anxiety (59%, n=36), and extreme severe anxiety (60.9, n=92). Also, the results indicate that participants who earned between 11-20 Ghana cedis had higher prevalence of moderate anxiety of 60.8 percent (n=73), severe anxiety of 55.7 percent (n=34), and extreme severe anxiety of 47.7 percent (n=72). Finally, the results show that the Kayayei who had been in Accra for more than three years show higher prevalence of anxiety moderate anxiety (43.3%, n=52), severe anxiety (34.4%, n=21), and extreme severe anxiety (33.1%, n=50).

**Table 10**
**Background Characteristics and Anxiety Among Kayayei**

| Characteristics | Normal [11] | Mild [9] | Moderate [120] | Severe [61] | Extremely severe [151] |
|---|---|---|---|---|---|
| **Age** | | | | | |
| 18-24 | 5 (45.4) | 4 (44.4) | 60 (50.0) | 38 (62.3) | 59 (39.1) |
| 25-34 | 2 (18.2) | 4 (44.4) | 47 (39.2) | 15 (24.6) | 71 (47.0) |
| ≥35 | 4 (3.4) | 1 (11.1) | 13 (10.8) | 8 (13.1) | 21 (13.9) |
| **Education** | | | | | |
| No formal education | 5 (45.5) | 7 (77.8) | 59 (49.2) | 20 (32.8) | 45 (29.8) |
| Primary | 1 (9.1) | 0 (0.0) | 31 (25.8) | 18 (29.5) | 62 (41.1) |
| JHS | 4 (36.4) | 1 (11.1) | 24 (20.0) | 17 (27.9) | 36 (23.8) |
| SHS | 1 (9.1) | 1 (11.1) | 6 (5.0) | 6 (9.8) | 8 (5.3) |
| **Marital status** | | | | | |
| Unmarried | 3 (27.3) | 3 (33.3) | 33 (27.5) | 28 (45.9) | 39 (25.8) |
| Married | 8 (72.7) | 6 (66.7) | 87 (72.5) | 33 (54.1) | 112 (74.2) |
| **Religion** | | | | | |
| Christian | 4 (36.4) | 1 (11.1) | 19 (15.8) | 9 (13.1) | 18 (11.9) |
| Islam | 7 (63.6) | 8 (88.9) | 101 (84.2) | 53 (86.9) | 133 (88.0) |
| **Number of children (Parity)** | | | | | |
| No child | 3 (27.3) | 3 (33.4) | 32 (26.7) | 26 (42.6) | 31 (20.5) |
| 1-2 children | 0 (0.0) | 2 (22.2) | 53 (44.2) | 21 (34.4) | 67 (44.4) |
| 3 and above | 8 (72.7) | 4 (44.4) | 35 (29.1) | 14 (23.0) | 53 (35.1) |
| **Difficulty of work** | | | | | |
| Difficulty | 6 (54.6) | 7 (77.8) | 54 (45.0) | 17 (27.9) | 33 (21.9) |
| Very difficult | 5 (45.4) | 2 (22.2) | 66 (55.0) | 44 (71.1) | 118 (78.1) |
| Accommodation | | | | | |
| No | 6 (54.6) | 4 (44.4) | 84 (70.0) | 36 (59.0) | 42 (27.8) |
| Yes | 5 (45.4) | 5 (55.6) | 36 (30.0) | 25 (41.0) | 109 (72.2) |

**Table 10 Continuation**

| Characteristics | Normal [11] | Mild [9] | Moderate [120] | Severe [61] | Extremely severe [151] |
|---|---|---|---|---|---|
| **Treat by patrons** | | | | | |
| Nicely | 3 (27.3) | 4 (44.4) | 44 (36.7) | 14 (23.0) | 22 (14.6) |
| Normal | 5 (45.4) | 2 (22.2) | 52 (43.3) | 36 (59.0) | 92 (60.9) |
| Badly | 3 (27.3) | 3 (33.3) | 24 (20.0) | 11 (18.0) | 37 (24.5) |
| **Work duration per day (hours)** | | | | | |
| 1-8 | 5 (45.5) | 5 (55.6) | 50 (41.7) | 33 (54.1) | 92 (60.9) |
| ≥9 | 6 (54.5) | 4 (44.4) | 70 (58.3) | 28 (45.9) | 59 (39.1) |
| **Daily income (GHC)** | | | | | |
| 1-10 | 2 (18.2) | 3 (33.3) | 39 (32.5) | 25 (41.0) | 64 (42.4) |
| 11-20 | 7 (63.6) | 5 (55.6) | 73 (60.8) | 34 (55.7) | 72 (47.7) |
| ≥21 | 2 (18.2) | 1 (11.1) | 8 (6.7) | 2 (3.3) | 15 (9.9) |
| **Duration of stay in Accra (In years)** | | | | | |
| <1 | 4 (36.4) | 5 (55.6) | 22 (18.3) | 22 (36.1) | 48 (31.8) |
| 1-2 | 3 (27.2) | 1 (11.1) | 46 (38.3) | 18 (29.5) | 53 (35.1) |
| ≥3 | 4 (36.4) | 3 (33.3) | 52 (43.3) | 21 (34.4) | 50 (33.1) |

## 5.9 Levels of Depression among the Kayayei

Figure 10 showed that 40.1 per cent of the Kayayei were moderately depressed, while 25.6 per cent were extremely depressed. Furthermore, the results also indicated that 21 per cent were severely depressed while 8.8 were mildly depressed, and 4.6 per cent were normal.

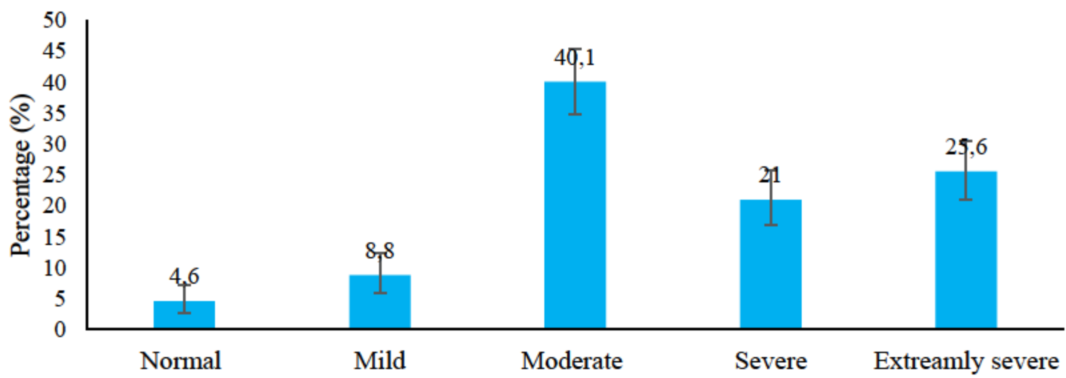


Fig 10: Level of depression

## 5.10 Levels of Anxiety among the Kayayei

Figure 11 shows that 42.9 percent of the Kayayei were extremely severe anxious while 34 percent were moderately anxious. Furthermore, 12.3 percent were severely anxious while 3.1 percent reported no anxiety. Finally, 2.6 reported mild levels of anxiety.

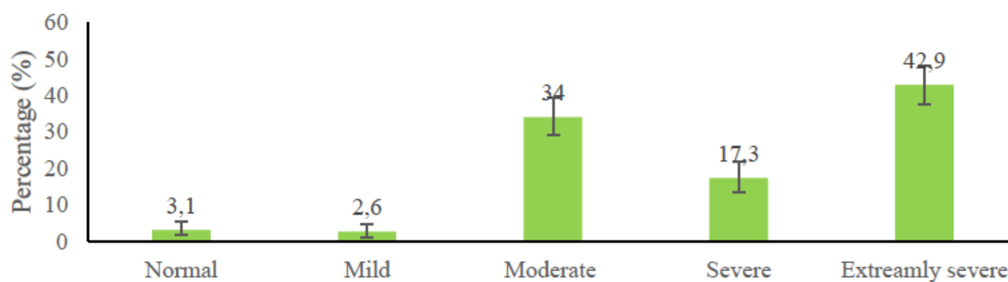


Fig 11: Level of anxiety

## 5.11 Levels of Stress among the Kayayei

In figure 12, 38.9 per cent of the participants reported no stress, while 23 per cent reported moderate levels of stress. Also, 18.8 per cent reported mild levels of stress while 18.8 per cent reported severe levels of stress. Finally, less than one per cent reported extremely severe levels of stress.

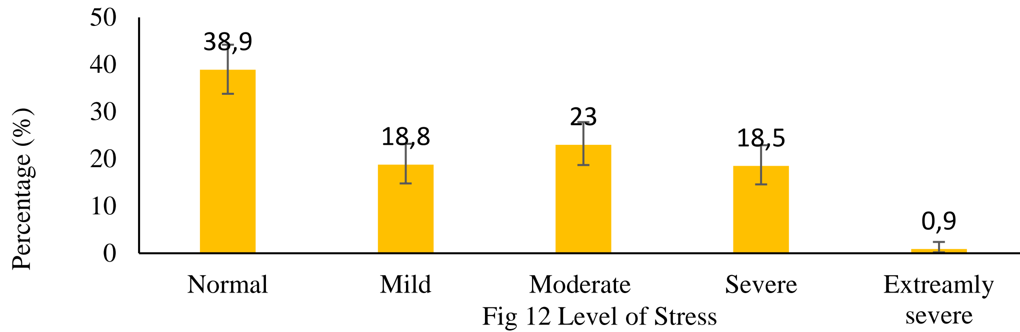

Fig 12 Level of Stress

**5.12 Prevalence of mental health challenges measured by DASS-21 subscale scores.**

Mental health challenges (i.e., depression, anxiety, and stress) were prevalent among the Kayayei. The results indicate that the most prevalent mental health challenge among the Kayayei was Anxiety at 94.4 per cent, followed by depression 86.6 per cent, and stress at 42.4 per cent.

**Table 11**

**Prevalence of Mental Health Challenges**

| | Depression | | Anxiety | | Stress | |
|---|---|---|---|---|---|---|
| | Freq | % | Freq | % | Freq | % |
| **Psychologically Normal** | | | | | | |
| Normal | 16 | 4.6 | 11 | 3 | 137 | 38.8 |
| Mild distress | 31 | 8.8 | 9 | 2.6 | 66 | 18.8 |
| **Total** | **47** | **13.4** | **20** | **5.6** | **203** | **57.6** |
| **Psychological Distress** | | | | | | |
| Moderate | 141 | 40.1 | 120 | 34.1 | 81 | 23 |
| Severe | 74 | 21 | 61 | 17.3 | 65 | 18.5 |
| Extremely Severe | 90 | 25.6 | 151 | 43 | 3 | 0.9 |
| **Total** | **305** | **86.6** | **332** | **94.4** | **149** | **42.4** |

### 5.13 Discussion

This section discusses the prevalence of physical and mental health challenges among the Kayayei. The findings reveal a high prevalence of both physical and mental health challenges among the Kayayei.

#### 5.13.1 Prevalence of Physical Health Challenges among the Kayayei

The findings of the present study show that the most prevalent physical health conditions among Kayayei are dizziness (58.5%), physical pain (55.4%), and headache (54%). The findings confirm previous studies that indicated a high prevalence of physical health problems among migrant workers. For instance, in a systematic review of 36 studies and 18 meta-analyses by Hargreaves et al. (2019), the prevalence of occupational health problems was addressed. The authors pooled data from studies that reported on health outcomes from 12000 labour migrants from low- and middle-income countries that were mainly engaged in unskilled manual labour. Their results indicated that migrant workers experienced a variety of physical health challenges including injuries from the workplace, as well as mental health. The findings of Hargreaves et al. (2019), also showed that migrant workers experienced at least one occupational morbidity, and among 3890 migrant workers, 22 per cent had experienced a workplace injury or accident. In another systematic review by Senarath, Wickramage, and Peiris (2016) on health issues affecting female internal migrant workers, the authors reported the prevalence of chronic fatigue to be at 23.5 per cent which is lower than the findings of the present study (41.2%). This difference might however, been due to the physical nature of the Kayayei business and the likely mental distress they experience due to the nature of their work (which will be discussed in the next chapters).

The Kayayei daily task of carrying loads on their head from one place to the other for a fee has also been described as a tedious physical activity. Being head porters further increases their risk of being exposed to physical health challenges also outlined by various authors (Agarwal et al., 1997; Opare, 2003; Van den Berg, 2007). In the present study, the tediousness of the activities of the Kayayei resulted in physical pain, tension fatigue, cold flu, headache, nausea, allergies, and dizziness. As found in this study, the Kayayei long periods of carrying heavy loads and pushing their way through crowded pathways also make their working conditions difficult. This corroborates a previous study by Yeboah (2010) in which the author found that poor working conditions, coupled with little rest and not earning enough income, put the Kayayei at risk of various health conditions. Furthermore, the incidence of abuse, exploitation,

and unsafe working conditions, have been a challenge among migrant workers, especially individuals in low-skilled jobs, which severely affects their physical health negatively as observed by Norredam and Agyemang (2019).

Even with the physical nature of the Kayayei work and the physical health challenges the Kayayei faced, they do not seek medical care from the formal health care sector as results from the qualitative study have indicated. Most of the participants, for instance, indicated they often self-medicate to relieve their pains, with most of them abusing 'over-the-counter pain killers.' This finding is consistent with findings from a study by Yu et al. (2019) which confirmed that migrants rarely sought health information and services from formal sources. Even with health care services available, previous experiences with discrimination or stigma at health care centres and the cost of medical care may restrict the Kayayei from seeking formal health services (Lattof et al., 2018), a likely issue that the Kayayei might also face.

In this study, the Kayayei were probably more interested in earning income than taking care of their physical health. One of the major aims of migrating to Accra in the first place was to earn income to send back home to contribute economically to the families and to help sustain the family financially (as seen in the qualitative study). Their lack of education also hampers their ability to look for jobs that are not detrimental to their physical health. Due to this, the Kayayei tend to do whatever it takes, and to work long hours in tedious jobs irrespective of the impact of their work on their health, a notion that is confirmed by Yu et al. (2019) in their study. Based on the conceptual framework, it is obvious that the context in which the Kayayei work is not conducive, and it is likely to have negative implications for their physical health, thereby resulting in a decline in physical health status as the years go by as suggested by Lattof et al. (2018).

The decline in the physical health status of the Kayayei will subsequently impact on their income levels negatively as the work demands long hours of labour under various conditions such as high temperature and rainy conditions which the Kayayei might not be able to endure due to poor health. These physical health challenges will, therefore, have negative consequences for their own survival and that of their families back home in the north which subsequently defeats the purpose of moving to Accra in the first place. Instead of earning more income to end the vicious cycle of poverty affecting most families in the north, the Kayayei might compound the problem by suffering from long term physical conditions, and they may

then not be able to meet the financial needs of their families back home. The Kayayei will subsequently be poorer after migration, and they can end up contributing to urban poverty as noted by Awumbila et al. (2014). In Ghana, women's income is primarily invested in the family and household needs instead of investing in housing and other properties. Women are a vulnerable population and are not protected by any legislation in Ghana which in turn might result in them becoming even more vulnerable to theft, rape, starvation, and related illnesses (Lattof et al., 2018).

As mentioned earlier, the economic development of a country is linked to a healthy workforce (Akazili et al., 2018). Since individuals in the informal sector such as the Kayayei are unprotected by legislation despite experiencing serious physical health challenges, this impacts negatively on their meagre income even further thereby decreasing their contribution to the national development. There is also the impact on the existing health care system. As observed from the qualitative aspect of the thesis in Chapter Four, the Kayayei usually do not seek care at an early stage of their health challenges. Most of them, self-medicate which may aggravate their condition. By the time they seek care, their condition might have worsened and, this increases the cost of treatment and puts pressure on the limited resources available.

### 5.13.2 Prevalence of Mental Health Challenges among the Kayayei

According to the WHO (2012), mental health is an essential part of an individual's ability to lead a fulfilling life, such as the ability to form and maintain a relationship, study, work, and make other important decisions in life. As such, anything that will compromise this capability to make any of these choices leads to malfunctioning, not only at the individual level, but also at the family and societal levels (WHO, 2012). It is further indicated that a person's innate and learned ability to deal with feelings and the social world can influence the individual's mental state.

The findings of the qualitative study indicated that the participants experienced issues of stress, anxiety, and depression. This finding was corroborated by the quantitative study which indicated the prevalence of anxiety to be extremely high (94.4%), followed by depression (86.6%), and stress (42.3%). The findings of this present study showed a comparatively lower prevalence of stress in comparison to the extremely high prevalence of anxiety and depression among the Kayayei, that seems to contradict previous findings which shows a higher prevalence of stress rather than anxiety among the migrants (Hovey, & Magaña, 2000; Mirzaei,

Ardekani, Mirzaei, & Dehghani, 2019). The deviation of the present study is likely to be attributable to the background contexts of the Kayayei. The opinion of stress as declared by the Kayayei is quite different from other groups since their whole life consists of challenges. Poverty rates in the three northern regions are extremely high, and these women do all sorts of menial jobs mostly on the farm to make ends meet while taking care of their domestic duties as well (Britwum & Akorsu, 2016). These Kayayei are therefore used to working under challenging conditions which might account for the low levels of stress recorded in the present study.

The findings of the present study, where depression and anxiety were found to be extremely high is consistent with the study by Chen (2011) in that there is a high prevalence of psychological distress among rural to urban migrants. In another study, Pannetier et al. (2017) found the incidence of anxiety and depression among female migrants to be 24 per cent which is far lower than the present study. Their study was, however, among international migrants whilst the present study was on internal migrants. The present study also combined moderate to extremely high levels of depression and anxiety as psychologically distressed which accounted for the high prevalence of anxiety and depression.

Studies have shown that migrants' psychological adaptation occurs in phases with mental health declining over time (Delara, 2016). Migration predisposes migrants to mental health issues due to the change in socio-cultural settings (Bhugra & Jones, 2001; Meyer, Lasater, & Tol, 2017; Mulcahy & Kollamparambil, 2016). Migration to a different location may lead to loss of cultural identity and inability to comprehend the new social norms and to navigate the local environment, that could result in an increase in mental health distress (Kumar & Diaz, 2019; Syse, Dzamarija, Kumar, & Diaz, 2018) as observed among the Kayayei in the current study. The disruptions to the normal social roles and networks, may according to Kirmayer et al. (2011) have a profound effect on the mental health of the Kayayei. However, it is difficult to imagine and measure the loss of friends, family, social networks, and to establish new relationships in places where the societal norms are very different (Kumar & Diaz, 2019; Syse, Dzamarija, Kumar, & Diaz, 2018). The movement from rural to urban areas is often associated with adverse lifestyle changes, including changes in dietary intake and social interaction (Kumar & Diaz, 2019).

The high mental health challenges among the Kayayei may also be due to discrimination and perceived social inequity (Wang et al., 2010). In a male-dominated society, women are assigned subordinate positions (Delara, 2016), rendering them powerless to defend themselves against discrimination and other injustice in society. Further, Ghana as a country has no national policy protecting the rights of individuals who are self-employed (Amponsah- Tawiah & Dartey-Baah, 2011). These women are subjected to physical and mental abuse by their clients and the people around them (Ahlvin, 2012). Income generated from their business is not enough to rent decent accommodation since their income is largely based on the generosity of their clients and not always on a negotiated price between them and their clients (Awumbila et al., 2008). They are also expected to support their families at home as well as pay those people who brought them from the north to the capital city, causing lots of frustration and stress with a consequent negative impact on their mental health.

Previous studies have found that the Kayayei, upon their arrival in the city, do not get any decent and affordable accommodation (Ahlvin, 2012; Kwankye et al., 2009; Opare, 2003). They, therefore, have no choice other than to sleep in front of Kiosks where there is little or no security. Consequently, they are sometimes attacked by armed robbers who deprive them of their savings and this situation also exposes them to sexual abuse or even abduction by sexual predators. This could explain the high prevalence of depression, anxiety and stress found among the Kayayei. This confirms the conceptual framework that the context in which the Kayayei operates has a direct influence on mental health challenges. Nevertheless, the present study found that some of the Kayayei have suicidal tendencies. The mental distress because of the daily lived experiences without any protection causes some of them to lose hope and think that their lives on earth are of no importance, therefore, death will be the best option to end their suffering as indicated in the qualitative study. This implies that Kayayei need social and psychological support to deal with their daily lived experiences as suggested by Demetry and Dalal (2014).

The tenets of the conceptual framework surrounding environment will have an influence on the psychological and mental status of migrants (Lazarus & Folkman, 1984). For example, the qualitative aspect of this study found daily experiences of the Kayayei such as sexual abuse and exploitation, verbal, physical abuse, and sometimes abduction impacted on their mental health negatively. In Ghana, there is no law protecting this venerable group and so even when they report a crime, most of the time, the perpetrators are not persecuted. The lack of protection

and the perceived neglect of society is of concern to these Kayayei who often think about the social injustice against them. This is in line with the argument by Infante, Idrovo, Sánchez-Domínguez, Vinhas, and González-Vázquez (2012) which indicated that migrants in their transitional or the final host destination are submitted to physical, verbal, and even sexual violence but have no form of security from agencies and the state at large.

It is further worth noting that economic hardships among the Kayayei might also be a reason for the high prevalence of physical and mental health challenges. This present study found that the average daily income of the Kayayei is GHS 14.63 (about three ($3) US dollars when the data was collected in 2018). The main reason for the Kayayei migrating to Accra is to earn more income to take back home for various purposes such as acquisition of capital for starting a business, and income to go back to school. Realising that these expectations are not being met is likely to be a source of mental health distress for the Kayayei. Before migrating to Accra, the capital city, most of the Kayayei have unrealistic pre-migration expectations that they will earn enough income within the shortest possible time due to stories they have been told by other families of remittances they received from their children as found by Awumbila et al. (2014).

### 5.13.3 Conclusion

The results suggest a high prevalence of physical and mental health challenges among the Kayayei, which is indicative of the health risks involved in the Kayayei business. It is, therefore, important to ensure that the Kayayei have knowledge of their physical and mental health status and be empowered with skills to mitigate some of the risks involved. Specifically, the Accra Metropolitan Assembly (AMA) could implement bi-laws to regulate spaces in major markets for porters to carry goods. There is also the need to provide adequate access to health services for the Kayayei by enrolling them onto the National Health Insurance Scheme (NHIS) as an exemption group. The findings further revealed the presence of mental health challenges among the Kayayei with high prevalence of anxiety, depression, and stress. There is, therefore, the need for government and mental health expects to make mental health services accessible to the Kayayei and to the general population.

# CHAPTER SIX
# RISK FACTORS FOR MENTAL HEALTH OF THE KAYAYEI

## 6.1 Introduction

Migration from a usual residence to an unknown destination brings with it mental health consequences. The migration process entails changes in social status and the cultural settings of migrants (Bhugra & Jones, 2001). Migration also exposes migrants to higher risks at the workplace through unclean working conditions, overcrowded housing, exploitation, and abuse in different forms, which exposes them to mental health challenges (Lurie & Williams, 2014; McCulloch, 2012). This chapter aims to investigate the risk factors of mental health challenges among the Kayayei. To achieve this aim, statistical analysis was conducted (as mentioned in chapter 3) to investigate the risk factors of depression, stress, and anxiety. Specifically, the association between background characteristics and mental health challenges was examined using binary logistic regression. Preliminary analysis indicated no relationship between background characteristics and physical health outcomes, therefore, this section focuses on the risk factors for mental health only.

## 6.2. Results

Mental distress (depression, anxiety, and stress) as measured by the DASS-21 was dichotomised to improve the responses per categories for analyses as outlined in the works of Al Saadi et al. (2017), Masiran et al. (2018), and Ramlan et al. (2020). Chi-square and binary logistic regression analysis were performed to determine the relationship between background characteristic (age, level of education, marital status, number of children, difficulty of work, accommodation, treatment by patrons, work duration per day, daily income, and duration of stay in Accra), and mental health challenges (depression, stress, and anxiety). Significant values of the chi-square ($\chi_2$) and the logistic regression analysis are presented.

### 6.2.1 Association between Background Characteristic and Depression

In Table 12, the analysis shows that the Kayayei aged 35 and above were 60 percent less likely to be depressed compared with those 18-24 years old, with a small effect size of V= 0.14. This is reflected in the crude odds ratio, with (COR) of 0.40 (95% CI=0.18, 0.90, p=0.026). The relationship was, however, not significant in the adjusted model. The results further indicate a significant relationship between education and depression with p=0.012 and a small effect size of V= 0.18. The Kayayei who had some form of education were more likely to be depressed compared with those not educated. The binary logistic regression analysis indicated that the

kayayei with primary and JHS education were 2.64 and 2.78 times more likely to be depressed (COR=2.64, 95% CI=1.22, 5.72, p=0.013), and (OR=2.78, 95% CI=1.15, 6.69, p= 0.023) respectively. There was no significant relation between Kayayei who had attained SHS compared to those who had no education in terms of depression.

Furthermore, the results indicated a significant relationship between the number of children and depression with p= 0.029 and a medium-size effect of V=0.029. The Kayayei who had three or more children were 56 percent less likely to be depressed than the Kayayei who had no children (COR =0.44, 95% CI=0.20, 0.98, p= 0.044). The relationship was, however, not significant in the adjusted model. There is also a significant relationship between work difficulty and depression with p= <0.001and a small effect size of *V*= 0.25, and this shows significance in the adjusted odds ratio. The results indicate that the Kayayei who rated their work as very difficult were 3.64 times more likely to be depressed than those who rated their work as just difficult (AOR=3.64, 95% CI=1.80, 7.33, p=<0.001). A significant relationship was also observed between depression and how patrons treated the Kayayei with p<0.001 and a medium effect size of V= 0.24. In the binary logistic regression analysis, those who reported being treated normally were 2.30 times more likely to be depressed than the Kayayei who reported being treated nicely (AOR=2.30, 95% CI=1.02, 5.15, p=0.043). The Kayayei who reported being treated badly were also more likely to be depressed compared with those who reported being treated nicely (AOR=2.42, 95% CI=0.80, 7.38, p= 0.019). The results also indicate a significant relationship between working hours (between working up to 8 hours a day and working above 8 hours) and depression with p= 0.002 and a small effect of *V* = -0.16. This also shows up in the crude odds ratio, of COR=0.37 (95% CI= 0.19, 0.71), p= 0.003. The relationship is, however, not significant in the adjusted model. Furthermore, there was a significant relationship between daily income and depression and appears to be between those earning 1-10 Ghana Cedis and 11-20 Ghana Cedis, with p= 0.016. However, the effect size is small, with V= 0.15. This shows up in the crude odds ratio of COR= 0.34 (95% CI= 0.15, 0.72, p=0.005).

**Table 12**
**Association between background Characteristics and Depression**

| Characteristics | Not Depressed Frequency | % | Depressed Frequency | % | χ2 | V | p-value | COR (95% CI), p-value | AOR (95% CI), p-value |
|---|---|---|---|---|---|---|---|---|---|
| **Age (years)** | | | | | 7.06 | 0.142, | 0.029 | | |
| 18-24 | 20 | 42.5 | 146 | 47.9 | | | | Ref | |
| 25-34 | 15 | 31.9 | 124 | 40.7 | | | | 0.99 (0.49, 2.01), 0.986 | 1.43 (0.54, 3.80), 0.478 |
| ≥35 | 12 | 25.5 | 35 | 11.5 | | | | 0.40 (0.18, 0.90), 0.026 | 0.96 (0.29, 3.16), 0.945 |
| **Education** | | | | | 10.88 | 0.18 | 0.012 | | |
| Not educated | 28 | 59.6 | 107 | 35.6 | | | | Ref | |
| Primary Education | 10 | 21.7 | 102 | 33.7 | | | | 2.64 (1.22, 5.72), 0.013 | 1.93 (0.83, 4.47), 0.126 |
| JHS | 7 | 15.2 | 75 | 24.8 | | | | 2.78 (1.15, 6.69), 0.023 | 1.14 (0.38, 3.43), 0.818 |
| SHS | 1 | 2.2 | 18 | 5.9 | | | | 4.90 (0.60, 36.47), 0.142 | 1.66 (0.16, 17.03), 0.671 |
| **Marital status** | | | | | 1.16 | -0.06 | 0.281 | | |
| Unmarried | 11 | 23.4 | 95 | 31.2 | | | | Ref | |
| Married | 36 | 76.6 | 210 | 68.9 | | | | 0.68 (0.33, 1.38), 0.284 | |
| **Number of children** | | | | | 7.09 | 0.142 | 0.029 | | |
| No child | 11 | 23.4 | 84 | 27.5 | | | | Ref | |
| 1-2 children | 13 | 27.7 | 130 | 42.6 | | | | 1.18 (0.49, 2.80), 0.714 | 1.23 (0.42, 3.55), 0.708 |
| 3 and above | 23 | 48.9 | 91 | 29.8 | | | | 0.44 (0.20, 0.98), 0.044 | 0.54 (0.16, 1.80), 0.313 |
| **Work Difficulty** | | | | | 22.88 | 0.25 | <0.001 | | |
| Difficult | 30 | 63.8 | 87 | 28.5 | | | | Ref | |
| Very Difficult | 17 | 36.2 | 218 | 71.5 | | | | 4.42 (2.32, 8.43), <0.001 | 4.26 (2.15, 8.45), <0.001 |
| **Accommodation** | | | | | | | | | |
| No | 30 | 63.8 | 142 | 46.6 | 4.86 | 0.12 | 0.027 | Ref | |
| Yes | 17 | 36.2 | 163 | 53.4 | | | | 2.02 (1.07, 3.83), <0.001 | 1.07 (0.50, 2.27), 0.857 |

**Table 12 Continuation**

| Characteristics | Not Depressed Frequency | % | Depressed Frequency | % | $\chi 2$ | V | p-value | COR (95% CI), p-value | AOR (95% CI), p-value |
|---|---|---|---|---|---|---|---|---|---|
| **Treat by patrons** | | | | | 20.33 | 0.24 | <0.001 | | |
| Nicely | 24 | 51.1 | 63 | 20.7 | | | | Ref | |
| Normal | 17 | 36.2 | 170 | 55.7 | | | | 3.81 (1.92, 7.56), <0.001 | 2.30 (1.02, 5.15,), 0.043 |
| Badly | 6 | 12.8 | 72 | 23.6 | | | | 4.57 (1.76, 11.90), 0.002 | 2.42 (0.80, 7.38), 0.019 |
| **Work duration per day (hours)** | | | | | 9.21 | -0.16 | 0.002 | | |
| 1-8 | 14 | 30.4 | 166 | 54.4 | | | | Ref | |
| 9 and above | 32 | 69.6 | 139 | 45.6 | | | | 0.37 (0.19, 0.71), 0.003 | 0.57 (0.25, 1.29), 0.178 |
| **Daily income (GHC)** | | | | | 8.27 | 0.15 | 0.016 | | |
| 1-10 | 9 | 19.2 | 124 | 40.7 | | | | Ref | |
| 11-20 | 34 | 72.3 | 157 | 51.5 | | | | 0.34 (0.15, 0.72), 0.005 | 0.56 (0.22, 1.44), 0.230 |
| ≥21 | 4 | 8.5 | 24 | 7.9 | | | | 0.44 (0.12, 1.53), 0.195 | |
| **Duration of stay in Accra (In years)** | | | | | 4.72 | 0.12 | 0.094 | | |
| <1 | 11 | 23.4 | 96 | 31.2 | | | | Ref | |
| 1-2 | 12 | 25.5 | 104 | 34.1 | | | | 1.00 (0.42, 2.38), 0.994 | |
| ≥3 | 24 | 51.1 | 106 | 34.7 | | | | 0.51 (0.24, 1.10), 0.086 | |

*V= Cramer's V, χ2=Chi Square;; CI= Confidence interval; COR: Crude odds ratio; AOR: Adjusted odds ratio*

### 6.2.2 Association between Background Characteristics and Stress

In table 13, the statistical analysis showed no significant relationship between age and stress (p= 0.277). There was, however, a significant relationship between level of education and stress with p= 0.011 and a small effect size of V=0.011. The analysis indicated that the Kayayei who had primary education were 79 percent more likely to be stressed than the Kayayei who were uneducated (AOR= 1.79, 95% CI=1.02,3.14, p= 0.042). Also, in the crude regression model, Kayayei who had JHS education were 81 percent more likely to be stressed than the uneducated ones (COR=1.81, 95% CI=1.03, 3.17, p=0.040). This relationship was, however, not significant in the adjusted model. There was also no significant relationship between SHS education and stress. The results further indicated a significant relationship between work difficulty and stress (p=0.002) with a small effect size of $V$ = 0.17. The binary logistic regression analysis indicated that the Kayayei who perceived their work as very difficult were 70% more likely to be stressed compared with those who perceived their work as difficult (AOR=1.70, 95% CI= 1.02,2.81, p=0.040).

There was a significant relationship between accommodation and stress with a medium effect of V= 0.30. This reflected in the adjusted odds ratio (AOR=3.03, 95% CI=1.78,5.14, p<0.001), showing that the Kayayei who had accommodation were 3.03 times more likely to be stressed as compared to the Kayayei who did not have accommodation. Furthermore, a significant relationship was found between treatment by patrons and stress with (p=0.006) with a small effect size of V= 0.17. The analysis indicated that the Kayayei who perceived to be treated normally were 2.40 times more likely to be stressed as compared to the Kayayei who perceived to be treated nicely (COR= 2.40, 95% CI= 1.40, 4.14, p= 0.002), the relationship was, however, not significant in the adjusted model. Regarding working hours, a significant relationship was observed between working hours and stress (p= 0.038) with a small size effect of $V$ = -0.11. This is reflected in the crude odds ratio showing that the Kayayei who worked for 9 hours or more a day were 37 percent less likely to be stressed as compared to the Kayayei who worked up to 8 hours a day (COR=0.63, 95% CI= 0.41, 0.97, p= 0.037), the relationship was not significant in the adjusted model. Regarding daily income, no significant relationship was found between daily income and stress (p=0.134). The regression analysis, however, showed that the Kayayei who earned GHS 11-20 were 37 percent less likely to be depressed than those who earned less (COR= 0.63, 95% CI= 0.40, 0.99, p= 0.046). No significant relationship was observed in the adjusted model.

**Table 13:**
**Association between Background Characteristics and Stress**

| Characteristics | Not Stressed Frequency | % | Stress Frequency | % | $\chi$2 | V | p-value | COR (95% CI), p-value | AOR (95% C)], p-value |
|---|---|---|---|---|---|---|---|---|---|
| **Age (years)** | | | | | 2.57 | 0.09 | 0.277 | | |
| 18-24 | 98 | 48.3 | 68 | 45.6 | | | | Ref | |
| 25-34 | 74 | 36.5 | 65 | 43.6 | | | | 1.27 (0.80,1.99), 0.309 | |
| ≥35 | 31 | 15.3 | 16 | 10.7 | | | | 0.74 (0.38,1.10), 0.392 | |
| **Education** | | | | | 11.22 | 0.18 | 0.011 | | |
| Not educated | 92 | 45.8 | 44 | 29.5 | | | | Ref | |
| Primary Education | 53 | 26.4 | 59 | 39.9 | | | | 2.33 (1.39, 3.90), 0.001 | 1.79 (1.02,3.14), 0.042 |
| JHS | 44 | 21.8 | 38 | 26.7 | | | | 1.81 (1.03, 3.17), 0.040 | 1.10 (0.58, 2.07), 0.779 |
| SHS | 12 | 6.0 | 7 | 4.7 | | | | 1.22 (0.45, 3.31), 0.697 | 0.55 (0.19, 1.64), 0.284 |
| **Marital status** | | | | | 0.54 | -0.04 | 0.462 | | |
| Unmarried | 58 | 28.8 | 48 | 32.2 | | | | Ref | |
| Married | 145 | 71.4 | 101 | 67.8 | | | | 0.84 (0.53,1.33), 0.462 | |
| **Number of children** | | | | | 0.71 | 0.05 | 0.700 | | |
| No child | 52 | 25.6 | 43 | 28.9 | | | | Ref | |
| 1-2 children | 86 | 42.4 | 57 | 38.3 | | | | 0.80 (0.47,1.35), 0.409 | |
| 3 and above | 65 | 32.0 | 49 | 32.9 | | | | 0.91 (0.53,1.58), 0.741 | |
| **Work Difficulty** | | | | | 9.60 | 0.17 | 0.002 | | |
| Difficult | 81 | 39.9 | 36 | 24.2 | | | | Ref | |
| Very Difficult | 122 | 60.1 | 113 | 75.8 | | | | 2.08 (1.30,3.32), 0.002 | 1.70 (1.02, 2.81), 0.040 |
| **Accommodation** | | | | | 31.02 | 0.30 | <0.001 | | |
| No | 125 | 61.6 | 47 | 31.5 | | | | Ref | |
| Yes | 78 | 38.4 | 10 2 | 68.6 | | | | 3.48 (2.23,5.44), <0.001 | 3.02 (1.86,4.89), <0.001 |

**Table 14 Continuation**

| Characteristics | Not Stressed Frequency | % | Stress Frequency | % | χ2 | V | p-value | COR (95% CI), p-value | AOR (95% C)], p-value |
|---|---|---|---|---|---|---|---|---|---|
| **Treatment by patrons** | | | | | 10.25 | 0.17 | 0.006 | | |
| Nicely | 62 | 30.5 | 25 | 16.8 | | | | Ref | |
| Normal | 95 | 46.8 | 92 | 61.7 | | | | 2.40 (1.40, 4.14), 0.002 | 1.28 (0.66, 2.45), 0.462 |
| Badly | 46 | 22.7 | 32 | 21.5 | | | | 1.73 (0.90, 3.30), 0.099 | 1.10 (0.52, 2.34) 0.804 |
| **Work duration per day (hours)** | | | | | 4.38 | -0.11 | 0.038 | | |
| 1-8 | 97 | 47.8 | 88 | 59.1 | | | | Ref | |
| 9 and above | 106 | 52.2 | 61 | 40.9 | | | | 0.63 (0.41, 0.97), 0.037 | 0.98 (0.58, 1.67), 0.988 |
| **Daily income (GHC)** | | | | | 4.01 | 0.11 | 0.134 | | |
| 1-10 | 68 | 33.5 | 65 | 43.6 | | | | Ref | |
| 11-20 | 119 | 58.6 | 72 | 48.3 | | | | 0.63 (0.40, 0.99), 0.046 | 0.88 (0.60, 1.29), 0.523 |
| ≥21 | 16 | 7.9 | 12 | 5.10 | | | | 0.78 (0.34, 1.79), 0.563 | 0.72 (0.30, 1.74), 0.467 |
| **Duration of stay in Accra (In years)** | | | | | 3.16 | 0.09 | 0.206 | | |
| <1 | 52 | 25.6 | 49 | 32.9 | | | | Ref | |
| 1-2 | 69 | 34.0 | 52 | 34.9 | | | | 0.80 (0.47, 1.36), 0.409 | |
| ≥3 | 82 | 40.4 | 48 | 32.2 | | | | 0.62 (0.37, 1.05), 0.077 | |

### 6.2.3 Association between background Characteristics Anxiety

Table 14 Shows the chi-square and binary logistic regression analysis of the relationship between background characteristics and anxiety. The results indicated that even though the chi square analysis did not show any significant relationship between level of education and anxiety (p=0.055), the binary logistic regression indicated a significant relationship between primary education and depression. The results show that the Kayayei who had primary education were 9.20 times more likely to be anxious than those without education (95% CI=1.17, 72.47, p= 0.035). The results further showed a significant relationship between number of children and anxiety (p= 0.007) with a small effect size of V= 0.17. The result is, however, not significant in the crude regression analysis. Regarding difficulty of work, the results indicated a significant relationship with anxiety (p= 0.002) and a small effect size of *V* = 0.17. The relationship was significant in the adjusted model as well. The results indicated that the Kayayei who perceived their work as very difficult were 3.54 times more likely to be anxious compared with the Kayayei you rate their work as difficult (AOR=3.54, 95% CI=1.30,9.62, p=0.013).

**Table 14**
**Association between Background Characteristics and Anxiety**

| Characteristics | Not Anxious Frequency | % | Anxious Frequency | % | $\chi 2$ | V | p-value | COR (95% CI), p-value | AOR (95% CI), p-value |
|---|---|---|---|---|---|---|---|---|---|
| **Age (years)** | | | | | 3.30, | 0.10, | 0.190 | | |
| 18-24 | 10 | 50.0 | 156 | 47.0 | | | | Ref | |
| 25-34 | 5 | 25.0 | 134 | 40.4 | | | | 1.74 (0.57,515), 0.334 | |
| ≥35 | 5 | 25.0 | 42 | 12.7 | | | | 0.54 (0.17, 1.660 0.281 | |
| **Education** | | | | | | | | | |
| No education | 12 | 63.2 | 124 | 37.6 | 7.59 | 0.15 | 0.055 | Ref | |
| Primary | 1 | 5.3 | 111 | 33.6 | | | | 10.74 (1.37, 83.95), 0.024 | 9.20 (1.17, 72.47), 0.035 |
| JHS | 5 | 26.3 | 77 | 23.3 | | | | 1.49 (0.51, 4.39), 0.470 | 1.18 (0.39, 3.57), 0.774 |
| SHS/Tertiary | 1 | 5.3 | 18 | 5.5 | | | | 1.74 (0.21, 14.21), 0.604 | 1.06 (0.12, 9.25), 0.955 |
| **Marital status** | | | | | 0.24 | 0.02 | 0.624 | | |
| Unmarried | 7 | 35.0 | 99 | 29.8 | | | | Ref | |
| Married | 13 | 65.0 | 233 | 70.2 | | | | 1.27 (0.49,3.27),0.624 | |
| **Number of children** | | | | | 9.96 | 0.17 | 0.007 | | |
| No child | 6 | 30.0 | 89 | 26.8 | | | | Ref | |
| 1-2 children | 2 | 10.0 | 141 | 42.5 | | | | 4.75 (0.94,24.07), 0.060 | |
| 3 and above | 12 | 60.0 | 102 | 30.7 | | | | 0.57 (0.21, 1.59), 0.285 | |
| **Difficulty of Work** | | | | | 9.64 | 0.17 | 0.002 | | |
| Difficult | 13 | 65.0 | 104 | 31.3 | | | | Ref | |
| Very Difficult | 7 | 35.0 | 228 | 68.7 | | | | 4.07 (1.57,10.50), 0.004 | 3.54 (1.30, 9.62), 0.013 |
| **Accommodation** | | | | | 0.01 | 0.01 | 0.917 | | |
| No | 10 | 50.0 | 162 | 48.8 | | | | Ref | |
| Yes | 10 | 50.0 | 170 | 51.2 | | | | 1.05 (0.43,2.58), 0.917 | |
| **Treatment by patrons** | | | | | 2.81 | 0.09 | 0.246 | | |
| Nicely | 7 | 35.0 | 80 | 24.1 | | | | Ref | |
| Normal | 7 | 35.0 | 180 | 54.2 | | | | 2.25 (0.76, 6.63), 0.141 | |
| Badly | 6 | 30.0 | 72 | 21.7 | | | | 1.05 (0.34, 3.27), 0.933 | |

**Table 14**
**Continuation**

| **Characteristics** | **Not Anxious** | | **Anxious** | | **χ2** | **V** | **p** | **COR (95% CI), p-value** |
|---|---|---|---|---|---|---|---|---|
| | **Frequency** | **%** | **Frequency** | **%** | | | | |
| **Work duration per day (hours)** | | | | | 0.06 | -0.01 | 0.814 | |
| 1-8 | 10 | 50.0 | 175 | 52.7 | | | | Ref |
| 9 and above | 10 | 50.0 | 157 | 47.3 | | | | 0.89 (0.36, 2.21), 0.814 |
| **Daily income (GHC)** | | | | | 2.37 | 0.08 | 0.306 | |
| 1-10 | 5 | 25.0 | 128 | 38.6 | | | | Ref |
| 11-20 | 12 | 60.0 | 179 | 53.9 | | | | 0.58 (0.20, 1.69), 0.312 |
| ≥21 | 3 | 15.0 | 25 | 7.5 | | | | 0.33 (0.07, 1.45)., 0.141 |
| **Duration of stay in Accra (In years)** | | | | | 3.26 | 0.10 | 0.196 | |
| <1 | 9 | 45.0 | 92 | 27.7 | | | | Ref |
| 1-2 | 4 | 20.0 | 117 | 35.2 | | | | 2.85 (0.85, 9.59), 0.088 |
| ≥3 | 7 | 35.0 | 123 | 37.1 | | | | 1.72 (0.62, 4.79), 0.300 |

*V= Cramer's V, χ2=Chi Square;; CI= Confidence interval; COR: Crude odds ratio; AOR: Adjusted odds ratio*

### 6.2.4 Association between Physical Health and Mental Health Challenges

The results indicated a significant relationship between physical health and depression with p= 0.044 with a small effect size of *V*= -0.11. The analysis shows that the Kayayei who reported good physical health were 57 percent less likely to be depressed as compared to those who reported poor physical health (AOR= 0.43 95% CI= 0.20, 0.94, p= 0.034). Concerning stress, a significant relationship was also observed with physical health p= 0.019 with a small effect size of *V*=-0.13. This also shows in the Crude odds ratio indicating that the Kayayei who reported good health were 40 percent less likely to be stressed as compared to those who reported poor health (COR= 0.60, 95% CI= 0.39, 0.92, p= 0.019). This significant however did not show at the adjusted odds ratio. The result, however, did not show any significant relationship between physical health and anxiety.

**Table 15**
**Association between Physical Health and Depression**

| Characteristics | Not Depressed (47) | Depressed (305) | $\chi2$ | V | p-value | COR (95% CI), p-value | AOR (95% CI), p-value |
|---|---|---|---|---|---|---|---|
| Physical Health | | | | | | | |
| Poor | 16 (34.0) | 152 (49.8) | 4.07 | -0.11 | 0.044 | Ref | Ref |
| Good | 31 (66.0) | 153 (50.2) | | | | 0.52 (0.27, 0.99), 0.046 | 0.43(0.20, 0.94), 0.034 |

**Table 16**

**Association between Physical Health and Stress**

| Characteristics | Not Stressed [203] | Stress [149] | $\chi2$ | V/ $\varphi$ | p-value | COR (95% CI), p-value | AOR (95% CI), p-value |
|---|---|---|---|---|---|---|---|
| Physical Health | | | | | | | |
| Poor | 86 (42.4) | 82 (55.0) | 5.53 | -0.13 | 0.019 | Ref | Ref |
| Good | 117 (57.6) | 67 (45.0) | | | | 0.60 (0.39, 0.92), 0.019 | 0.64(0.41, 1.00), 0.054 |

**Table 17**

**Association between Physical Health and Anxiety**

| Characteristics | Not Anxious (20) | Anxious (332) | $\chi2$ | V | p-value | COR (95% CI), p-value | AOR (95% CI), p-value |
|---|---|---|---|---|---|---|---|
| Physical Health | | | | | | | |
| Poor | 12 (60.0) | 156 (47.0) | 1.28 | 0.06 | 0.258 | Ref | |
| Good | 8 (40.0) | 176 (53) | | | | 1.70 (0.67, 4.25), 0.262 | |

### 6.3 Discussion

The focus of this chapter was to ascertain the risk factors associated with mental health challenges among the Kayayei. The findings of the present study indicated that the Kayayei aged 35 and above were less likely to be depressed as compared to ages 18-24 years, the relationship is however not significant in the adjusted odds ratio. There was however no significant relationship between age and stress and age and anxiety. The results indicated that age alone did not reduce or increase depression, the reduction might have been in addition to other factors such as the number of children. This is because the results also indicated that Kayayei with 3 or more children were also less likely to be depressed as compared with those without. Studies have showed that migrants such as the Kayayei living in informal settlements are more prone to engage in risky sexual behaviour with associated reproductive health outcomes including pregnancy (Greif, Dodoo, & Jayaraman, 2011; McGrath, Eaton, Newell, & Hosegood, 2015; Olawore et al., 2018). The older Kayayei were more likely to have more children who also end up in the Kayayei business. This finding reiterates the premium placed on children in African societies where children are valued for economic, social, and cultural activities as noted by Alhassan, Ziblim, and Muntaka (2014). Having these children around could be a source of pride for their parents and help them to cope with the challenges of the Kayayei business.

The results of the study revealed that the Kayayei with primary and JHS school education were more likely to be depressed, anxious, and stressed. It is important to note that the educated Kayayei are more prone to suffer from mental health challenges as compared to

the uneducated Kayayei. This finding contradicts other studies which argue that more educated people experience lower rates of mental health problems than those with less education, presenting the notion that higher educational achievement serves as a protective factor against mental health disorders (Bauldry, 2015; Bjelland et al., 2008; Bracke, Pattyn, & von dem Knesebeck, 2013; Crespo, López Noval, & Mira, 2013; Strijbos, 2016).

The findings of the present study are likely due to the fact that the education level of these Kayayei is rather low, with a substantial number of them reported having some level of basic education. In the qualitative study, many have reported the intention to further their education in the foreseeable future. Research shows that more educated individuals, who are likely to have better job opportunities, and thus a better Socio-economic status are likely to experience lower levels of mental distress (Feinstein, Sabates, Anderson, Sorhaindo, & Hammond, 2006; Halpern-Manners, Schnabel, Hernandez, Silberg, & Eaves, 2016; Veldman et al., 2014). It was also argued that these individuals with higher education might be better able to engage in daily coping that may aid in reducing their suffering from psychological distress while persons with low education have a greater sense of futility predisposing them to higher psychological distress (Spruyt, Van Droogenbroeck, & Kavadias, 2015). Furthermore, educated individuals are more likely to be better informed on health in general and the recognition of symptoms, hence, they are more likely to seek professional health care including mental health care (Agyemang & Asibey, 2018; Fletcher & Frisvold, 2009; O'Keeffe & Officer, 2013; Steele, Dewa, Lin, & Lee, 2007). This does, however, not seem to be the case for the Kayayei as they might not have the knowledge and skills to manage mental health issues nor have ready access to health and mental health care.

The study also found out that Kayayei who rated the nature of their work as very difficult have a higher likelihood of experiencing depression, stress, and anxiety. This finding is commensurate with previous findings that reported relationships between nature of work and mental health of workers (Finne, Christensen, & Knardahl, 2016; Ozaki, Motohashi, Kaneko, & Fujita, 2012; Wieclaw et al., 2008). Even though employment, irrespective of the type, provides individuals with financial resources that can promote increased positive mental wellbeing, it may also contribute to the development of psychological distress if

conditions in which they perform are poor (Battams et al., 2014; Lee, Park, Min, Lee, & Kim, 2013; Henderson, Williams, Little, & Thornicroft, 2013; McDaid, Curran, & Knapp, 2005). In this study, the mental health distress of the Kayayei could primarily be the extraneous job demands of their work as it is informal employment that involves lifting and carrying heavy loads from one place to another over long periods and distances. In most instances the Kayayei, irrespective of their age must carry heavy loads bought by their clients on their head to the desired destination. All these repetitive work routines are associated with musculoskeletal stress (pain) due to the weight of loads and falls that might also impact mental health due to the association between pain and mental health (Tantawy, Rahman, & Ameer, 2017).

The study found that Kayayei who reported having longer working hours (9 hours on average) were at a lower risk of experiencing depression and stress. For both depression and stress the relationship was significant at the crude odds ratio. This significance, however, did not show at the adjusted odds ratio. This is an indication that working for longer hours alone did not reduce depression and stress among the Kayayei, and this might be caused by a combination of other factors such as the daily income. In this study, even though the Kayayei do not earn much, the results indicated that the Kayayei who earn between 11-20 Ghana Cedis are less likely to be depressed or stressed as compared to those who earn less income. The finding in this current study contradicts the study by Afonso, Fonseca, and Pires (2017) among individuals in corporate institutions which found that individuals working long hours have significantly higher psychological distress symptom compared to those who are regular hour workers (<48 working hours per week). In an earlier study, Virtanen et al. (2011) reported that workers who work more than ten hours per day were at 31 to 40 per cent more at risk of depression and anxiety than others. Various studies suggested that long working hours constitute not only a risk factor for depression and stress symptoms among workers but increase the risk of several physical diseases such as coronary heart diseases and stroke leading to a reduced quality of life (Bannai & Tamakoshi, 2014; Kim et al., 2013; li et al., 2019; Milner, Smith, & LaMontagne, 2015; Rodriguez-Jareño et al., 2014; Tabatabaeifar et al., 2015; Virtanen et al., 2012; Yoon, Ryu, Kim, won Kang, & Jung-Choi, 2018).

In this study, it was noted that these Kayayei faced challenging circumstances but were used to working for long hours before migrating to Accra to engage in the Kayayei business. For instance, a study by Opoku-Ware (2014), indicated that one of the main occupations of women in Northern Ghana is subsistence farming which is very tough and time-consuming whilst also having to take care of the household. The need to earn as much money as possible to support themselves and their families and children, as seen in the qualitative study, necessitated the long working hours carrying loads to various destinations. It implies that Kayayei might be used to working for long hours and the fact that this help them to earn a better income might be enough to improve their mental health outcomes.

Having accommodation is supposed to protect individuals and to increase their sense of well-being. This is different with the Kayayei in this present study. The finding indicated that having accommodation is rather associated with mental health distress among the Kayayei. Various studies have shown that homeless people are rather prone to higher levels of psychological distress due to social deprivations associated with homelessness (Fazel, Khosla, Doll, & Geddes, 2008; Navarro-Lashayas, & Eiroa-Orosa, 2017; Spicer, Smith, Conroy, Flatau, & Burns, 2015). It must be noted that, the type of accommodation that these Kayayei had as reported in the qualitative study (Chapter 4) is deplorable. The Kayayei who do not want to sleep on the street or in the front of people's shops have no better choice than resorting to sharing communal overcrowded and unsanitary accommodation with their colleagues. This overcrowded living condition with lack of privacy and risk of the spread of communicable diseases might be associated with the psychological stress among these women. The findings confirm studies conducted among other populations by Krieger and Higgins (2002), Kruger, Reischl, and Gee (2007), Mangrio, Zdravkovic (2018), and Pevalin, Reeves, Baker, and Bentley (2017). Living in temporary and dilapidated housing in slum areas where most Kayayei can afford to live also exposes them to psychological distress since they are often victims of robbery, sexual assault and sometimes evicted from sleeping places by the city authorities even though they pay weekly rent as reported in the individual in-depth interviews.

The findings of the present study further indicated that the Kayayei who are treated badly by their clients were more likely to experience mental health distress. Maltreatment and discrimination against migrant workers and their impact on mental health outcomes have also been reported in various other studies (Azinga 2015; Kwankye et al., 2009; Schmitt, Branscombe, Postmes, & Garcia, 2014). A study by Straiton, Aambø, and Johansen (2019) using data from the living conditions survey among immigrants in Norway and with a sample size of 4399, found that perceived discrimination predicted significantly higher odds of mental health problems. In a similar study, Schunck et al. (2015) also found that perceived discrimination predicted both mental and physical health concerns. The study findings are, thus, supported by various studies and suggest that maltreatment and discrimination against migrant workers is likely to have negative mental health consequences for them. It should also be noted that migrant women who engage in informal work might be more vulnerable to abuse and maltreatment because they often hold jobs for which there is little protection under social legislation (Achana & Tanle, 2020; Lai & Fong, 2020). Furthermore, in most countries, women do not seem to have the same rights and opportunities for employment as men do. The women are however, expected to take responsibility for the survival of the whole family and look for sources of income no matter the circumstances (ILO, 2003; Magidimisha & Gordon, 2015).

The results further indicated that physical health challenges predicted depression among the Kayayei. The findings of this study further revealed that physical health alone did not predict incidence of stress among participants. The result was significant in the unadjusted odds ratio but became insignificant in the adjusted odds ratio, respectively. This underscores the resilience of the Kayayei to withstand difficult situations in the face of physical health challenges. Notwithstanding this resilience, it must be recognised that the complexities of migration and the impact on mental health is vast, and it is therefore very difficult to identify all aspects in a single study.

It is worth noting from the study's findings that physical health challenges predicted depression but not stress. The relationship between physical health challenges and depression has been well documented in academic literature (Baune, Caniato, Garcia-Alcaraz, & Berger, 2008; Benjamin, Morris, McBeth, MacFarlane, & Silman, 2000).

Evidence shows that the association between physical health challenges (pain) and depression is bi-directional. While some findings indicated that pain predicted depression (Bair, Robinson, Katon, & Kroenke, 2003; Corruble, Guelfi, 2000; Gayman, Brown, & Cui, 2011), other evidence also demonstrated that depression predicted increased bodily pains (Demyttenaere et al., 2010; Gayman et al., 2011). This implies that the relationship between physical health challenges and depression may be pervasive and might arise due to biological pathways as previously noted by Bair et al. (2003) and Gayman et al. (2011).

### 6.4 Conclusion

The focus of this chapter was to investigate the socio-demographic risk factors for mental health conditions among the Kayayei. The findings indicate that the main risk factors for mental health concerns were accommodation, and the difficult nature of the Kayayei business. Using the bioecological system framework of Bronfenbrenner (1990), promoting mental health of the Kayayei through a multilevel strategy is therefore needed. At the individual levels, there is the need for programmes that aims at training the Kayayei to acquire self-confidence and be self-assured to protect themselves from maltreatment. The programmes should also help them to develop resilience to better cope with the challenges of the Kayayei business. In addition, at the interpersonal level, there is the need to develop social networks with family and friends to get support when needed. Finally, at the community level, there is the need for government, NGOs, and other agencies to develop programmes targeting the vulnerable in society to help them with issues of accommodation and enact laws and regulations to protect them.

# CHAPTER 7
# SOCIAL SUPPORT AND COPING STRATEGIES ADOPTED BY THE KAYAYEI

## 7.1 Introduction

The continued expansion of migration has brought about many opportunities as well as challenges (Kuo, 2014). Although labour migration comes with many benefits such as possible improvements in economic status and an opportunity to enjoy a better life, there are other challenges which includes how to navigate migration regulations, demanding working and living conditions, risk to physical and mental health, and cross-cultural difficulties still remain (Katewongsa 2015; Mak, Roberts, & Zimmerman, 2020). There are also significant physical and psychological challenges rural-urban migrants go through in the transition from the rural areas to urban centres. These physical and psychological challenges are quite severe among migrant women especially those in the informal sector whose working conditions are not regulated by any policy (Amponsah- Hodges & Baah, 2006; Lu, 2010; Tawiah, & Dartey-Baah, 2011).

Various studies (Datta et al., 2007; Kuo.2014) have indicated that although migrants are faced with various challenges, they adopt certain coping strategies to deal with these. The way migrants cope with the stresses of their daily life experiences has received a lot of attention in academic circles.  In Ghana, NGOs provide some form of assistance such as enrolling the Kayayei into the NHIS but thorough search in the scientific literature did not find any study conducted on social support available and coping strategies adopted by the Kayayei to navigate their business challenges. Most of the previous studies have been conducted in other parts of the world. It is therefore important to conduct a study using the Kayayei as samples to examine the social support available and coping strategies adopted by low skilled labourers who are internal migrants in Ghana.

The aim of this study was to assess the social support and coping strategies adopted by the Kayayei and the effectiveness of the strategies they adopted. Data were collected and analysed using Stata 15. Descriptive statistics were used to describe the simple statistics, Significant chi-square ($\chi2$) results relating to relationships between demographics and

coping strategies were presented, and binary logistic regression was presented on the impact of coping on mental health.

### 7.2 Pearson Correlation between Mental Distress, Social Support, Coping Strategies and Physical health challenges.

The Pearson-moment correlation coefficient (*r*) was used to examine the relationship between mental health challenges (Depression, stress, and anxiety), and the sub-scales coping strategies (Approach coping, avoidant coping, religious coping, and humour), and social support (significant other support, friends support, and family support), and physical health challenges. Another correlation between mental health challenges and the individual coping strategies was also measured.

In the first set, table 18 shows a strong positive correlation between the sub-scales of mental health challenges (depression, stress, and anxiety). Depression was positively strongly correlated with stress ($r = 0.739$, $p < .001$), and anxiety ($r = 0.777$, $p < 0.001$). There was a strong positive correlation between stress and anxiety ($r = 0.822$, $p < 0.001$). Concerning the sub-scales of social support, the sub-scales showed positive correlations. The sub-scale of significant others support was positively correlated with family support ($r= 0.337$, $p < 0.001$), with friends' support ($r= 0.378$, $p < 0.001$), and with total support ($r=0.675$, $p < 0.001$). Apart from significant others support which had a weak positive correlation with anxiety, all the other sub-scales of social support had negative correlations with mental health challenges. Family support show a weak negative correlation with depression ($r= -0.222$, $p< 0.001$), with stress ($r= -0.192$, $p < 0.01$), and with anxiety ($r= -0.186$, $p < 0.01$). friends' support also showed a weak negative correlation with depression ($r= -0.213$, $p < 0.001$), stress ($r= -0.185$, $p < 0.01$) and anxiety ($r= 182$, $p< 0.01$). Regarding coping strategies, there were positive correlations between all the sub-scales of the coping strategies (Avoidant, approach, humour, and religion). Avoidant-coping strategy is positively correlated with approach-coping strategy ($r= 0.649$, $p < 0.001$), humour ($r= 0.531$, $p < 0.001$), and religion ($r=419$, $p < 0.001$). There was also a positive correlation between the coping strategies and mental health sub-scales with avoidant coping strategy having the strongest positive significant correlation with depression ($r= 0.585$, $p < 0.001$), stress ($r= 0.496$, $p < 0.001$), and anxiety ($r= 0.517$, $p < 0.001$). Apart from significant other

support which had a weak positive significant correlation with all the sub-scales of coping with religion being the strongest ($r=0.308$, $p < 0.01$), all the other sub-scales of social support had weak negative correlations with the coping strategies. The strongest negative significant correlation was between friends support and religious coping ($r= -0.187$, $p < 0.05$). Physical health on the other hand, had a mixed correlation with the other sub-scales. Physical health had a positive significant correlation with family support ($r= 0.193$, $p < 0.01$), friends support ($r= 0.258$, $p < 0.001$), and total support ($r= 0.204$, p 0.001). Physical health was also negatively significantly correlated with depression ($r= -0.105$, $p < 0.05$), approach coping ($r= -0.183$, $p <0.001$), humour ($r= -0.305$, $p < 0.05$), and religion ($r= -0.133$, $p < 0.05$).

Regarding individual coping strategies, in table 19 most of the strategies showed significant positive correlations with mental health challenges. Planning which is an approach-coping strategy had the strongest correlation with depression ($r=0.575$, $p < 0.001$), with stress ($r= 0.454$, $p < 0.001$), and with anxiety ($r= 464$, $p < 0.001$). Also, denial, an avoidant-coping strategy showed significant positive correlation with depression ($r= 0.554$, $p < 0.001$), with stress ($r= 418$, $p < 0.001$), and with anxiety ($r= 456$, $p < 0.001$).

**Table 18**

**Correlations between Mental Health Challenges, Social Support, Coping Strategies and Physical Health.**

| variables | D | S | A | SOS | FAS | FRS | TS | AVC | APC | HUC | REC | PH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **D** | **1** | | | | | | | | | | | |
| **A** | 0.793*** | **1** | | | | | | | | | | |
| **S** | 0.777*** | 0.822*** | **1** | | | | | | | | | |
| **SOS** | 0.089 | 0.068 | 0.106* | **1** | | | | | | | | |
| **FAS** | -0.222*** | -0.194** | -0.186** | 0 337*** | **1** | | | | | | | |
| **FRS** | -0.213*** | -0.185** | -0.182** | 0 378*** | 0.701*** | **1** | | | | | | |
| **TS** | -0.156** | -0.140** | -0.121* | 0.675*** | 0.858*** | 0.879* | **1** | | | | | |
| **AVC** | 0.589*** | 0.496*** | 0.517*** | 0 252*** | -0.097 | -0.109* | 0.002 | **1** | | | | |
| **APC** | 0.497*** | 0.430*** | 0.437*** | 0 127** | -0.185*** | -0.153** | -0.100 | 0.649*** | **1** | | | |
| **HUC** | 0.334* | 0.178* | 0.211* | 0 191* | -0.134** | -0.187* | -0.071 | 0.531* | 0.483* | **1** | | |
| **REC** | 0.269*** | 0.247*** | 0.292*** | 0 308** | -0.123* | -0.111* | 0.011 | 0.419*** | 0.351*** | 0.531*** | **1** | |
| **PH** | -0.105* | -0.010 | 0.037 | 0.020 | 0.193** | 0 258*** | 0.204*** | -0.036 | -0.183*** | -0.305* | -0.133* | **1** |

**** p<0.001, ** p<0.01, * p<0.05*

*D = depression, S = stress, A = anxiety, SOS = Significant others support, FAS = Family support, FRS = Friends' support, TS = Total support, AVC = Avoidant coping strategy, APC = Approach coping strategy, HUM = humour coping strategy, REC = religious coping strategy, PH = physical health challenges*

## Table 19

## Correlation between Mental Health Challenges and Individual Coping Strategies

| Variables | D | S | A | SD | DL | SU | DT | V | SM | AC | ES | IS | PR | P | ACP |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Depression (D)** | 1 | | | | | | | | | | | | | | |
| **Stress (S)** | 0.793*** | 1 | | | | | | | | | | | | | |
| **Anxiety (A)** | 0.777*** | 0.822*** | 1 | | | | | | | | | | | | |
| **Self-Distraction (SD)** | 0.465*** | 0.377*** | 0.426*** | 1 | | | | | | | | | | | |
| **Denial (DL)** | 0.554*** | 0.418*** | 0.456*** | 0.606*** | 1 | | | | | | | | | | |
| **Substance use (SU)** | 0.004 | 0.017 | 0.071 | 0.035 | 0.024 | 1 | | | | | | | | | |
| **Disengagement (DT)** | 0.533*** | 0.415*** | 0.417*** | 0.573*** | 0.701*** | 0.020 | 1 | | | | | | | | |
| **Venting (V)** | 0.373*** | 0.373*** | 0.368*** | 0.418*** | 0.502*** | 0.130*** | 0.537*** | 1 | | | | | | | |
| **Self-blame (SB)** | 0.433*** | 0.387*** | 0.356*** | 0.303*** | 0.392*** | 0.171*** | 0.461*** | 0 544*** | 1 | | | | | | |
| **Active coping (AC)** | 0.468*** | 0.385*** | 0.381*** | 0.585*** | 0.756*** | 0.010 | 0.628*** | 0 506*** | 0.329*** | 1 | | | | | |
| **Emotional support (ES)** | 0.363*** | 0.328*** | 0.341*** | 0.534*** | 0.489*** | -0.001 | 0.610*** | 0 531*** | 0.391*** | 0.568*** | 1 | | | | |
| **Instrumental support (IS)** | 0.321*** | 0.340*** | 0.349*** | 0.504*** | 0.455*** | -0.013 | 0.520*** | 0 540*** | 0.387*** | 0.521*** | 0.717** | 1 | | | |
| **Positive reframing (PR)** | 0.505*** | 0.368*** | 0.414*** | 0.585*** | 0.670*** | 0.094 | 0.715*** | 0 508*** | 0.449*** | 0.719*** | 0.618*** | 0.553*** | 1 | | |
| **Planning (P)** | 0.575*** | 0.454*** | 0.464*** | 0.562*** | 0.601*** | 0.097 | 0.650*** | 0.486*** | 0.485*** | 0.603*** | 0.551*** | 0.535*** | 0.782*** | 1 | |
| **Acceptance ACP)** | 0.476*** | 0.396*** | 0.384*** | 0.559*** | 0.495*** | 0.081 | 0.552*** | 0 532*** | 0.462*** | 0.546*** | 0.463*** | 0.541*** | 0.601*** | 0.666*** | 1 |

**** p<0.001, ** p<0.01, * p<0.05*

### 7.3 Results

### 7.3.1 Coping Strategies Used by the Kayayei

Table 20 shows the responses on the Brief cope scale. With regard to avoidant-coping strategies, the mean score was 25.53 with a standard deviation of 4.86. The most common response to the questions were 'I've been doing this a little bit' and "I've been doing this a medium amount" with regards to the approach to coping, the mean score was 29.0 and a standard deviation of 5.51. The most common responses were "I've been doing this a little bit" and "I've been doing this a medium amount". Regarding religion the mean score was 6.36 and standard deviation of 1.38. Humour also had a mean score of 5.34 and a standard deviation of 1.49.

**Table 20**

**Coping Strategies Used by the Kayayei**

| Avoidant coping (M=25.53, SD= 4.86) | 1 | | 2 | | 3 | | 4 | | Total % |
|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | |
| 1. I've been turning to work or other activities to take my mind off things. | 15 | 4.3 | 176 | 50.6 | 152 | 43.7 | 5 | 4.1 | 348 |
| 2. I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping. | 17 | 4.9 | 148 | 42.5 | 135 | 38.8 | 48 | 13.8 | 348 |
| 3. I've been saying to myself "this isn't real.". | 38 | 10.9 | 163 | 46.7 | 127 | 36.4 | 21 | 6.0 | 349 |
| 4. I've been refusing to believe that it has happened. | 15 | 4.3 | 205 | 58.7 | 121 | 34.7 | 8 | 2.3 | 349 |
| 5. I've been saying things to let my unpleasant feelings escape. | 13 | 3.7 | 198 | 56.7 | 126 | 36.1 | 12 | 3.4 | 349 |
| 6. I've been expressing my negative feelings. | 42 | 11.9 | 178 | 50.6 | 122 | 34.7 | 6 | 1.7 | 348 |
| 7. I've been using alcohol or other drugs to make myself feel better | 322 | 92.3 | 18 | 5.2 | 7 | 2.0 | 2 | 0.6 | 349 |
| 8. I've been using alcohol or other drugs to help me get through it. | 318 | 91.1 | 17 | 4.9 | 11 | 3.2 | 3 | 0.9 | 349 |
| 9. I've been giving up trying to deal with it. | 13 | 3.7 | 214 | 61.3 | 113 | 32.4 | 9 | 2.6 | 349 |
| 10. I've been giving up the attempt to cope. | 23 | 6.6 | 194 | 55.8 | 126 | 36.2 | 5 | 1.4 | 348 |
| 11. I've been criticising myself | 68 | 19.5 | 165 | 47.3 | 95 | 27.2 | 21 | 6.0 | 349 |
| 12. I've been blaming myself for things that happened | 50 | 14.3 | 175 | 50.1 | 108 | 31.0 | 16 | 4.6 | 350 |

| Approach coping (M=29.00, SD=5.51) | 1 | | 2 | | 3 | | 4 | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | |
| 1. I've been concentrating my efforts on doing something about the situation I'm in. | 5 | 1.4 | 189 | 54.3 | 145 | 14.7 | 9 | 2.6 | 348 |
| 2. I've been taking action to try to make the situation better. | 3 | 0.9 | 211 | 60.5 | 118 | 33.8 | 17 | 4.9 | 349 |
| 3. I've been trying to come up with a strategy about what to do. | 6 | 1.7 | 183 | 52.4 | 142 | 40.7 | 18 | 5.2 | 349 |
| 4. I've been thinking hard about what steps to take. | 5 | 1.4 | 184 | 52.7 | 147 | 72.1 | 13 | 3.7 | 349 |
| 5. I've been trying to see it in a different light, to make it seem more positive | 7 | 2.0 | 211 | 60.5 | 121 | 34.7 | 10 | 2.9 | 349 |
| 6. I've been looking for something good in what is happening | 10 | 2.9 | 187 | 53.7 | 132 | 37.9 | 19 | 5.5 | 348 |
| 7. I've been accepting the reality of the fact that it has happened | 5 | 1.4 | 168 | 48.3 | 167 | 45.1 | 18 | 5.2 | 348 |
| 8. I've been learning to live with it. | 1 | 0.3 | 169 | 48.4 | 155 | 44.4 | 24 | 6.9 | 349 |
| 9. I've been getting emotional support from others | 24 | 6.9 | 212 | 60.7 | 112 | 32.1 | 1 | 0.3 | 449 |
| 10. I've been getting comfort and understanding from someone | 11 | 3.2 | 195 | 56.0 | 136 | 39.1 | 6 | 1.7 | 348 |
| 11. I've been trying to get advice or help from other people about what to do | 14 | 4.0 | 201 | 57.6 | 127 | 36.4 | 7 | 2.0 | 349 |
| 12. I've been getting help and advice from other people | 11 | 3.2 | 184 | 52.7 | 142 | 40.7 | 12 | 3.4 | 349 |
| **Religion (M= 6.36, SD=1.38)** | | | | | | | | | |
| 1. I've been trying to find comfort in my religion or spiritual beliefs | 1 | 0.3 | 101 | 29.0 | 142 | 40.8 | 104 | 29.9 | 348 |
| 2. I've been praying or meditating | 0 | 0.0 | 44 | 12.6 | 114 | 32.7 | 191 | 54.7 | 349 |
| **Humour (M=5.34, SD=1.49)** | | | | | | | | | |
| 1. I've been making jokes about it. | 7 | 2.0 | 155 | 44.5 | 111 | 31.9 | 75 | 21.5 | 348 |
| 2. I've been making fun of the situation | 9 | 2.6 | 148 | 41.4 | 142 | 40.7 | 50 | 14.3 | 349 |

*1= I haven't been doing this at all; 2 = I've been doing this a little bit; 3 = I've been doing this a medium amount; 4 = I've been doing this a lot*

### 7.3.2 Coping Strategies among the Kayayei

Figure 13 represents the various coping strategies that the Kayayei adopted. Considering all the 14 strategies, the majority (78.7%, N=277) used religion as a method of coping, while almost half of the participants used humour (49.4%, N=174), acceptance (42.6%, N=150?) and self-distraction (42.3%, N=149?). Only 26.1 per cent (N=92) used self-blame as a coping strategy.

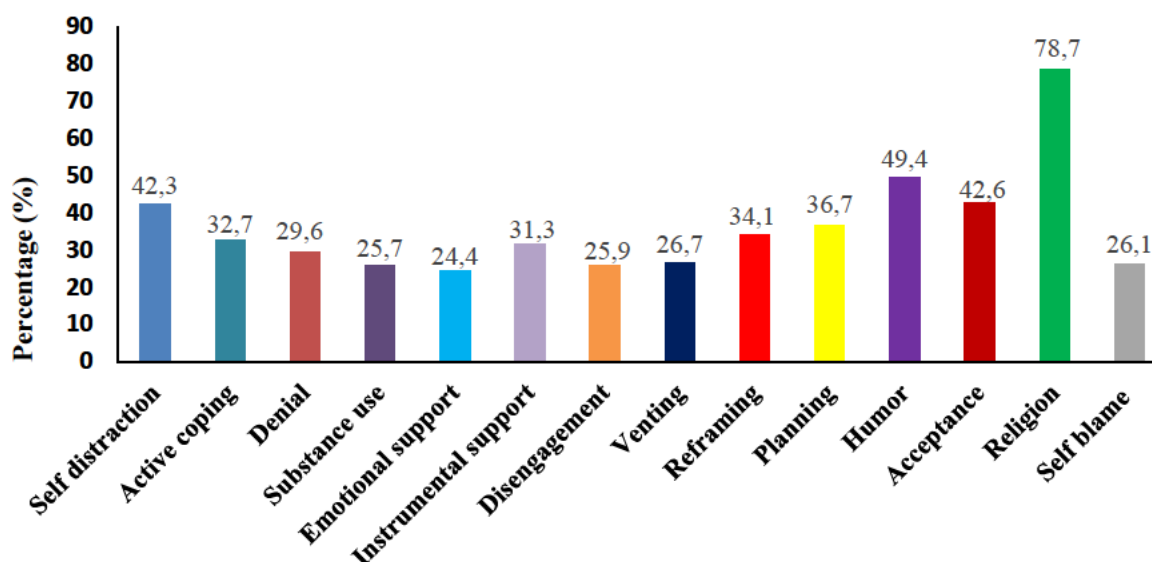


*Figure 13: Coping strategies*

### 7.3.3 Prevalence of Cumulative Avoidant and Approach Coping Strategies

Table 21 shows that participants used both avoidant and approach coping strategies almost equally. Avoidant coping strategies were used 54.8 per cent of the time while approach-coping strategies were used 52.8 per cent.

**Table 21**

**Prevalence of Avoidant and Approach Coping strategies**

| Characteristics | Frequency | Prevalence |
|---|---|---|
| Avoidant | 193 | 54.8 |
| Approach | 186 | 52.8 |

### 7.3.4 Association between Individual Coping Strategies and Mental Health

*Depression*

Table 22 revealed a positive relationship between self-distraction and depression, participants who use self-distraction-coping strategies were 3.58 times more likely to be depressed (AOR=3.58, 95% CI=1.73–7.41, $p<0.001$), denial was also found to have a positive association with depression. The results indicate that participants who employed denial coping strategies were 2.88 times more likely to be depressed (95% CI=1.28-6.48, $p=0.010$), Furthermore, participants who used self-blame as a coping strategy were 2.56 times more likely to be depressed (95% CI=1.26-5.20, $p=0.010$). Besides, there was a positive relationship between

active coping and depression, the results showed that participants who employed an active coping strategy were 6.88 times more likely to be depressed (95% CI=2.58, 18.31, p<0.001). However, there was no statistically significant relationship between behavioural disengagement and depression (AOR=2.00, 95% CI=0.75-5.26, p=0.166), planning and depression (AOR= 2.00, 95% CI=0.13-4.90, p=0.131), or acceptance and depression (AOR=0.89, 95% CI=0.40-1.99, p=0.770).

*Stress*

In Table 23, the results show that participants who used a self-distraction coping mechanism are 4.37 times more likely to be stressed (95% CI=2.42=7.92, p<0.001). Besides, participants who used a self-blame coping strategy were 2.99 times more likely to be stressed (AOR=2.99, 95% CI=1.57, 5.69, p<0.001). Also, participants who employed active coping were 2.67 times more likely to be stressed (95% CI=1.55-4.57, p<0.001), and participants who received instrumental support were 2.12 times more likely to be stressed (1.24-3.72, p=0.006). There was, however, no significant relationship between denial coping strategy (AOR=1.33, 95% CI=0.55-3.23, p=0.527), planning (AOR=1.63, 95% CI=0.85-3.11, p=0.138) acceptance (AOR=1.38, 95% CI=0.73-261, p=0.325) and stress

*Anxiety*

The results in Table 24 indicate that there was a positive relationship between self-blame and anxiety. The results showed that participants who use self-blame coping mechanism are 4.25 times more likely to be anxious (95% CI=1.43-12.65, p=0.009). There was, however, no significant relationship between active coping (AOR= 2.00, 95% CI=0.61-6.56, p=0.256), planning (AOR=2.80, 95% CI=0.85-9.20, p=0.089) and anxiety.

**Table 22**

**Association between Avoidant Coping Strategies and Depression**

| Characteristics | Not Depressed (47) | Depressed (305) | χ2 | V/ φ | p-value | COR (95% CI), p-value | AOR (95% CI), p-value |
|---|---|---|---|---|---|---|---|
| **Self-Distraction** | | | | | | | |
| Low | 34 (72.3) | 101 (33.1) | 26.50 | 0.27 | <0.001 | Ref | |
| High | 13 (27.7) | 204 (66.9) | | | | 5.28 (2.67, 10.45), <0.001 | 3.58 (1.73, 7.41), 0.001 |
| **Denial** | | | | | | | |
| Low | 17 (36.2) | 28 (9.2) | 26.61 | 0.27 | <0.001 | Ref | |
| High | 30 (63.8) | 277 (90.8) | | | | 5.61 (2.75, 11.41), <0.001 | 2.88 (1.28, 6.48), 0.010 |
| **Substance Use** | | | | | | | |
| Low | 47 (100.0) | 293 (96.1) | 1.91 | 0.07 | 0.166 | 1 (Empty) | - |
| High | 0 (0.0) | 12 (3.9) | | | | | |
| **Behavioural Disengagement** | | | | | | | |
| Low | 11 (23.4) | 17 (5.6) | 17.68 | 0.22 | <0.001 | Ref | |
| High | 36 (76.6) | 288 (94.4) | | | | 5.17 (2.25, 11.92), <0.001 | 2.00 (0.75, 5.26), 0.166 |
| **Venting** | | | | | | | |
| Low | 7 (14.9) | 23 (7.5) | 2.82 | 0.15 | 0.093 | Ref | |
| High | 40 (85.1) | 282 (92.5) | | | | 2.15 (0.86, 5.32), 0.100 | - |
| **Self-Blame** | | | | | | | |
| Low | 23 (48.9) | 56 (18.4) | 21.87 | 0.25 | <0.001 | Ref | |
| High | 24 (51.1) | 249 (81.6) | | | | 4.26 (2.24, 8.09), <0.001 | 2.56 (1.26, 5.20), 0.010 |

**Table 23**

**Association between Avoidant Coping Strategies and Stress**

| Characteristics | Not Stressed [203] | Stress [149] | χ2 | V/ φ | p-value | COR (95% CI), p-value | AOR (95% CI), p-value |
|---|---|---|---|---|---|---|---|
| **Self-Distraction** | | | | | | | |
| Low | 111 (54.7) | 24 (16.1) | 54.07 | 0.39 | <0.001 | Ref | |
| High | 92 (45.3) | 125 (83.9) | | | | 6.28 (3.75, 10.54), <0.001 | 4.37 (2.42, 7.92), <0.001 |
| **Denial** | | | | | | | |
| Low | 36 (17.7) | 9 (6.0) | 10.54 | 017 | 0.001 | Ref | |
| High | 167 (82.3) | 140 (94.0) | | | | 3.35 (1.56, 7.20), 0.002 | 1.33 (0.55, 3.23), 0.527 |
| **Substance Use** | | | | | | | |
| Low | 197 (97.0) | 143 (96.0) | 0.30 | 0.03 | 0.583 | Ref | |
| High | 6 (3.0) | 6 (4.0) | | | | 1.38 (0.44, 4.36), 0.586 | - |
| **Behavioural Disengagement** | | | | | | | |
| Low | 18 (8.9) | 10 (6.7) | 0.55 | 0.04 | 0.460 | Ref | |
| High | 185 (91.1) | 139 (93.3) | | | | 1.35 (0.61, 3.02), 0.462 | - |
| **Venting** | | | | | | | |
| Low | 20 (9.9) | 10 (6.7) | 1.09 | 0.06 | 0.297 | Ref | |
| High | 183 (90.1) | 139 (93.3) | | | | 1.52 (0.69, 3.35), 0.300 | - |
| **Self-Blame** | | | | | | | |
| Low | 63 (31.0) | 16 (10.7) | 20.34 | 0.24 | <0.001 | Ref | |
| High | 140 (69.0) | 133 (89.3) | | | | 3.74 (2.06, 6.80), <0.001 | 2.99 (1.57, 5.69), 0.001 |

**Table 24**

**Association between Avoidant Coping Strategies and Anxiety**

| Characteristics | Not Anxious (20) | Anxious (332) | $\chi2$ | V/ $\varphi$ | p-value | COR (95% CI), p-value | AOR (95% CI), p-value |
|---|---|---|---|---|---|---|---|
| **Self-Distraction** | | | | | | | |
| Low | 13 (65.0) | 122 (36.8) | 6.37 | 0.13 | 0.012 | Ref | |
| High | 7 (35.0) | 210 (63.3) | | | | 3.20 (1.24, 8.23), 0.016 | 1.52 (0.50, 4.57), 0.461 |
| **Denial** | | | | | | | |
| Low | 8 (40.0) | 37 (11.1) | 14.09 | 0.20 | <0.001 | Ref | |
| High | 12 (60.0) | 296 (88.9) | | | | 5.32 (2.04, 13.85), 0.001 | 1.79 (0.53, 6.04), 0.348 |
| **Substance Use** | | | | | | | |
| Low | 20 (100.0) | 320 (96.4) | 0.75 | 0.05 | 0.387 | Ref | |
| High | 0 (0.0) | 12 (3.6) | | | | 1 | - |
| **Behavioural Disengagement** | | | | | | | |
| Low | 7 (35.0) | 21 (6.3) | 21.18 | 0.25 | <0.001 | Ref | |
| High | 13 (65.0) | 311 (93.7) | | | | 7.97 (2.88, 22.11), <0.001 | 2.99 (0.81, 11.07), 0.101 |
| **Venting** | | | | | | | |
| Low | 6 (30.0) | 24 (7.2) | 12.55 | 0.19 | <0.001 | Ref | |
| High | 14 (70.0) | 308 (92.8) | | | | 5.50 (1.94, 15.60), 0.001 | 1.77 (0.48, 6.49), 0.391 |
| **Self-Blame** | | | | | | | |
| Low | 13 (65.0) | 66 (19.9) | 22.06 | 0.25 | <0.001 | Ref | |
| High | 7 (35.0) | 266 (80.1) | | | | 7.48 (2.87, 19.50), <0.001 | 4.25 (1.43, 12.65), 0.009 |

**Table 25:**

**Association between Approach Coping Strategies and Depression**

| Characteristics | Not Depressed (47) | Depressed (305) | $\chi2$ | V/ $\varphi$ | p-value | COR (95% CI), p-value | AOR (95% CI), p-value |
|---|---|---|---|---|---|---|---|
| **Active Coping** | | | | | | | |
| Low | 41 (87.2) | 129 (42.3) | 32.94 | 0.31 | <0.001 | Ref | |
| High | 6 (12.8) | 176 (57.7) | | | | 9.32 (3.84, 22.61), <0.001 | 6.88 (2.58, 18.31), <0.001 |
| **Emotional Support** | | | | | | | |
| Low | 5 (10.6) | 23 (7.5) | 0.53 | 0.04 | 0.465 | Ref | |
| High | 42 (89.4) | 282 (92.5) | | | | 1.46 (0.53, 4.05), 0.467 | - |
| **Instrumental Support** | | | | | | | |
| Low | 27 (57.5) | 147 (48.2) | 1.39 | 0.06 | 0.238 | Ref | |
| High | 20 (42.6) | 158 (51.8) | | | | 1.45 (0.78, 2.70), 0.240 | - |
| **Positive reframing** | | | | | | | |
| Low | 4 (8.5) | 10 (3.3) | 2.92 | 0.09 | 0.088 | Ref | |
| High | 43 (91.5) | 295 (96.7) | | | | 2.74 (0.82, 9.14), 0.100 | - |
| **Planning** | | | | | | | |
| Low | 35 (74.5) | 122 (40.0) | 19.58 | 0.24 | <0.001 | Ref | |
| High | 12 (25.5) | 183 (60.0) | | | | 4.38 (2.18, 8.76), <0.001 | 2.00 (0.13, 4.90), 0.131 |
| **Acceptance** | | | | | | | |
| Low | 29 (61.7) | 113 (37.1) | 10.28 | 0. 17 | 0.001 | Ref | |
| High | 18 (38.3) | 192 (62.9) | | | | 2.74 (1.45, 5.15), 0.002 | 0.89 (0.40, 1.99), 0.770 |

**Table 26**
**Association between Approach Coping Strategies and Stress**

| Characteristics | Not Stressed [203] | Stressed [149] | $\chi2$ | V/ $\varphi$ | p-value | COR (95% CI), p-value | AOR (95% CI), p-value |
|---|---|---|---|---|---|---|---|
| **Active Coping** | | | | | | | |
| Low | 130 (64.0) | 40 (26.8) | 47.6 | 0.37 | <0.001 | Ref | |
| High | 73 (36.0) | 109 (73.2) | | | | 4.85 (3.06, 7.70), <0.001 | 2.67 (1.55, 4.57), <0.001 |
| **Emotional Support** | | | | | | | |
| Low | 18 (8.9) | 10 (6.7) | 0.55 | 0. 04 | 0.460 | Ref | |
| High | 185 (91.1) | 139 (93.3) | | | | 1.35 (0.60, 3.02), 0.462 | - |
| **Instrumental Support** | | | | | | | |
| Low | 130 (64.0) | 44 (29.5) | 40.94 | 0.34 | <0.001 | Ref | |
| High | 73 (36.0) | 105 (70.5) | | | | 4.25 (2.70, 6.69), <0.001 | 2.15 (1.24, 3.72), 0.006 |
| **Positive reframing** | | | | | | | |
| Low | 7 (3.5) | 7 (4.7) | 0.35 | -0.03 | 0.553 | Ref | |
| High | 196 (96.5) | 142 (95.3) | | | | 0.72 (0.25, 2.11), 0.555 | - |
| **Planning** | | | | | | | |
| Low | 121 (59.6) | 36 (24.2) | 43.69 | 0.35 | <0.001 | Ref | |
| High | 82 (40.4) | 113 (75.8) | | | | 4.63 (2.90, 7.40), <0.001 | 1.63 (0.85, 3.11), 0.138 |
| **Acceptance** | | | | | | | |
| Low | 109 (53.7) | 33 (22.2) | 35.53 | 0.31 | <0.001 | Ref | |
| High | 94 (46.3) | 116 (77.8) | | | | 4.08 (2.53, 6.55), <0.001 | 1.38 (0.73, 261), 0.325 |

**Table 27**
**Association between Approach Coping Strategies and Anxiety**

| Characteristics | Not Anxious (20) | Anxious (332) | χ2 | V/ φ | p-value | COR (95% CI), p-value | AOR (95% CI), p-value |
|---|---|---|---|---|---|---|---|
| **Active Coping** | | | | | | | |
| Low | 15 (75.0) | 155 (45.7) | 6.06 | 0. 13 | 0.014 | Ref | |
| High | 5 (25.0) | 177 (53.3) | | | | 3.43 (1.22, 9.64), 0.020 | 2.00 (0.61, 6.56), 0.256 |
| **Emotional Support** | | | | | | | |
| Low | 3 (15.0) | 25 (7.5) | 1.44 | 0.06 | 0.231 | Ref | |
| High | 17 (85.0) | 307 (92.5) | | | | 2.17 (0.59, 7.90), 0.241 | - |
| **Instrumental Support** | | | | | | | |
| Low | 11 (55.0) | 163 (49.1) | 0.263 | 0.03 | 0.608 | Ref | |
| High | 9 (45.0) | 169 (50.9) | | | | 1.27 (0.51, 3.14), 0.609 | - |
| **Positive reframing** | | | | | | | |
| Low | 2 (10.0) | 12 (3.6) | 2.01 | 0.08 | 0.156 | Ref | |
| High | 18 (90.0) | 320 (96.4) | | | | 2.96 (0.62, 14.25), 0.175 | - |
| **Planning** | | | | | | | |
| Low | 15 (75.0) | 142 (42.7) | 7.93 | 0.15 | 0.006 | Ref | |
| High | 5 (25.0) | 190 (57.2) | | | | 4.01 (1.43, 11.30), 0.009 | 2.80 (0.85, 9.20), 0.089 |
| **Acceptance** | | | | | | | |
| Low | 10 (50.0) | 132 (39.8) | 0.82 | 0.05 | 0.365 | Ref | |
| High | 10 (50.0) | 200 (60.2) | | | | 1.52 (0.61, 3.74), 0.367 | - |

### 7.3.5 Association between Cumulative Coping Strategies and Mental Health Challenges

*Depression*

The results in Table 28 show that the only statistical significance was showed between avoidant coping and depression. The results also indicate that the Kayayei who adopted avoidant coping were 8.93 times more likely to be depressed (95% CI=3.87-20.59, p<0.001). There is no statistically significant influence on approach coping (AOR=1.001, 95% CI=0.372, 2.75, p=0.983), religion (AOR=1.04, 95% CI=0.52, 2.29, p=0.811), and humour (AOR=1.31, 95% CI=0.69-2.87, p=0.803).

Stress

The results in Table 29 indicate that the Kayayei who used the approach coping strategy were 2.34 times more likely to be stressed (95% CI=1.26-4.34, p=0.007). Also, the Kayayei who used avoidant coping strategy were 2.48 times more likely to be stressed (95% CI=.33, 4.62, p=0.004). On the other hand, there was no statistical difference between using religion (AOR=1.96, 95% CI=0.10-3.83, p=0.051), and humour (AOR=0.71, 95% CI=0.38-1.33, p=0.288) as coping strategies and being stressed.

Anxiety

In the case of anxiety in Table 30, in model one, only avoidant coping was significant. Therefore, no further analysis was conducted. The findings also revealed that participants who used avoidant coping were 7. 57 times more likely to be anxious as compared to others who do not (95% CI=.17, 26.37, p=0.001). There was no statistical significance between approach coping (COR= 2.17, 95% CI=0.85-5.58, p=0.107), religion (COR=1.23, 95% CI=0.43-3.49, p=0.703) humour (COR=1.41, 95% CI=0.57, 3.49, p=0.460) and anxiety.

**Table 28**

**Association between Coping Strategies and Depression**

| Characteristics | Not Depressed (N=47) | Depressed (N=305) | $\chi^2$ | V | p-value | COR (95% CI), p-value | AOR (95% CI), p-value |
|---|---|---|---|---|---|---|---|
| **Approach** | | | | | | | |
| Low Approach | 36 (76.6) | 130 (42.6) | 18.86 | 0.23 | <0.001 | Ref | |
| High Approach | 11 (23.4) | 175 (57.4) | | | | 4.41 (2.16, 8.98), <0.001 | 1.001 (0.372, 2.75) 0.983 |
| **Avoidant** | | | | | | | |
| Low Avoidant | 40 (85.1) | 119 (39.0) | 34.93 | 0.32 | <0.001 | Ref | |
| High Avoidant | 7 (14.9) | 186 (61.0) | | | | 8.93 (3.87, 20.59), <0.001 | 8.93 (3.87, 20.59), <0.001 |
| **Religion** | | | | | | | |
| Low religion | 17 (36.2) | 59 (19.3) | 6.81 | 0.14 | 0.009 | Ref | |
| High Religion | 30 (63.8) | 246 (80.7) | | | | 2.36 (1.22, 4.57), 0.011 | 1.04 (0.52, 2.29) 0.811 |
| **Humour** | | | | | | | |
| Low Humour | 29 (61.7) | 102 (33.4) | 13.92 | 0.20 | <0.001 | Ref | |
| High Humour | 18 (38.3) | 203 (66.6) | | | | 3.21 (1.70, 6.05), <0.001 | 1.31 (0.69, 2.87) 0.803 |

**Table 29**

**Association between Coping Strategies and Stress**

| Characteristics | Not Stressed [N=203] | Stress [N=149] | $\chi^2$ | V | p-value | COR (95% CI), p-value | AOR (95% CI), p-value |
|---|---|---|---|---|---|---|---|
| **Approach** | | | | | | | |
| Low Approach | 128 (63.1) | 38 (25.5) | 48.62 | 0.37 | <0.001 | Ref | |
| High Approach | 75 (37.0) | 111 (74.5) | | | | 4.99 (3.13, 7.94), <0.001 | 2.34 (1.26, 4.34), 0.007 |
| **Avoidant** | | | | | | | |
| Low Avoidant | 124 (61.1) | 35 (23.5) | 49.03 | 0.37 | <0.001 | Ref | |
| High Avoidant | 79 (38.9) | 114 (76.5) | | | | 5.11 (3.19, 8.20), <0.001 | 2.48 (1.33, 4.62), 0.004 |
| **Religion** | | | | | | | |
| Low Religion | 61 (30.1) | 15 (10.07) | 20.27 | 0. 24 | <0.001 | Ref | |
| High Religion | 142 (70.0) | 134 (89.9) | | | | 3.84 (2.08, 7.08), <0.001 | 1.96 (0.10, 3.83), 0.051 |
| **Humour** | | | | | | | |
| Low Humour | 93 (46.8) | 38 (25.5) | 15.17 | 0.21 | <0.001 | Ref | |
| High Humour | 110 (54.2) | 111 (74.5) | | | | 2.47 (1.56, 3.91), <0.001 | 0.71 (0.38, 1.33) 0.288 |

**Table 30**

**Association between Coping Strategies and Anxiety**

| Characteristics | Not Anxious (N=20) | Anxious (N=332) | $\chi^2$ | V | p-value | COR (95% CI), p-value |
|---|---|---|---|---|---|---|
| **Approach** | | | | | | |
| Low Approach | 13 (65.0) | 153 (46.1) | | E | | |
| High Approach | 7 (35.0) | 179 (53.9) | 2.71 | 0.09 | 0.100 | 2.17 (0.85, 5.58), 0.107 |
| **Avoidant** | | | | | | |
| Low Avoidant | 17 (85.0) | 142 (42.8) | | Ref | | |
| High Avoidant | 3 (15.0) | 190 (57.2) | 13.58 | 0.20 | <0.001 | 7.58 (2.17, 26.37), 0.001 |
| **Religion** | | | | | | |
| Low Religion | 5 (25.0) | 71 (21.4) | | Ref | | |
| High Religion | 15 (75.0) | 261 (78.6) | 0.15 | 0.02 | 0.707 | 1.23 (0.43, 3.49), 0.703 |
| **Humour** | | | | | | |
| Low Humour | 9 (45.0) | 122 (36.8) | | Ref | | |
| High Humour | 11 (55.0) | 210 (63.3) | 0.55 | 0.04 | 0.458 | 1.41 (0.57, 3.49), 0.460 |

### 7.3.6 Social Support Available to the Kayayei

Table 31 shows the support available to the Kayayei as measured by the MSPSS. The social support was received from significant others M=11.02, SD=2.19), family (M=9.47, SD=2.55), and friends (M=9.98, SD=2.55).

**Table 31**

**Social Support available to the Kayayei**

| **Significant other support (M=11.02, SD=2.19)** | 1 | | 2 | | 3 | | 4 | | Total % |
|---|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % | |
| 1. There is a special person who is around when I am in need | 14 | 4.0 | 70 | 30.1 | 255 | 73.1 | 10 | 2.9 | 349 |
| 2. There is a special person with whom I can share my joys and sorrows | 10 | 2.9 | 68 | 19.5 | 265 | 75.9 | 6 | 1.7 | 349 |
| 3. I have a special person who is a real source of comfort to me | 14 | 4.0 | 70 | 20.1 | 255 | 73.1 | 10 | 2.9 | 349 |
| 4. There is a special person in my life who cares about my feelings | 12 | 3.4 | 62 | 17.8 | 254 | 2.8 | 21 | 6.0 | 349 |
| **Family support (M=9.47, SD=2.55)** | | | | | | | | | |
| 1. My family really tries to help me | 40 | 11.5 | 158 | 45.3 | 149 | 42.7 | 2 | 0.6 | 349 |
| 2. I get emotional help and support I need from my family | 52 | 14.0 | 126 | 36.1 | 169 | 48.4 | 2 | 0.6 | 349 |
| 3. I can talk about my problems with my family | 32 | 9.2 | 118 | 33.8 | 191 | 54.7 | 8 | 2.3 | 349 |
| 4. My family is willing to help me make decisions | 39 | 11.2 | 148 | 42.4 | 152 | 43.6 | 10 | 2.9 | 349 |
| **Friends support (M=9.98, SD=2.55** | | | | | | | | | |
| 1. My friends really try to help me. | 35 | 10.0 | 105 | 30.1 | 201 | 57.5 | 8 | 2.3 | 349 |
| 2. I can count on my friends when things go wrong | 34 | 9.7 | 119 | 34.1 | 188 | 53.9 | 8 | 2.3 | 349 |
| 3. I have friends with whom I can share my joys and sorrows. | 29 | 8.3 | 108 | 31.0 | 200 | 57. 3 | 12 | 3.4 | 349 |
| 4. I can talk about my problems with my friends | 32 | 9.2 | 118 | 33.8 | 191 | 54.7 | 8 | 2.3 | 349 |

### 7.3.7 Social Support Systems used by the Kayayei.

Social support systems used by the Kayayei were measured. In general, all forms of support offered to Kayayei ranges between low and medium, the results indicated that the Kayayei did not receive high social support in all the categories of support available. The results indicated

total support received by the Kayayei was low (72,7%, N=256) while only 27 per cent (N=96) received moderate support, none of the Kayayei reported receiving high levels of support. Regarding support from significant others, the majority (71,6%, N=252) reported receiving moderate support from significant others. Support from family members and friends were respectively low (64.5 per cent [N=227] and 53.4 per cent [N=188].

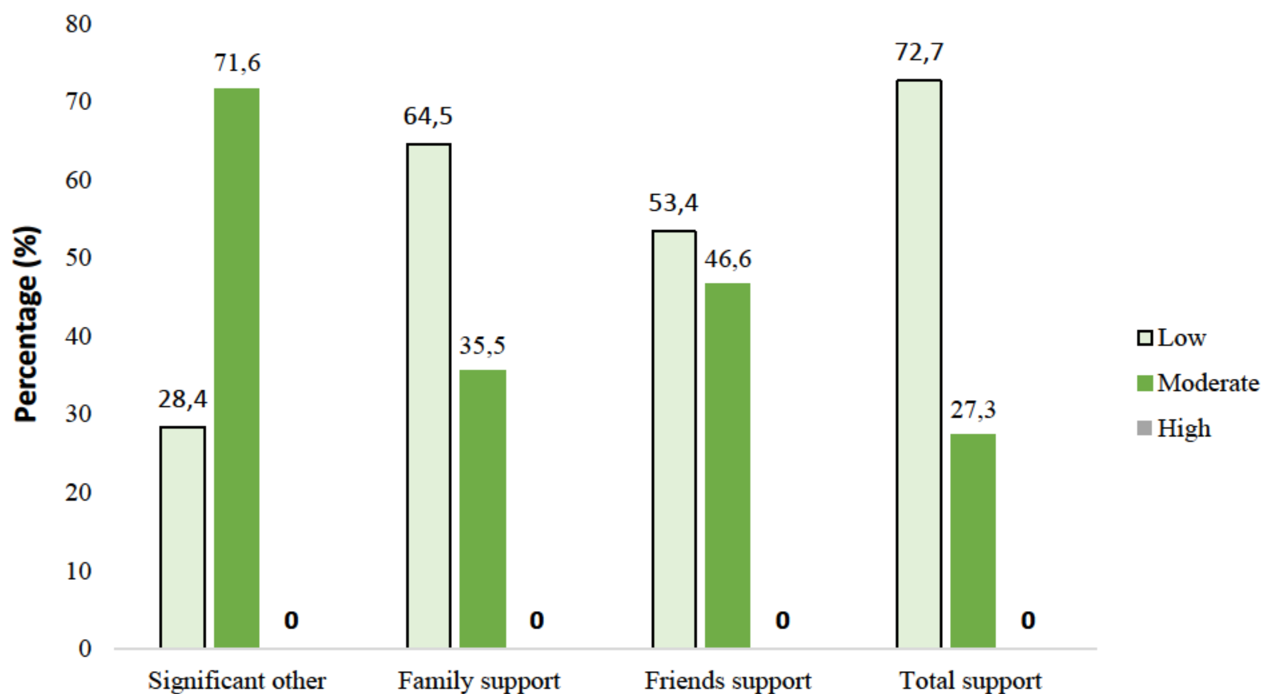


*Figure 14 Social support*

**7.3.8 Association Between Social Support and Mental Health Challenges**

*Depression*

Table 32 indicates a significant negative relationship between friends support and depression p=0.011 and a low effect size of *V*= -0.14. This reflected in the Crude odds ratio which indicated that the odds of participants who received moderate support from friends being depressed are 56 percent less than participants who received low friends support (COR= 0.44, 95% CI= 0.23, 0.84, p= 0.012). However, there was no statistically significant association observed between significant others support (COR=1.19, 95% CI= 0.62, 2.31), p= 0.600), family support (COR= 0.65, 95% CI= 0.33-1.26, p= 0.195), total support (COR= 0.48, 95% CI= 0.15-1.54, p= 0.215) and depression.

Stress

In table 33, the statistical analysis indicates a significant negative relationship between family support and stress p= <0.001, and a small effect size of V= -0.20. A further binary regression indicated that the odds of Kayayei who received medium levels of family support being stressed are 45 percent less than those who received low levels of family support (AOR= 0.55, 95% CI= 0.32, 0.95, p= 0.034). Regarding friend's support, the results show a significant negative relationship with stress 9p= <0.001), with a small effect size (V= -0.20). This result reflected in the adjusted odds ratio which indicates that the odds of participants who received moderate friends support being stressed were 41 percent less than those who received low friends support (AOR= 0.59, 95% CI= 0.35, 0.99, p= 0.046). On the other hand, there was no statistically significant association between stress and significant others support (COR= 0.93, 95% CI= 0.58, 1.49), p= 0.766). There was also no significant association between total support and stress (COR= 0.40, 95% CI= 0.13, 1.26, p= 0.119).

Anxiety

Table 34 shows a significant negative relationship between total support and anxiety p= 0.029. and a small effect size -0.12. This showed in the crude odds ratio indicating the odds of participants who received moderate total support being anxious is 75 percent less than participants who received low total support (COR= 0.25, 95% CI= 0.07, 0.95, p= 0.042). There was, however, no significant relationship between significant others support (COR= 1.07, 95% CI= 0.34, 2.86, p= 0.894), family support (COR= 0.66, 95% CI= 0.26, 1.63, p= 0.364), friends support (COR= 0.56, 95% CI= 0.22, 1.41, p=0.221) and anxiety.

**Table 32**

**Association Between Social Support and Depression**

| Characteristics | Not Depressed (N=47) | Depressed (N=305) | $\chi^2$ V p-value | COR (95% CI), p-value |
|---|---|---|---|---|
| **Significant Others Subscale** | | | | |
| Low Support | 15 (31.9) | 86 (28.2) | 0.28, 0.03, 0.600 | Ref |
| Moderate Support | 32 (68.1) | 219 (71.8) | | 1.19 (0.62, 2.31), 0.600 |
| **Family Subscale** | | | | |
| Low Support | 26 (55.3) | 201 (65.9) | 1.99, -0.08, 0.158 | Ref |
| Moderate Support | 21 (44.7) | 104 (34.1) | | 0.64 (0.34, 1.19), 0.160 |
| **Friends Subscale** | | | | |
| Low Support | 17 (36.2) | 171 (56.1) | 6.48, -0.14, 0.011 | Ref |
| Moderate Support | 30 (63.8) | 134 (43.9) | | 0.44 (0.23, 0.84), 0.012 |
| **Total Subscale** | | | | |
| Low Support | 43 (91.5) | 292 (95.7) | 1.60, -0.07, 0.206 | Ref |
| Moderate Support | 4 (8.5) | 13 (4.3) | | 0.48 (0.15, 1.54), 0.215 |

**Table 33**

**Association Between Social Support and Stress**

| Characteristics | Not Stressed [N=203] | Stress [N=149] | $X^2$ V p-value | COR (95% CI), p-value | AOR (95% CI), p-value |
|---|---|---|---|---|---|
| **Significant Others Subscale** | | | | | |
| Low Support | 57 (28.1) | 44 (29.5) | 0.09, -0.02, 0.766 | Ref | |
| Moderate Support | 146 (71.9) | 105 (70.5) | | 0.93 (0.58, 1.49), 0.766 | |
| **Family Subscale** | | | | | |
| Low Support | 114 (56.2) | 113 (75.8) | 14.53, -0.20, <0.001 | Ref | |
| Moderate Support | 89 (43.8) | 36 (24.2) | | 0.41 (0.26, 0.65), <0.001 | 0.55 (0.32, 0.95), 0.034 |
| **Friends Subscale** | | | | | |
| Low Support | 91 (44.8) | 97 (65.1) | 14.19, -0.20, <0.001 | Ref | |
| Moderate Support | 112 (55.2) | 52 (34.9) | | 0.44 (0.28, 0.67), <0.001 | 0.59 (0.35, 0.99), 0.046 |
| **Total Subscale** | | | | | |
| Low Support | 190 (93.6) | 145 (97.3) | 2.59, -0.09, 0.108 | Ref | |
| Moderate Support | 13 (6.4) | 4 (2.7) | | 0.40 (0.13, 1.26), 0.119 | |

**Tables 34**
**Association Between Social Support and Anxiety**

| Characteristics | Not Anxious (N=20) | Anxious (N=332) | $\chi^2$ V p-value | COR (95% CI), p-value |
|---|---|---|---|---|
| **Significant Others Subscale** | | | | |
| Low Support | 6 (30.0) | 95 (28.6) | 0.018, 0.07, 0.894 | Ref |
| Moderate Support | 14 (70.0) | 237 (71.4) | | 1.07 (0.34, 2.86), 0.894 |
| **Family Subscale** | | | | |
| Low Support | 11 (55.0) | 216 (65.1) | 0.83, -0.05, 0.361 | Ref |
| Moderate Support | 9 (45.0) | 116 (34.9) | | 0.66 (0.26, 1.63), 0.364 |
| **Friends Subscale** | | | | |
| Low Support | 8 (40.0) | 180 (54.2) | 1.53, -0.07, 0.216 | Ref |
| Moderate Support | 12 (60.0) | 152 (45.8) | | 0.56 (0.22, 1.41), 0.221 |
| **Total Subscale** | | | | |
| Low Support | 17 (85.0) | 318 (95.8) | 4.77 .-0.12, 0.029 | Ref |
| Moderate Support | 3 (15.0) | 14 (4.2) | | 0.25 (0.07, 0.95), 0.042 |

### 7.3.9 Results of the Logistic Regression in Predicting Mental Health Challenges (Depression, Stress, and Anxiety)

Three Stepwise Logistic Regression models were fitted by using the Backwards Selection method to predict the mental health challenges of the Kayayei (Depression, Anxiety, and Stress) at p=0.2. Independent variables that were fitted include background characteristics i.e. age, level of education, accommodation, treatment by patrons and difficulty of work, the full scale each of Avoidant (denial, self-distraction, substance use, disengagement, venting and self-blame) and Approach Coping (Active coping, emotional support, instrumental support, positive reframing, planning and acceptance), humour and religion as well as social support including significant other support, family support, friends support and total support were used in the model. To determine the Goodness of fit for the models, the Hosmer-Lemeshow goodness of fit test was used. The model is said to have a good fit when the p-value is not less than 0.05.

#### 7. 3.9.1 Results of the Logistic Regression in Predicting Depression

Table 35 presents the logistic regression model for the best predictors of **depression**. The likelihood ratio chi square of 84.2 with $p<0.001$ shows that all the variables predict the outcome very well. The Hosmer-Lemeshow Goodness of fit chi square test yielded 5.01 with p-value of 0.756 indicating that the model had a good fit. The pseudo $R^2$ of 0.304 also indicates a very good model fit according to the rule of thumb. Five variables out of the ten (i.e., treatment by patrons, work difficulty, and the following coping strategies denial, emotional support, and acceptance) were significant at the 0.05 level. For participants who perceived to be badly treated by patrons, the odds of being depressed were 2.2 times as high as those who reported not being badly treated (95% CI=1.020, 4.911, p=0.044). Also, for participants who rated their work as very difficult the odds of being depressed is 3.41 times as large as participants who rated their work as just difficult (95% CI= 1.564, 7.058, p= 0.001). Furthermore, the odds of being depressed is 8.10 higher in participants who employed higher denial coping strategy as compared to those who used low denial coping strategy (95% CI=2.428, 27.038, p=0.001). The model further shows that for participants who received high levels of emotional support, the odds of being depressed were 3.05 higher than those who received low emotional support (95% CI=1.075, 8.662, p=0.036). In the case of acceptance coping strategy, the odds of being depressed is 3.4 times higher among participants who used high acceptance coping strategy as compared to those who used low acceptance coping strategy (95% CI=1.114, 10.381, p=0.032).

**Table 35**

**Results of the Logistic Regression in Predicting Depression**

| Characteristics | Odds ratio | Std. Err. | z | p | 95% CI Lower | Upper |
|---|---|---|---|---|---|---|
| **Age** | 0.410 | 0.188 | -1.94 | 0.052 | 0.166 | 1.008 |
| **Education** | 2.018 | 0. .857 | 1.65 | 0.098 | 0.877 | 4.641 |
| **Treatment by patrons** | 2.238 | 0.238 | 2.10 | 0.044* | 1.020 | 4.911 |
| **Difficulty of work** | 3.417 | 1.264 | 3.32 | 0.001** | 1.564 | 7.058 |
| **Accommodation** | 0.512 | 0.216 | -1.58 | 0.113 | 0.0223. | 1.172 |
| **Denial** | 8.103 | 4.981 | 3.40 | 0.001** | 2.428 | 27.038 |
| **Behavioural disengagement** | 2.974 | 1.675 | 1.94 | 0.053 | 0.986 | 8.969 |
| **Emotional support** | 3.052 | 1.624 | 2.10 | 0.036* | 1.075 | 8.662 |
| **Acceptance** | 3.401 | 1.936 | 2.15 | 0.032* | 1.114 | 10.381 |
| **Constant** | 1.054 | 0. .376 | 0.15 | 0.882 | | |

### 7.3.9.2 Results of the Logistic Regression in Predicting Stress

Table 36 presents the logistic regression model results pertaining to the best predictors of **stress.** The likelihood ratio chi square of 111.02 with $p<0.001$ shows that all the variables predict the outcome very well. The Hosmer-Lemeshow Goodness of fit chi square test yielded 5,71 with p-value of 0. 679 indicating that the model had a good goodness of fit. The pseudo $R^2$ of 0.213 also indicates a very good model fit. Out of the ten variables in the model, five made a significant contribution in predicting stress i.e., level of education, and coping strategies including self-distraction, denial, acceptance, and humour as ways of coping, The model shows that the odds of being stressed is 2.56 times higher in the Kayayei with primary education as compared to those who were uneducated (95% CI=1.459, 4.513, p=0.001). Also, the odds of being stressed is 2.38 times higher in participants who used higher self-distraction coping strategy as compared to those who used low self-distraction coping strategy (95% CI=1.221, 4.663, p=0.011). In the case of denial coping strategy, the odds of being stressed is 1.78 times higher in participants who used higher denial coping strategy as compared to those who use low denial coping strategy (95% CI=0.988, 3.323, p=0.005, p=0.005). Furthermore, the odds of being stressed was 3.88 times higher in participants who used higher levels of acceptance coping strategy as compared to those who use low levels (95% CI=1.966, 7.687, p= <0.001). On the other hand, the odds of being stressed was 65 percent less in participants who used high

humour coping strategy as compared to those who used low humour coping strategy (OR=0.358, 95% CI=0.169, 0.757, p= 0 007).

**Table 36**

**Results of the Logistic Regression in Predicting Stress**

| Characteristics | Odds Ratio | Std. Err. | z | p | 95% CI | |
|---|---|---|---|---|---|---|
| | | | | | Lower | Upper |
| **Education** | 2.566 | 0.739 | 3.27 | 0.001*** | 1.459 | 4.513 |
| **Accommodation** | 1.651 | 0.493 | 1.68 | 0.093 | 0.909 | 2.968 |
| **Treatment by patrons** | 0.607 | 0.219 | -1.38 | 0.169 | 0.299 | 1.234 |
| **Self-distraction** | 2.386 | 0.815 | 2.54 | 0.011* | 1.221 | 4.663 |
| **Denial** | 1.787 | 0.540 | 1.92 | 0.005** | 0.988 | 3.323 |
| **Self-blame** | 1.669 | 0.560 | 1.65 | 0.100 | 0.906 | 3.074 |
| **Acceptance** | 3.887 | 1.352 | 3.90 | <0.001*** | 1.966 | 7.687 |
| **Humour** | 0.358 | 0.136 | -2.68 | 0.007* | 0.169 | 0.757 |
| **Friends support** | 0.586 | 0.162 | -1.93 | 0.054 | 0.340 | 1.009 |
| **Constant** | 0. .249 | 0. .077 | -4.49 | 0.000 | | |

**7. 3.9.3 Results of the Logistic Regression in Predicting Anxiety**

Table 37 presents the logistic regression results on predictors of **anxiety.** The likelihood ratio chi square of 42.74 with p<0.001 shows that all the variables predict the outcome very well. The Hosmer-Lemeshow Goodness of fit chi square test yielded 9.92 with p-value of 0.270 indicates that the model had a good goodness of fit. The pseudo $R^2$ of 0. 286 also indicates a very good model fit. Six variables made significant contributions to the model. The items are age, education, accommodation, work difficulty, treatment by patrons, and denial. The Anxiety model indicated that the odd of being anxious is 3.6 times higher in participants aged 25-34 as compared to participants aged 18-24 (95% CI=1.081, 11.697, p=0.037). Furthermore, the odds of being anxious is 14.05 times higher among participants with primary education as compared to participants without education (95% CI=1.625, 121.454, p=0.016). In the case of accommodation, the odds of being anxious is 73 percent lower among participants with accommodation as compared to participants without education (OR= 0.27, 95% CI= 0.0837, 0.8550, p=0.026). In addition, participants who rated their work as very difficult have 3.51 times odds of being anxious as compared to those who rated their work as just difficult (95%

CI=1.218, 10.146, p=0.020). Finally, the odds of being anxious were 11.32 (95% CI= 2.37, 54.088, p= 0.002). times higher in participants who employed high denial coping strategies as compared to those who used low denial coping strategy.

**Table 37**

**Results of the Logistic Regression in Predicting Anxiety**

| Characteristics | Odds ratio | Std. Err. | z | p | 95% CI | |
|---|---|---|---|---|---|---|
| | | | | | Lower | Upper |
| **Age** | 3.556 | 9.034 | 2.09 | 0.037* | 1.081 | 11.697 |
| **Education** | 14.052 | 15.463 | 2.40 | 0.016* | 1.625 | 121.454 |
| **Accommodation** | 0.267 | 0.157 | -2.23 | 0.026* | 0.083 | 0.8550 |
| **Difficulty of work** | 3.515 | 1.901 | 2.32 | 0.020* | 1.218 | 10.146 |
| **Treatment by patrons** | 0.150 | 0.102 | -1.79 | 0.005* | 0.339 | 0.555 |
| **Daily income** | 0.527 | 0.236 | -1.43 | 0.154 | 0.219 | 1.270 |
| **Self-blame** | 3.263 | 2.303 | 1.68 | 0.094 | 0.818 | 13.015 |
| **Denial** | 11.323 | 9.034 | 3.04 | 0.002** | 2.370 | 54.088 |
| **Religion** | 0.398 | 0.256 | -1.43 | 0.154 | 0.112 | 1.409 |
| **Constant** | **22.858** | **24.870** | **2.88** | **0.004** | | |

### 7. 4 Discussion

This section discusses the various coping strategies adopted by the Kayayei and the impact of these strategies on their mental health. The section further discusses the various forms of social support available to the Kayayei. Finally, the predictors of mental health challenges among the Kayayei were also discussed in comparison to relevant studies in the field.

Coping styles are not inherently positive or negative, the effectiveness of the coping styles depends on the context in which they are used and their functionality (Morris, Moghaddam, Tickle, & Biswas 2018). This study found that the use of avoidant coping strategy is associated with higher levels of mental health challenges. This finding is consistent with related studies in other parts of the world (Eisenberg, Shen, Schwarz, & Mallon 2012; Dempsey, Stacy, & Moely, 2000). For instance, Dempsey et al. (2000), in their study titled "approach" and "avoidance" coping and PTSD symptoms in inner-city youth, found out that the use of avoidance strategies was associated with emotional and behavioural difficulties. Working as Kayayei in the business city of Agbogbloshie is a challenging endeavour coupled with

maltreatment by patrons hence, the Kayayei use maladaptive coping strategies such as denial, self-blame, and self-distraction to cope with the challenges. A possible explanation for the choice of these coping strategies could be attributed to the Kayayei desiring to distant themselves from the reality on the ground such as working for long hours and earning meagre income and they engage in other activities that may cause them more mental health distress, Eisenberg et al. (2012), observe that feeling anxious about their circumstances may engage in avoidant coping strategies, such as distraction or denial to distance themselves from signals that remind them of the challenges.

The different ways of coping with stressors achieve a variety of different outcomes that are either positive or negative (Kuo, 2014). According to Roth and Cohen (1986, p. 818), "avoidant coping strategies that are avoidant in nature, usually lead to disruptive avoidance behaviours, unwanted intrusions of threatening material, and emotional numbness". This occurs when individuals consciously or unconsciously make effect to keep threatening affects and perceptions out of awareness. According to Roth and Cohen (1986), avoidant coping strategies have the propensity of interfering with relevant action when there is the likelihood of affecting the nature of a threat. The use of avoidant coping among the Kayayei is likely to produce long-term mental health consequences as found by other studies. A study by Seiffge-Krenke and Klessinger (2000), on the long-term effects of Avoidant Coping on Adolescents' Depressive Symptoms, showed a consistent relationship between avoidant coping strategy and depressive symptoms across time. This is an indication that without proper psychological intervention, these Kayayei may suffer prolonged psychological distress.

The study also found that participants who used the approach coping strategy were stressed. In relation to depression and anxiety, even though the results were not significant, they showed a positive relationship with approach coping. This finding contradicts earlier studies which indicated negative relationship between approach coping and mental health distress. For instance, studies by Hansen and Ghafoori (2017), Meng and D'Arcy (2016), and Saxon et al. (2017) found that approach coping was generally associated with better mental health outcomes. However, the relationship between coping and mental health outcomes are generally unclear due to the diverse conceptualisation of coping (Seguin & Roberts, 2017). For instance, other studies using the sum of coping strategies found contradicting results. While Khamis (1998), found coping responses to be associated with lower levels of mental health distress, Sachs et al. (2008), on the other hand found coping responses to increase mental health distress.

It is therefore difficult to find a consistent trend in the scientific literature in the findings. Findings in the present study could be attributed to the report that orientation towards threatening material can lead to increased distress (Roth & Cohen, 1986). Roth and Cohen (1986, p. 817) further indicated that “when there is no possibility for changing the situation or for emotional assimilation of the threat, the approach can lead to worrying that is both time consuming and non-productive". The Kayayei go through various challenges such as sexual assaults, working for long hours, and discrimination as indicated by Azinga (2015); ILO (2003); Rodriguez-Jareño et al. (2014). Therefore, when the Kayayei perceive that there is no possibility of changing the situation or the emotional assimilation of the threat, they tend to work for long hours, though the gains obtained do not merit the effort invested. Consequently, the time-consuming and yet non-productive efforts can lead to mental health distress, especially depression and stress.

In Ghana and most parts of the world, religion is the most important influencer of lives (Bergin & Jensen, 1990). Not surprisingly, in this study, most of the participants use religion to cope with their challenges. The result showed, however, that using religion as a coping strategy increases stress levels of the Kayayei. This finding contradicts earlier studies by Flannelly & Inouye (2001); Nakonz & Shik (2009); Ross (1990), which indicated that religious coping is related to more positive outcomes to stressful events. The findings of the present study however confirmed what other studies found that religious coping could be related to more negative outcomes (Thompson & Vardaman, 1997; Pargament et al., 2003). Furthermore, a study by Dreyer and Dreyer (2012) among Caucasian males in South Africa found that religiosity was less a predictor of a sense of being and purpose in life. Rather, the use of psychosocial support and stress management were related to meaningfulness and purpose. A study by Agha (2021) found that religious coping was associated with mental health distress. As stated earlier, religion is very important in the life cycle of many Ghanaians, including the Kayayei. However, religious coping could be used either positively or negatively, as George, Ellison, and Larson (2002) described. Positive coping is characterised by the belief that God loves, cares for, and strengthens. Additionally, others believe that positive coping gives a sense of meaning and belonging to a larger purpose. The use of the above coping strategies is likely to improve health and wellbeing. The use of negative religious coping strategies including feeling punished or abandoned by God, believing that illness and negative life circumstances are because of sin, as indicated by George et al. (2002), could have negative mental health outcomes as found in the

present study. This implies that the Kayayei might have used negative religious coping strategies even though the study did not probe the form of strategy they adopted.

The present study, however, did not ask about the specific religious activities that the Kayayei undertake to cope with stressful situations. To get a better understanding of the role religion play in helping individuals to cope during challenges circumstances, it is important to assess the dynamic ways in which religion is used in specific situations as suggested by Pargament, Koenig, and Perez (2000). Further studies are therefore needed to determine the specific religious coping strategies that the Kayayei used to cope with stress and their impact on mental health.

Social support from family and friends has been a key form of support for migrant workers. In this study, 72.7 per cent of the participants indicated receiving low support while 27.3 per cent indicated receiving moderate support. There was however no high support received by participants. In this study, there was no statistically significant relationship between support from significant others, family support and depression. There was however a negative statistically significant relationship between friends support and depression. Regarding stress, the findings indicated no significant relationship between friends support and stress, on the other hand, a significant relationship between family support and stress was observed. The findings support earlier studies showing negative relationship between social support and mental health distress (Dinh, Castro, Tein, & Kim 2009; Hombrados-Mendieta, et al., 2019; Jibeen, 2011 Kristiansen. Mygind, & Krasnik 2006). Regarding anxiety none of the social support mechanisms had any statistically significant relationship. Perceived support from family and friends by the Kayayei was found to have a beneficial effect on mental health by buffering the negative effects of stress as observed by Thiots (1982). Although the Kayayei received low to moderate levels of support from family and friends. This support reduced mental health distress among participants. Feeling loved and receiving support from others help to reframe the challenges of life in new meaningful ways (Hombrados-Mendieta et al., 2019; Cutrona, 1986). Results of the present study highlight the importance of interpersonal level factors of the conceptual framework. The results also highlight the need to develop better social relationships through family and friends to receive the relevant support when needed to buffer the challenges of migration. As posited by the conceptual framework, social support is crucial for the psychological wellbeing of migrants in managing the daily challenges that may arise from the migration process. It is, therefore, important to design health promotion interventions

aimed at creating support networks for the Kayayei which will act as a buffer to mitigate mental health challenges.

**Predictors of Mental health Challenges (Depression, Stress, and Anxiety).**

Stepwise Logistic Regression Backwards Selection methods was used to predict the mental health challenges of the Kayayei (Depression, Stress, and Anxiety) at 0.20. In the findings of the predictors of depression, the whole model significantly explained 30.4 percent of the variance and 'treatment by patrons', 'work difficult', 'denial coping strategy', 'emotional support', and 'acceptance' made significant contribution to the model. In the case of Stress, the whole model significantly predicted 23.1 of variance and 'education', 'self-distraction coping', 'denial coping', 'acceptance coping', and 'humour coping' made significant contribution to the model. Furthermore, in the finding for predictors of anxiety, the whole model significantly predicted 28.6 percent of the variance with age, education, accommodation, work difficulty, treatment by patrons, and denial, making a significant contribution to the model.

The findings of the present study further indicate that the odds of being anxious were higher among participants between 24-34 years as compared to participants between 18-23 years old. Maternal role is a complex process that is affected by socio-cultural factors, economic conditions, and support systems available (Ahmadifaraz et al., 2013). The older Kayayei are possibly mothers who must perform their traditional duties as mothers at home while working for long hours as Kayayei. In their study, Ahmadifaraz et al. (2013) found that women worry about childcare due to lack of support from working organisation. With regards to the present study, the Kayayei were self-employed with little support from family and friends. Most of the time they carry their young children on their backs throughout the day as they go about the Kayayei business. The dual role of motherhood and working with little income coupled with inadequate support might have caused anxiety among these women.

The model on the predictors of anxiety indicated that participants who had accommodation were less likely to be anxious as compared to those without accommodation. Although in chapter six above, the findings indicated that participants with accommodation were more likely to be stressed due to the nature of the facilities they have. This finding contradicts an earlier study by Sinning, van Wijngaarden, and Conwell (2011), which found higher levels of anxiety disorders among residents in public housing. Another study by Simning, Conwell, Fisher, Richardson, and van Wijngaarden (2012) among older adults in public housing also

found higher levels of anxiety among respondents. These studies where anxiety is higher among residence in public housing were conducted in higher income countries where most residents in public housing were unemployed, abuse drugs, and mostly had low income creating mental health distress including anxiety. In this study, even though the socio-economic characteristics of the Kayayei are similar to the above studies, the differences in the finding might be because, the Kayayei may feel housing security because they at least have a place they can go to after a long day at work thereby reducing anxiety about accommodation as observed by Stahre, VanEenwyk, Siegel, and Njai (2015). According to Stahre et al. (2015), individuals with low incomes worry about paying their rents and about possibly becoming homeless, this insecurity can cause them psychological distress. In the case of the Kayayei, even though the housing available is of low quality creating a lot of stress, they are however able to afford the weekly rent thereby reducing anxiety about rent payment. Governments and other non-governmental organisations are entreated to put up decent and affordable accommodation that will be accessible to the Kayayei and other vulnerable populations in the capital city of Accra.

The logistic regression that examined the predictors of mental health challenges indicated that, avoidant and denial coping strategies made significant contributions to all the three models while self-distraction made significant contribution in the stress model. The use of avoidance coping strategy was the only variable in the avoidant subscale that had negative impact on depression, stress, and anxiety. The results show that participants who used high levels of denial were more likely to be depressed, stressed and anxious. This confirms a finding by Agha (2021) on the mental well-being and association of the four factors in the coping structure model, the study found that denial coping strategy was significantly associated with depression, anxiety, and stress. Folkman and Lazarus (1984) asserted that avoidance coping is only useful when adapting to a stressor immediately, but it becomes ineffective with time. Individuals who use avoidance coping strategies such as denial to safeguard themselves from stressful situations by avoiding the situation, face the possibility that, in the long run could create mental health challenges and could reduce positive thinking (Agha, 2021). In contrast to the benefits of accepting potential challenges as a coping strategy, the use of avoidance could be maladaptive to the individual (Britt, Crane, Hodson, & Adler, 2016; Yagil, Ben-Zur, & Tamir, 2011).

The logistic regression also indicated that high levels of self-distraction were more likely to be stressed as compared to those who used low levels of self-distraction. This finding also

confirms findings of other studies (Nielsen, & Knardahl, 2014; Baral & Bhagawati, 2019) on the negative impact of self-distraction coping strategies on mental health outcomes. In this study, the results indicated that participants used self-distraction 42.3 percent of the time. According to Folkman and Lazarus (1984), self-distraction coping strategy is used to divert the attention from a threatening situation towards other thoughts that are not related to the stressor. The Kayayei business come with numerous challenges as mentioned earlier such as working under unhygienic conditions, being subjected to physical abuse, earning inadequate income etc (Ahlvin, 2012; Awumbila et al., 2008; Opare, 2003). Due to these challenges, a self-distraction coping strategy might help divert attention to other thoughts not related to the circumstance, but the persistence of the circumstances makes this form of coping ineffective in the long term thereby creating psychological distress among the participants.

In this study, two approach coping strategies, namely emotional support and acceptance made significant contributions to the depression model. The results indicated that participants who received high levels of emotional support and used acceptance coping strategies were depressed. In the stress model, the results show a significant contribution of acceptance coping strategy indicating that participants who used high levels of acceptance coping strategies are more likely to be stressed, despite typically being considered an adaptive strategy which should rather improve mental health outcomes. While various studies (Fathi & Simamora 2019; Hennekam, Richard, & Grima 2020; Tsaras et al., 2018), have indicated a negative relationship between approach coping strategies and mental health distress, a study by Griffith, Dubow, and Ippolito (2000), however, indicated that the effectiveness of a specific coping strategy is based on the situation and the context in which it is employed. In their study, Griffith et al. found out that the choice of coping strategy and its effectiveness is dependent on ethnicity, gender, level of education and the perceived controllability of the stressor. The finding of the present study is an indication that the type of the coping strategy chosen by the Kayayei might not have been appropriate to deal with the situation thereby creating mental health distress. It is also possible that the Kayayei might have been stressed and depressed before seeking emotional support from friends and family. Since the source of support is not coming from expects who know how to handle the mental health situation, their support might not help, or it may rather aggravate the situation. According to Melrose, Brown, and Wood (2015), mental health may be impacted negatively when individuals receive more support than they need. This implies that emotional support should be given only when needed because it is only beneficial when individuals identify a need for it. In the case of acceptance coping strategy, it is possible that

the Kayayei have come to terms with their situation since they have little control over their circumstances.

The study also showed that humour made a significant contribution to the model indicating that participants who employed humour as a coping strategy were less likely to be stressed. This present study has confirmed other scientific studies that established that using humour as a coping strategy which could reduce stress. Humour is presumed to be one of the means that individuals use to cope with the challenges of daily life as found by Nezlek and Derks (2001), who in their study found that using humour as a coping strategy is positively related to enjoyable social life. In another study, Pérez-Aranda et al. (2019), found that the use of humour reduces emotional distress. Humour reconstructs a stressful situation in such a way that makes it less stressful (Martin, Kuiper, Olinger, & Dance, 1993). According to Rew and Horner (2000), the use of humour as a coping strategy is a form of resilience which encourages vulnerable individuals to build positive thinking, which becomes a defence mechanism when facing challenges. It must, however, be noted that the adaptation of a specific coping strategy and its usefulness is dependent on both the individual characteristics, resources available and the context, as indicated in the theoretical framework.

### 7.5 Conclusion

The aim of this chapter was to assess the coping strategies adopted by the Kayayei and the social support available to them. The Chapter also examined the risk factors for mental health distress (depression, anxiety, and stress). The findings indicated a positive relationship between bad treatment by patrons, difficulty of work, and coping strategies (denial, acceptance, emotional) depression. The study also found a strong positive relationship between level of education, coping strategies (self-distraction, denial, acceptance) and stress. On the other hand, there was a strong negative relationship between the use of humour as a coping strategy and stress. The study further found a positive relationship between age, work difficulty and the denial-coping strategy while there was a negative relationship between accommodation and anxiety. The findings of the present study suggest that the Kayayei only received moderate levels of support from family and friends. Even though the support received is minimal, they still were able to mitigate mental health challenges thereby. It is, therefore, important to design health promotion interventions aimed at creating support networks for the Kayayei which will act as a buffer to mitigate mental health challenges. In the concluding chapter of this thesis, detailed intervention strategies are provided.

# CHAPTER EIGHT
# SUMMARY AND INTEGRATIVE DISCUSSION, GUIDELINE FOR HEALTH PROMOTION, AND CONCLUSION

## 8.1 Introduction

This chapter presents a summary of the key findings followed by a brief integrated discussion of the study finding. The intervention guideline steps are described and both matrix of change and behavioural outcomes as well as theoretical models and their practical applications are discussed. The chapter concludes with the contribution to knowledge made by the study, the recommendations for further research, and the conclusion.

## 8.2 Brief Summary of Key Findings

In this study, the physical and mental health challenges of the Kayayei, social support and the coping strategies they used to navigate the challenges of their daily lived experiences were investigated as the empirical foundation for the development of relevant guidelines for health promotion interventions. The first phase of the present study described the qualitative study conducted with a purposively selected sample of the Kayayei at the Agbogbloshie market in Accra, Ghana's capital city. Findings from the first phase informed the second phase of the study. The second phase of the study, which was a quantitative cross-sectional survey among a larger sample of the Kayayei, examined the prevalence of physical and mental health challenges among the Kayayei, the risk factors associated with mental health challenges, social support, and the coping strategies they used to address the challenges of daily living. The findings of both the qualitative and quantitative phases of the thesis are summarised as the foundation for the detailed guidelines suggested for health promotion related interventions. This is followed by a brief integrated discussion. The chapter is concluded by presenting the study limitations, the significant contributions to academic scholarship, and suggestions for future research.

## 8.3 Brief Integrated Discussion

This study found that the main reasons the Kayayei migrate to the capital city Accra were economic and cultural, where some of the women run away from certain cultural practices, they deemed detrimental to their health and general wellbeing. Some of the economic reasons included the need to get money to finance their education and to remit to relatives back at their place of origin with the intention of alleviating the economic hardship of their families. The need to migrate from the northern part to southern Ghana points to the longstanding north-

south disparity in terms of socio-economic development in Ghana in favour of the southern parts of the country as outlined by various scholars (Cooke, Hague, & McKay, 2016; Jatoe, Al-Hassan, & Adekunle, 2012; Oduro, Peprah, & Adamtey, 2014). Major market centres and employment opportunities abound in the south while the north is mainly deprived of these. Levels of urbanisation which also come with modernisation driven by technological advancements, are mainly centred in the south rather than in the north. It is, therefore, not surprising that the Kayayei indicated that they migrated to Accra with the hope of finding and benefitting from such greener pastures. The findings where the Kayayei generally migrated to Accra to escape forced marriages, as corroborated by the findings of Adjei (2015) are reflective of the pervasiveness of outmoded cultural practices in the Northern parts of Ghana compared to the south. This was also found to be the case in previous studies (Domfe & Oduro, 2018; Fuseini, Enu-Kwesi, & Sulemana, 2019). However, upon arrival in the capital city (Accra), the Kayayei realized that the economic opportunities they sought were virtually non-existent. Furthermore, the inability of the participants to secure some income, as found in the current study, could partly be attributed to the lack or low levels of education rendering them with little skills and knowledge to get into white colour jobs they so desired. The consequence is that they have no option than to resort to the Kayayei business which requires no formal education. Studies have found that the unemployment rate among people with low levels of education is high (Lavrinovicha, Lavrinenko, & Teivans-Treinovskis, 2015; Van Aardt, 2012). Therefore, the Kayayei business is the only option available for these migrant females, this tedious business exposes the Kayayei to physical and mental health challenges.

The Kayayei women, like other informal workers operate without any legal protection, thereby, exposing them to different forms of abuse and exploitation as noted by Akinwale (2014). The study showed that life as a Kayayei is challenging and harsh, not only physically but also impact negatively on their mental health which includes depression, anxiety, and stress. In Ghana where mental health services are not given the needed attention, the few mental health facilities available also have tended to focus on the treatment of physical health conditions (Eaton & Ohene, 2016), with little attention paid to the psychological aspects. Furthermore, the physical nature of the Kayayei business, including long working hours carrying heavy, and being knocked over by moving vehicles, often cause physical health conditions such as back and neck pains, fatigue, and other adverse health conditions. This finding thus, confirms the challenges female migrants go through and their impact on the physical health as found by previous studies (Khanal & Shrestha, 2010; Simkhada, Van Teijlingen, Gurung, & Wasti,

2018). The economic hardship seems to compel the Kayayei to resort to self-medication when they have physical health problems rather than visit health facilities. These avenues include drug peddlers, local herbalists, and chemical (drug) shops. The practice of self-medical among these Kayayei is also likely to increase drug dependence and abuse as indicated by (Esan et al., 2018). The lack of health information (Yu et al., 2019) and relevant knowledge on health conditions could lead to undiagnosed conditions that may cause long term disabilities which may intend compound their mental health challenges.

The finding revealed that the kayayei faced various forms of hardship as they tried to meet their basic survival needs such as food and accommodation. Even when they obtain accommodation, the kind of accommodation does not meet the basic standard of hygiene and human habitation. This is one of the main challenges that the Kayayei experienced when they first arrived in Accra to engage in the Kayayei business. This situation occurs due to the inability of the Kayayei to afford the cost of rent for a decent accommodation in the capital city, influenced by the paltry amounts of money they earn daily, also supported by the study of Navarro-Lashayas and Eiroa-Orosa (2017). According to Spicer, Smith, Conroy, Flatau, and Burns (2015), this unsafe accommodation for vulnerable groups leads to burglary and sexual harassment, affects the sense of wellbeing, and increases psychological distress, which is further compounded by the social deprivations associated with abuse. Rodriguez-Jareño et al. (2014) suggested that sleeping in slums, deplorable, and unsanitary conditions also exposes vulnerable people and children to many diseases such as cholera and malaria.

In attempts to cope with all these high levels of risk and adversity, the Kayayei adopt a range of diverse constructive and maladaptive coping strategies. In the qualitative study, it was learned that the most positive coping strategies adopted by the Kayayei were engagement in recreational activities. These activities include information sharing (sharing their lived experiences with their friends), listening to music, or watching movies, receiving support from their relatives and friends, or engaging in religion and faith practices. These findings confirm that of other studies (Henneh & Amu, 2019; Obembe et al., 2019). In the quantitative study, even though the Kayayei used other forms of coping strategies, the most prevalent coping strategy was religion. It was surprising to find that the use of religion did not seem to have played a protective role in the Kayayei mental wellbeing. It is, however, possible that the extent of their mental distress also required psychological intervention that was lacking, and this is a cause for concern. During the research, the Kayayei were asked about the psychosocial support

available to them. The study found that the main support was emotional support from friends and family. Even though the Kayayei received minimum support from family and friends, these forms of social support did play a supportive role and did act as a buffer to mental health. Social support has been found to support mental health in other studies (Brener et al., 2020; Hombrados-Mendieta et al., 2019; Nielsen, Christensen, Finne, & Knardahl, 2020).

Some Kayayei, however, adopted maladaptive coping strategies such as self-distraction, self-blame, and denial, as ways to deal with the challenges they faced in their daily living. The decision by the Kayayei to adopt these maladaptive coping approaches, particularly avoidance, could be ascribed to the fact that the Kayayei who are feeling anxious about their situation seem to engage in distraction with other thoughts. While temporary escape from their daily and routine encounters and challenges may bring relief as suggested by Eisenberg et al. (2012) this approach over a long period is maladaptive. They run the risk of emotional numbness and depression. In the longitudinal study of Seiffge-Krenke and Klessinger (2000) it was found that youth who engage in avoidant coping over time were more likely to present with depressive symptoms than those who used approach coping strategies.

An integrated approach to address these complex and multidimensional problems requires national and local policies that are multidimensional, which will seek to capture the different aspects of vulnerabilities that affect the health and wellbeing of female porters. It seems that apart from making physical and mental health services more accessible to the Kayayei e.g., health insurance coverage, psychosocial support and care, structural interventions to improve their daily struggles with accommodation, exploitation and insecure livelihoods should be implemented by governmental departments and other stakeholders i.e. NGOs. The Health Policy Dialogue (HPD), facilitated by WIEGO in Accra in 2012, is an example of such an initiative. This initiative registered over 1,000 Kayayei to have free access to health care services through the Ghanaian National Health Insurance Scheme (NHIS) (HPD, 2020). However, this intervention only assisted a few of the Kayayei to have free medical care likely to promote and improve their timely healthcare-seeking behaviour of visiting formal health care facilities. It must, however, be noted that Agbogbloshie alone, the site of the present study, had about 3000 Kayayei at the time of data collection, which is an indication that most of the Kayayei in Agbogbloshie and in Ghana were not captured in this intervention. There is the need to have a comprehensive intervention programme targeting the Kayayei by focusing on the behavioural and environmental determinates of their physical and mental health status to promote their health and wellbeing and other vulnerable groups in the Ghanaian society. These

interventions will not only support the Kayayei but could help to achieve some of the social development goals set for the year 2030.

### 8.4 The Development of Health Promotion Intervention Guidelines for the Kayayei

The development of relevant guidelines for successful interventions needs to be grounded in empirical findings. The IM Framework as proposed by Bartholomew et al. (2016); Bartholomew et al. (2006); Kok, Peters, & Ruiter (2017) and Kok et al. (2004) was used in the development of the guidelines (as discussed in chapter 2) grounded in the insights gained from the qualitative and quantitative studies in phase one and two respectively (Chapters 4, 5, 6, and 7). The development of the interventions and implementation thereof does not form part of the scope of the thesis and will occur at a later stage. In table 17 below the steps of the IM process and the relevant steps for this study are highlighted in the intervention steps.

**Table 38**

**Intervention Mapping Steps**

| Steps | Description |
|---|---|
| Step 1* | Needs analysis |
| Step 2* | Programme objectives |
| Step 3* | Programme design |
| Step 4 | Formative implementation and programme refinement |
| Step 5 | Programme implementation plan and feasibility and practicality assessment |
| Step 6 | Evaluation plan with both process and impact measures |

*Steps 1 to 3 falls within the scope of this thesis

#### 8.4.1 Step 1: Needs Analysis - Summary of the Study Findings.

In figure 15, the key aspects relevant for health promotion interventions are depicted. It should be noted that during the data collection, the key principles of needs assessment were followed, as detailed in the methodology section (chapter 3) of the thesis. In this regard, a participant-centred approach was used where the researcher followed all ethical protocols for data collection among human participants that uphold the participants' human rights to dignity and respect, thus no blaming was done in any way as outlined by Kok et al. (2017). The use of qualitative research allowed for the involvement of the participant community in assessing their needs. The voices of the Kayayei as discussed in chapter 4 helped the researcher to build relationships with the participants by listening to their narratives on their lived experiences as

suggested by Bartholomew et al. (2006). As participants created their own meanings of their experiences, the researcher also participated actively by getting close to the participants' world in order to understand their experiences better, as suggested by Smith & Osborn (2007). The qualitative study enabled the researcher to identify the reasons for migration, challenges in the Kayayei business and the coping strategies adopted to curtail some of the challenges. These findings were used to inform the quantitative study and to assess the prevalence of the mental and physical health issues among a bigger group of participants (N=352). The qualitative study outlined individual and structual level factors that impacted on the physical and mental health of the Kayayei as depicted in Figure 15. In figure 15, indididual behaviour of the Kayayei such as carrying of heavy loads, accidents from falls, walking long distances impacted negatively on the physical health of the Kayayei and thereby impacted negatively on their mental health as discussed in chapter 4. Furthermore, structural and societal factors including vehicular accidents, maltreatment by patrons, lack of adequate health care facilities for prompt medical care also had a negative effect on physical and mental health as discussed in chapter 4 of the study.

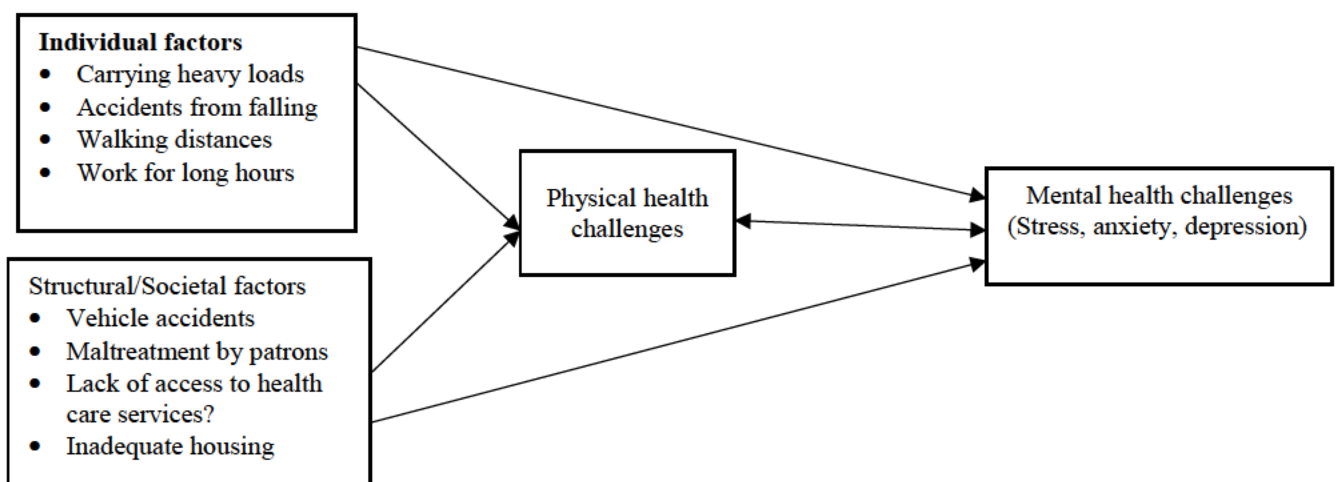


Fig 15 *Personal and structural/societal level factors based on the qualitative study*

A quantitative study was subsequently conducted to determine the prevalence of physical and mental health conditions and the factors that impacted on the mental health conditions. Figure 16 below highlights the summary of the individual, interpersonal and structural factors that influence mental health outcomes of the Kayayei as discussed in chapters 5, 6, & 7. In figure 16 below, the individual needs identified include resilence, personal goals, difficulty of work, coping strategies, physical health challenges and lack of skills. The interpersonal factor needs include availability of social support, finally the structural and societal level factors identied

are, poverty and push factors in migration, labour laws and policies, cultural norms, religious teachings and stigma and discrimination as found in the qualitative study.

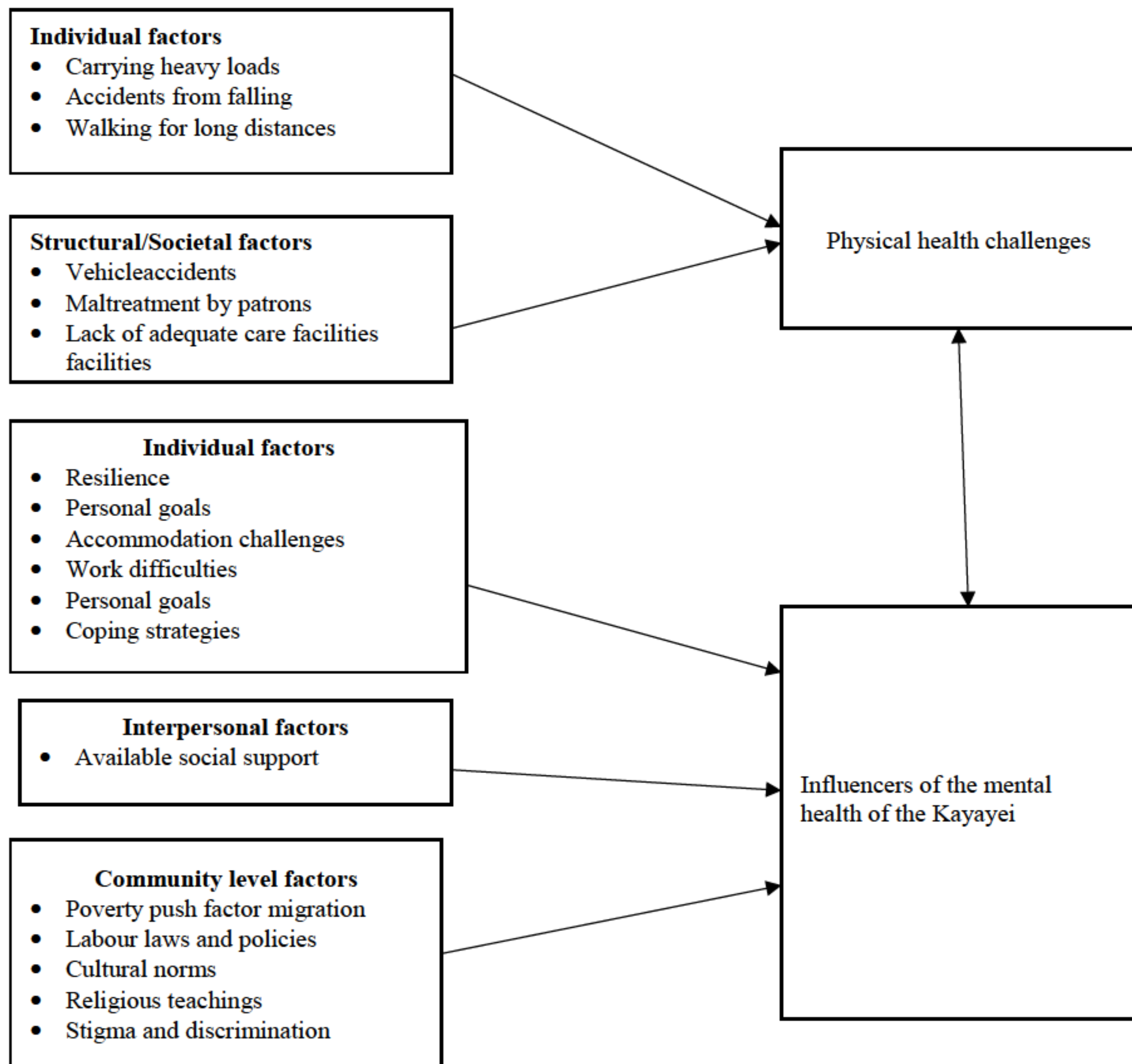


*Figure 16. Individual, interpersonal and structural factors*

### 8.4.2 Step 2 Metrics of Change Objectives

The change objectives were derived from the needs assessments and in particular those aspects that were prioritised for the health promotion interventions at the individual and structural levels. This is aligned to the guidance of various scholars referred to earlier (Fernandez et al., 2019; Kok et al., 2016; Sabater-Hernández et al., 2016) that the change needs should take cognisance of the ecological levels of influence as outlined in the bio-ecological model Chapter 2. At the individual level, the knowledge, beliefs, attitudes, and existing practices should be considered. The context/social environment consisting of the microsystem, the mesosystem, and the macrosystem (Bronfenbrenner & Morris, 2006), are the interpersonal influencers such

as family, friends, and other social networks as well as cultural norms and religious teachings that were identified to provide the Kayayei with the necessary social support, as discussed in the theoretical perspective in chapter 2. In addition, the structural environmental or contextual influencers are very important for consideration in health promotion interventions as these influencers may pose major barriers to or support for the desired preventive and promotive health related behaviour. This pertains to governmental laws and regulations e.g., labour laws, supportive structures, and services for vulnerable populations etc. While it may not be possible for health promotors or researchers to have a direct impact on this sphere, they can play a critical role in mobilising support for social action through advocacy which may influence the structural determinants for health and wellbeing over time. Advocacy for health and wellbeing is one of the basic principles of health promotion outline in the Ottawa Charter of 1986 (WHO 1986) and various other scholars (Cohen, & Marshall, 2017; Hubinette, Dobson, Scott & Sherbino 2017; Hubinette, Dobson, Voyer & Regehr, 2014; Labonte 1994).

Against the background of the needs analysis and prioritised spheres influence, it was clear that an intervention for the Kayayei should focus on self-development to build their psychological capital to draw from when in adversity and health education pertaining to physical and mental health issues with the necessary supportive skills development. Before the implementation of the IM, the health promotion personnel should have some engagement with the Kayayei to identify an acceptable name for the programme as suggested by Bartholomew et al. (2006).

To ensure impact of an intervention, various scholars (Fernandez et al., 2019; Kok, Gottlieb, Commers, & Smerecnik, 2008; Sabater-Hernández et al., 2016;), suggested that the change needs must be identified at the ecological level including individual characteristics that may influence behaviour such as knowledge, beliefs, and attitudes. The target audience for this guideline at the individual level is the Kayayei who are the main beneficiaries of the intervention, however other vulnerable groups in the Ghanaian population will also be considered. The interpersonal levels are the family and friends and finally, community/structural levels are NGO's, local and national authorities. Behavioural outcomes are specified grounded on the findings of the current study in chapters 4 to 7 in this thesis and subsequently performance objectives are identified for each behaviour outcome.

**Expected Behaviour Outcomes of the Kayayei**

Behaviour outcomes are the actions that individuals are expected to perform after the intervention in this case the self-development and health education components of the programme. Outlined below are the expected behaviour outcomes for the self-development and health education components of the intervention.

*Self-Development- It is expected that the Kayayei will:*

- Refrain from self-stigmatisation by valuing self;
- Practice resilience in the face of adversity by being self-aware, mindful, taking care of self, and forming positive relationships;
- Feel empowered and confident enough to seek to develop some vocational skills linked to identified goals and interests; and
- Develop positive self-esteem.

*Health Education- It is expected that the Kayayei will:*

- Practice relaxation exercises when feeling overwhelmed and not able to relax (sleep);
- Identify minor and major health problems and seek timely health care;
- Identify personal goals and develop feasible plans to achieve those goals;
- Identify effective ways of carrying loads to reduce impact on physical health;
- Plan and have adequate sleep;
- Plan for maximum hour working hours; and
- Have knowledge on reproduction and sexual health issues.

**Interpersonal Outcomes**

- To assist the Kayayei to develop networks to support such as peer support; and
- To form credit unions to offer credit facilities to the Kayayei in times of need.

**Broad Structural and Societal Outcomes**

- Engage in social mobilisation of existing structures that serve vulnerable populations and representatives of these groups like the Kayayei to create an awareness of their plight among the broader society;
- To advocate for policies and guidelines at a national and local levels;
- To better protect the informal sector workers from exploitation and abuse;
- Improve service delivery to vulnerable populations, e.g., internal migrants regarding housing, health and psycho-social support;

- Create work opportunities through growth pooling strategies across the country where few work opportunities exist e.g. the northern parts of the country;
- Include in school curricula cultural education about harmful practices and in Life Skills- include information on practices to enhance health and wellbeing of learners with the hope of better outcomes at later stages of life; and
- To make recommendations to government, NGOs, and other benevolent organisations to come together to arrange for temporary affordable housing for the Kayayei.

**Performance or Behavioural Objectives**

According to Eldredge et al. (2016, p. 17), "performance objectives are the description of specific behaviour that the at-risk group or the environmental agent must perform to achieve the desired change". Performance objectives specify what needs to be done and this enables planners to move from the general behavioural and environmental factors to produce a plan for more detailed actions that will produce the desired health behaviour (Eldredge et al., 2016). The health and wellbeing of the Kayayei is impacted both negatively and positively by personal factors at both the social and structural levels. To improve the health and wellbeing of the Kayayei, it is important for the intervention to focus on individual level factors such as self-development and health education. There is also the need for collective network development at the interpersonal level to promote social support. Furthermore, structural interventions are required through promotion of social integration, education, access to health care services, and facilitating engagement with health care providers.

**Table 39**

**Matrix of Individual Change Objectives Pertaining to Self-Development**

| Determinants | Performance objectives | Change objectives |
|---|---|---|
| **Adaptive coping** | • To assist the Kayayei to develop constructive coping strategies to deal with their daily living experiences | • The Kayayei will adopt adaptive coping strategies such as engaging in relaxation exercises, meditation, seeking for support, and cognitive reframing |
| **Resilience** | • To assist the Kayayei to develop resilience in the face of adversity | • The Kayayei will be encouraged to keep things in perspective when faced with obstacles.<br>• Persuasive messages to encourage the Kayayei to be focused on their goals.<br>• The Kayayei will be encouraged to accept change and have a positive outlook. |
| **Goal setting** | • To assist the Kayayei to develop personal goals and plans to achieve their set goals | • Through the intervention programme the Kayayei will set goals and develop a strategy framework to achieve the stated goals to guide their actions |

| | | |
|---|---|---|
| **Vocational training** | • To assist the Kayayei to develop vocational skills such as dress making, baking, and hair dressing | • Advocate for local and national government and NGO's to establish vocational training centres aimed at training the Kayayei to learn skills that will enable them to establish their own business.<br><br>• The Kayayei to enrol in skills development initiatives. |
| **Health care seeking** | • Encourage the Kayayei to enrol into the NHIS and report symptoms to health centres promptly | • The Kayayei to enrol into the NHIS scheme and seek prompt medical attention when not feeling will |
| **Self-value** | • Encourage the Kayayei through education to have a different perspective of themselves and put more value on themselves realising their worth | • The Kayayei will prioritise themselves and be more appreciative of the self. Acknowledge their contributions positively. |

**Table 40**
**Matrix of Interpersonal Change Objectives**

| Determinants | Performance objectives | Change objectives |
|---|---|---|
| **Stigma** | • To tackle to issues of stigmatisation and maltreatment of the Kayayei | • The Kayayei to reframe from self-stigma through self-value.<br>• Form cooperative groups to advocate for better treatment of public and greater awareness of their plight. |
| **Support Systems** | • Using peer educators to discuss past experiences | • Formation of support groups to hold regular meeting and offer social support and personal affirmation.<br><br>• Develop networking among the existing communities of the Kayayei and other supportive structures to mobilize the psychosocial support and the necessary resources for the Kayayei population especially those who are in distress. |

**Table 41**
**Matrix of Structural and Society Change Objectives**

| Determinants | Performance objectives | Change Objectives |
|---|---|---|
| **Access to health and social services** | • To advocate for social interventions such as expanding the markets to create more space for the Kayayei, enrolling them into the NHIS.<br><br>• Facilitate for health care workers to engage with the Kayayei to offer the appropriate health care.<br><br>• Advocate to community engagement to integrate the Kayayei into the community. | • Through the intervention programme, durbars will be organised with the Kayayei and invite the minister of gender and child protection, minister of employment and social welfare and advocate social interventions that aim at improving the health and wellbeing of the Kayayei.<br><br>• Creating avenues for the Kayayei to be integrated into the community. |
| **Employment opportunities through a Growth pool** | • Through the intervention programme, durbars will be organised with the Kayayei and invite the minister of | • To make recommendations to governments to develop growth pooling strategies where factories will be established in the northern |

| | | |
|---|---|---|
| | gender and child protection, minister of employment and social welfare and advocate for policy change to protect the Kayayei. | part of the country to create employment opportunities and attract more individuals to the north. |
| **Life Skills and Human Rights Education in Basic schools** | • To make recommendation to governments to include human right in the school in basic schools.<br>• Hold seminars to educate store owners about the plight of Kayayei | • Schools will teach include human rights education basic school syllabus.<br>• Social actions will be taken to protect the Kayayei against stigmatisation and maltreatment. |
| **Housing** | • To make recommendation to government, NGOs, to arrange for temporary accommodation that is safe and low rate for shorter period. | • Arranging for temporary affordable accommodation for the Kayayei. |

### 8.4.3 Intervention Mapping – Step 3 Theoretical Methods and Practical Applications

After carefully identifying and formulating the performance and change objectives in step 2, theoretical methods and practical applications addressing the determinants were selected to address them. Theoretical methods are techniques and processes that are derived from theories and research and are applied to achieve programme objectives (Kok et al., 2004). Theoretical models are intended to facilitate change at both the individual and environmental levels. The focus of the intervention is on self-development and health education. Therefore, social cognitive and behaviour change models have been suggested with their practical applications for intervention at different levels as outlined below.

**Table 42**

**Theoretical Methods and Practical Applications**

| Determinants and change objectives | Theoretical Methods | Parameters for use | Practical applications |
|---|---|---|---|
| | | **Self-development** | |
| **Self-Value** | • **Cognitive restructuring and Shifting perspectives** (Theories of stigma and discrimination) (Batson, Chang, Orr, & Rowland, 2002; Goffman 2009)<br>• Social cognitive theory (Bandura, 2005)<br>• Self-determination theory (Deci & Ryan, 2008) | • Self-compassion, Emancipation through destigmatisation, health promotion | • Experiential exercises, life stories; use of case studies/scenarios and role plays to clarify values and power, also to equip the Kayayei to deal with stigmatisation from the public, self-stigmas well as engage in activities that promotes self-compassion |

| **Self-efficacy and self-esteem** | • **Redefining the self:** Social cognitive theory (Bandura, 2001; 2005; Deci & Ryan, 2008). | • Individuals with self-efficacy and self-agency | • Build skills through experiential engagement in general self-efficacy and domain efficacy. Encourage to seek opportunities to develop skills, Develop and construct personal identity |
|---|---|---|---|
| **Empowerment** | • **Empowerment** (Laverack (2006)<br><br>• Agentic perspectives (Bandura, 2005), | • Empowered individuals who take control over their own health and wellbeing<br><br>• Empowerment through vocational skills that will enable more work opportunities | • Health education with case studies, role plays to equip them with knowledge and skills to take care of their health and wellbeing.<br><br>• Vocational training to equip them with some skills to enable other work opportunities (more structural level intervention by external stakeholders & government/local government) |
| **Resilience** | • **Protective capacities:** Psychological capital, self-agency, and social capital (Bandura, 2011; Luthar, & Cicchetti, D. 2000; Luthans, Youssef, & Avolio, 2015; Häuberer, 2011). | • Individuals with improved adaptive capacity, personal strength, and transformational attitude towards challenges | • Experiential learning activities and drawing from life stories to identify personal resilience, ability to bounce back from adversities, narrative theatre to depict real life challenges and how to strengthen positive coping |
| Coping (enhancing adaptive coping strategies) | • **Modelling** (Social cognitive theory, theories of learning) (Bandura, 2011; Kazdin, 2012; Kelder, Hoelscher, Perry, 2015)<br>• **Coping with stress** (Folkman, Lazarus, 1984).<br>• **Self-Regulation** (Self-Regulation model: Byrnes, 2013). | • Attention, remembrance, self-efficacy, and skills.<br><br>• Reinforcement of the role model; identification with role model, Self-monitoring of behaviour | • Use experiential learning activities e.g., scenarios and narrative theatre to explore current and alternative coping mechanisms & help-seeking behaviours for health & wellbeing.<br><br>• Use of real-life role models to inspire and demonstrate the possibility of alternative actions and to encourage and give hope. |
| Goal setting | **Motivational interviewing:**<br><br>• Goal setting (theories of self-regulation) (Deci & Ryan, 2010; Locke, & Latham, 2019; Miller & Rollnick, 2012)<br><br>• **Stages of change theory** (Prochaska, | • Individuals with clear goals and realistic ways of achieving the goals | • Development of skills to explore personal future perspectives, value clarification, envisioned success, setting of realistic goals and action plans using a range of experiential and formal input e.g., video input, scenarios and drawing from life stories, group work and sharing of personal |

| | DiClemente, & Norcross,1993). | | experiences to foster future perspectives and goals and actions aligned to future goals. |
|---|---|---|---|
| **Interpersonal level** | | | |
| Developing new social networks/ Social integration | • **Social Capital theory** (Bandura, 2011), bonding, bridging, and linking. Develop new social networks and link new members to old networks who will act as mentors.<br><br>• (Theories of social networks and social support; Holt-Lundstad & Uchino, 2015; Kok et al., 2017; Valente, 2015) | • Kayayei that are integrated and linked to available networks that can provide appropriate support to organisations, groups and agents & other structures that may support vulnerable groups.<br><br>• Kayayei that are empowered to identify own social support groups and | • Creating awareness among the Kayayei of available networks, organisations, groups, etc and provide them with contact details. Assist in a needs assessment of additional help and support that are needed and develop action plans to address some support networks and ways of linking to support networks.<br><br>• Integration through community forums and peer mentorship from already integrated Kayayei. |
| | | | |
| Access to health care | • **Health behaviour modification**<br>• Health belief model (Becker, 1974; Champion & Skinner, 2008; Rosenstock 1974)<br><br>• Illness presentation theory (Leventhal et al., 1997) | • Symptom recognition Outreach services that provide physical and mental health care, integration of mental and physical care services.<br><br>• Kayayei assessing health care services | • Health education re physical and mental distress. Linking service providers and the Kayayei to provide appropriate care |
| **Structural level** | | | |
| Advocacy | • **Communication and Innovation**<br>• Theories of communication Rogers, & Shoemaker 1971).<br>• Diffusion of Innovation theory (Rogers, 2010)<br>• Social action theories (Tuomela, 1984; Ewart 1991) | • An aware and responsive health and social development and support sector caring society to the plight vulnerable groups and in particular concerned about the health and wellbeing of vulnerable groups including the Kayayei | • Mobilise governmental departments, local government, NGO's and other advocacy groups and structure to improve the general wellbeing of the Kayayei and also other vulnerable groups.<br><br>• Develop a policy brief of the research findings directed at national and local government to |

| | | | highlight the plight of the Kayayei |
|---|---|---|---|
| Informal sector reforms | • Innovations: Diffusion of Innovation theory (Rogers, 2010) | • Adoption of Innovations<br>• Local and national government will implement policies that protect the informal sector | • Mobilise NGOs and other representatives or "champions" for other vulnerable groups to collaborate and advocate for policies and guidelines to regulate the protection of informal sector workers |
| Growth pooling | • Adoption of Innovations: Diffusion of Innovation theory (Rogers, 2010) | • Government or local authorities to create more employment opportunities in northern Ghana. | • Advocating for job creation in the northern part of Ghana so the Kayayei will not find it necessary to migrate to Accra |

### 8.5 Contribution of the Study to the Body of Knowledge

The main strength of this study is the use of a sequential exploratory mixed method approach in assessing the needs of the Kayayei and in developing guidelines for health promotion interventions grounded on these insights. The use of both qualitative and quantitative data enhances a better understanding of the physical and mental health challenges of the Kayayei. This allowed the researcher to test theoretical models and to modify them, when necessary, based on participant's feedback as suggested by Hanson et al. (2005). The mixed method approached drew on the strength of both the qualitative and quantitative approaches as suggested by Creswell and Plano Clark (2011). The qualitative study offered an in-depth understanding and conceptualisation of the physical and mental health challenges of the Kayayei.

The qualitative study outlined the reasons why the Kayayei migrate to Accra. The main reasons for migration identified by the qualitative aspect of this study were economic and cultural. While some of the women migrated to escape cruel cultural practices making their migration permanent, others migrated to earn some income and intended to return later. In addition, this study also found that the assumption that the Kayayei are uneducated, and illiterate was not the case. This finding confirmed an earlier study by Awumbila et al. (2017) that many of the Kayayei were educated and came to Accra to earn income to further their education. The study findings showed how the Kayayei also exhibited tremendous resilience in the face of the challenges they face, promoting survival (see also Smith et al., 2010). Furthermore, the study

also identified coping strategies such as religion and recreation. The quantitative survey complemented these insights by examining the prevalence and relationship between the variables under study and this helped in the generalising of the findings of the study to a larger group of the Kayayei.

The development of intervention guidelines (see the section above) embedded in the needs analysis that explored the lived experiences of the Kayayei both qualitatively and quantitatively, which is sensitive to women's vulnerabilities in the context of unequal gender power relations. The psychosocial and environmental context in which these vulnerable women found themselves is an issue of concern. The intervention guideline suggests a holistic view to bring about changes in the bioecological system.

Furthermore, this study suggests of pathways for advocacy and social action to alleviate some of the plights of the Kayayei that might also address the needs of other vulnerable migrants living in Accra. To improve the physical and mental health of the Kayayei and other vulnerable groups in society, there is the need for actions that will help mitigate hardships faced by the vulnerable in society.

Finally, the review of the available literature on the physical and mental health challenges among the Kayayei in Ghana provided a comprehensive overview of the existing knowledge and highlighted important gaps in knowledge regarding the topic that this study aimed to address.

### 8.6 Recommendation for Future Research

The following suggestions for further study are offered based on the findings of this study:

- ✓ With Ghana being a religious country where religion permeates every aspect of life, further research is needed to understand the dynamic ways in which individuals use religion in specific ways and the role of religion in mitigating mental health distress.
- ✓ There is a perceived need to refine existing measurement (mental health screening) instruments to be used in the African context and to develop research further instruments particularly for the African context.
- ✓ As stipulated by the bioecological model, there is the need to conduct further studies on how individual characteristics impact negatively or positively on mental health outcomes among vulnerable populations. This will aid in the development of further interventions to address the specific needs of this group.

- ✓ Research should be conducted to compare the Likert scale as to categorical scales to determine the responses that could yield a better understanding of a phenomenon in an African context. Participants in the present study seem to have difficulty in responding to the different levels of the Likert scale.
- ✓ A study should be conducted on the advocacy process for health and wellbeing of vulnerable groups with a focus on the process, lessons learnt, barriers and successes. This insight should be useful in low- and middle-income countries to address the plight of vulnerable and marginalised groups.

## 8.7 Limitations of the Study

The use of a cross-sectional design for the quantitative aspect of the study, where data was collected at a single point in time, was a limitation because it limited the interpretation of the findings. Due to this, the study was only able to find relationships between variables, but it was not able not make any suggestions regarding causation. It is recommended that future studies should use longitudinal studies that could shed light on these aspects over time. Secondly, the use of non-probability sampling technique means that not all the Kayayei in Ghana had the same opportunity of being selected for participation therefore the results cannot be generalised to all the Kayayei in Ghana. However, because Agbogbloshie has the largest number of Kayayei in Ghana, the sample size was deemed adequate for the study and the findings can therefore be generalised to those in Accra. Furthermore, this study's use of self-reported measures could have led to social desirability bias especially regarding religious coping. However, it is believed that the biases if any are minimal as the tools used for collecting data were standardised and tested in the African context with acceptable inter-item reliability coefficients.

## 8.8 Conclusion

Globally, poverty and desperation are driving forces of migration where individuals seek for better lives elsewhere and search of a better income to take care of families. Apart from this, repressive and restrictive religious practices and the patriarchal order of some societies has led to forced child marriages, widowhood rites and maltreatment that confine women to a life of oppression. Young women attempt to escape this life only to be trapped by the dominant patriarchal order of another society where marginalisation of women persists. Little attention is paid to their education, they are exploited in work contexts, and some engage in sexual activities to address basic needs for survival for themselves and their families and children.

Societies and governments with underlying patriarchal orientations still pay little attention to marginalised groups particularly if they are women. Women are supposed to marry, bear children, be a home maker and take care of children. Furthermore, women face stigmatisation, exclusion, poor access to basic social and health services and this is worsened by poor economies of Sub-Saharan African countries. This marginalisation increases restrictions on economic freedom resulting in hopelessness and mental health distress among women, particularly in sub-Saharan Africa. To make matters worse there is poor access to mental health services and an absence of or little support for individuals suffering from mental health distress in most African countries. The findings of this doctoral study suggest that the Kayayei who constitute a marginalised and vulnerable group in the Ghanaian society experience high levels of physical and mental health challenges. It is apparent that there is an urgent need for structural change and interventions that target the physical and mental health of the vulnerable in Ghanaian society, particularly women.

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# APPENDICES

## APPENDIX 1: ETHICAL CLEARANCE

UNIVERSITY OF
KWAZULU•NATAL

INYUVESI
YAKWAZULU.NATALI
27 July 2018

Ms Joyce Komesuor 217078885
School of Applied Human Sciences - Psychology
Howard College Campus

Dear Ms Komesuor

Reference number: HSS/0404/018D
Project title: Risk and Protective Factors in the Mental Health of Migrant Female Head Porters in Ghana.

Full Approval — Full Committee Reviewed Application

With regards to your response received on 26 July 2018 to our letter of 20 June 2018, the Humanities and Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol have been granted FULL APPROVAL.

Any alteration/s to the approved research protocol i.e. Questionnaire/interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number.

Please note: Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

..........................................

Dr S Naidoo (Deputy Chair)

cc Supervisor: Prof Anna Meyer-Weitz cc
Academic Leader Research: Dr Maud

Mthembu cc School Administrator: Ms
Ayanda Ntuli

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Humanities & Social Sciences Research Ethics Committee
Professor Shenuka Singh (Chair)/Dr Shamila Naidoo (Deputy Chair)
Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001 , Durban 4000
Telephone: +27 (O) 31 260 3587/8350/4557 Facsimile: +27 (0) 31 260 4609 Email:
ximbap@ukzn.ac.za / snymanm@ukzn.qc.za I
mohunp@ukzn.ac.za Website: www.ukzn.ac.za

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## APPENDIX 2: PERMISSION LETTER FROM THE KAYAYEI ASSOCIATION

**KAYAYEI YOUTH ASSOCIATION (GH)**

P.O. BOX 16661, ACCRA TEL 0246709054 - 0244300723 - 0200366882
LOC. BIMBILA STATION, OLD FADAMA. E-MAIL: kayaghana@gmail.com

Motto: Save Todays Mother
To Save Future Leaders

October 2, 2017

Professor Anna Meyer-Weitz,
Supervisor / Ag. Academic Leader,
School of Applied Human science,
Discipline of Psychology,
University of KwaZulu-Natal,
Glenwood, Durban, 4041,
Republic of South Africa.

Dear Professor Mayer-Weitz,

**REQUEST TO CONDUCT A DOCTORAL RESEARCH STUDY BY JOYCE KOMESUOR (PHD STUDENT NUMBER: 217078885)**

Your letter of September 21, 2017 on the above subject refers.

We write to indicate that the Kayayei Youth Association is an umbrella Not-For-Profit Association registered as a None-Governmental Organisation. We are dedicated to ensuring the welfare and wellbeing of Kayayei.

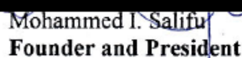
We wish to affirm our willingness and readiness to work with Ms. Joyce Komesuor, your PhD Candidate Number: 217078885 to the extent that her study would not infringe on the rights of our members. The researcher would be granted permission to interview our member and collect data for **academic purposes only.**

That the data so collected **shall not** be used for any other purpose without the prior express permission of the Association.

It is our hope that the researcher, your candidate would operate in accordance with the letter and spirit of this arrangement.

Thank you

Yours sincerely,



Mohammed I. Salifu
**Founder and President**

**Cc: Ms. Joyce Komesuor**

## APPENDIX 3: MEMORANDUM OF UNDERSTANDING BETWEEN THE KAYAYEI ASSOCIATION AND RESEARCHER

# A MEMORANDUM OF UNDERSTANDING

Between

**KAYAYEI YOUTH ASSOCIATION (GH)**
"The Association" Representad by Mohammed I. Salifu (Founder & President)

And

**MS. JOYCE KOMESUOR (PhD CANDIDATE #217078885)**
"The Researcher"

On

***Data Collection among Kayayei in Accra, Ghana***

1. That the **Researcher** hereby enters into agreement with the **Association**
2. That the purpose of this agreement is to enable the Researcher collected data
3. That the data so collected is for Academic Purpose Only and is to enable the Researcher complete her PhD programme
4. That the objectives of the study are to:
    a. Explore the experience of the Kayayei
    b. Investigate specific psychosocial and contextual environmental risk factors for the mental health distress among the Kayayei
    c. Ascertain the extent of mental health problems among Kayayei
    d. Explore the coping strategies used by the Kayayei
    e. Examine the extent of psychosocial support for mental health distress of the Kayayei
5. That the Researcher shall take all steps necessary to ensure that:
    a. The rights of the respondents (Kayayei) are not infringed upon
    b. The data collected shall be used **only** for the purpose stated herein
    c. The process shall not be used for the financial or material advantage of the parties
    d. The data collected shall not be disclosed to any other party (apart from the University of KwaZulu Natal without the written approval of the Association.

We the parties do hereby agree that any breach of the provisions of this agreement shall render the agreement void and of no effect.

Singed this ...2nd..... day of October 2017

Ms. Joyce Komesuor ..................... Signature

Witness ..................... Signature

Mr. Mohammed I. Salifu ..................... Signature

..................... Signature

## APPENDIX 4: INTERVIEW GUIDE

UNIVERSITY OF KWAZULU NATAL-SOUTH AFRICA
DEPARTMENT OF PSYCHOLOGY (HEALTH PROMOTION)
*IN-DEPTH INTERVIEW GUIDE FOR FEMALE HEAD PORTERS*

My name is ____________ I am collecting data for a study on **Physical and Mental Health Challenges among the Kayayei.** I would like to interact with you for about 30 minutes on your experiences as a Kayayei. The information is required purely for academic purposes. You have the right not to answer questions that make you feel uncomfortable and even discontinue the whole process if you feel so. All the answers you give will be confidential and will not be shared with anyone other than members of my study team.
Thank you for agreeing to be part of this study

Interview no: ________________________
Market: ________________________
Date of interview (DD/MM/YY): _______/_______/________
Time of interview: Start ________End________
Interviewer: _______________________

### SECTION A: DEMOGRAPHIC INFORMATION

1. Age (In completed years)__________________
2. Level of education__________________
3. Marital Status__________________
4. Ethnicity__________________
5. Religion __________________
6. Place of origin______________________
7. Duration of working as a head porter______________________
8. Number of hours working per day ______________________

### SECTION B: REASONS FOR MOVING TO ACCRA

9. Why did you decide to move to Accra, when did you move? For how long have you been in Accra? (Probe for other reasons)

**SECTION C: DAILY LIVED EXPERIENCES**

10. Please tell me how a typical working day is like for you as a head porter (Probe for time participant usually starts work, the main locations they carry loads to, the usual types of load they carry, the time they close from work, and the time they normally sleep).
11. How would you describe the general attitude of clients towards you? (Probes: Positive, friendly, entertaining, accommodating, generous, negative, annoying, intimidating, and insulting).
12. How much do you charge your clients for loads you carry for them? (Probe for the type of item it is, weight of the item)
13. How has your experience with payments for loads you carry for clients been? (Probes: Do they pay exactly what is charged? Do they refuse to pay the exact amount charged upon reaching their destinations? Do some even refuse to pay you entirely)?
14. What have been your experience regarding sexual harassment from (male) clients?
15. Is there anything else you would want to tell me regarding your work on a daily basis?

**SECTION D: RISK FACTORS**

16. Tell me some of the dangers you face in your line of work on a daily basis (Probe for rape, ritual murders, dislocation of neck, theft/robbery)
17. What are your experiences with accommodation? (Probe for places where they sleep, risks they are exposed to in search for [decent] accommodation, have they ever been duped by any [supposed] landlord? Have they been evicted unjustly from an accommodation they paid for? Has someone [forcibly] had sex with them so as to offer them accommodation?).
18. What other risks are you exposed to in your line of work?

**SECTION E: PHYSICAL HEALTH CHALLENGES**

19. How do you define your physical Health?
    - How does your work impact on your physical health? (probe for specific health problems associated with their work)
    - During the past 6 months, how much difficulty have you had doing your work as a result of your physical health? (probe for level of difficulty experienced: a little, much, severe)

**SECTION F: MENTAL HEALTH CHALLENGES**

20. How do you define your mental health?

- Will you say you are in good health? (if yes probe for attribution, if no explore health problems and responses to health problems)
- Probe for problems of anxiety, depression and stress
- Anxiety:
    - Do you sometimes experience trembling of hands?
    - Have you been experiencing loud heartbeats when you have not done anything strenuous?
    - Do you sometimes experience fear without reason?

      (for all these issues if yes, probe for frequency and severity)

- Depression:
    - Generally how happy/content are you in life?
    - How useful do you feel you are to yourself and your community?
    - Have you ever felt that you are tired with life? (How serious it is?)
    - Have you ever planned to end your life? (probe for reasons for suicide contemplation, frequency of such ideas)

- Stress:
    - How difficult is it for you to relax?
    - How often do situations agitate you and getting to over react? (probe for scenarios to gets participants agitated?
    - To what extent are you able to tolerate frustrations?
- Relationship between physical and mental health problems
    - How do you think about your physical health problems?
    - Do they hinder your work?
    - Do you get frustrated because of your physical health?
    - Do you get agitated because of a physical condition?
    - Do you feel sad when you have a physical condition?

      (Probe for more mental health problems due to physical condition)

**SECTION G: COPING STRATEGIES**

**21.** How do you deal with the dangers and risks you are exposed to in your work? (Probe for coping strategies, the role of religion, inner strength resilience and unhealthy forms of coping such as alcohol and drug use (emotional Focused) Reducing the demand of the situation such as information seeking, redefining the problem (problem focused)

- Types of coping Personality, adaptation
- **Recreational activities such as spots, music and dance, jokes etc.**

**SECTION G: PSYCHOSOCIAL SUPPORT**

22. Do you have support when you need it?

    - (probe to find out the support available to participants such as family, friends, NGO's etc)

**NEUTRAL PROMPTS TO TEASE OUT MORE INFORMATION**

1. Could you please say a bit more on?
2. I did not understand what you said …………………….. can you please explain further?
3. I shall return to this question in a little while
4. What do you mean by?

CONCLUSION

Thank you for participating in our research and answering all our questions. Do you have some other information that you need to share with us?

Thank You

## APPENDIX 5: FOCUS GROUP DISCUSSION GUIDE

UNIVERSITY OF KWAZULU NATAL-SOUTH AFRICA
DEPARTMENT OF PSYCHOLOGY (HEALTH PROMOTION)

My name is ____________ I am collecting data for a study on **Physical and Mental Health Challenges among the Kayayei.** I would like to interact with you for about 1 hour on your experiences as a Kayayei. The information is required purely for academic purposes. You have the right not to answer questions that make you feel uncomfortable and even discontinue the whole process if you feel so. All the answers you give will be confidential and will not be shared with anyone other than members of my study team.

Thank you for agreeing to be part of this study.

FGD ID: ____________________
Participant ID: ____________________
Date of interview (DD/MM/YY): ____________/______/______
Time of interview: Start ___________End____________
Market: ________________________
Interviewer: ______________________

| **100: SOCIO-DEMOGRAPHIC CHARACTERISTICS**<br>Fill in or circle the appropriate responses for questions 101 to 110 | | |
|---|---|---|
| No | Variable | Attributes |
| 101 | Age (In completed years) | ___________________ |
| 102 | Highest level of education | |
| 103 | Religion | 1. Christianity………………………..……..……..…..….1<br>2. Islam……………………………………..…..........….….2<br>3. African Traditional……………………….……............….3<br>4. Other (specify)………………………………… |
| 104 | Marital status? | 1. Married or living together……………..…………..…1<br>2. Divorced/Separated…………………..…….…….…..2 |

| | | |
|---|---|---|
| | | 3. Widowed………………………….…………<br>…....3<br>4. Never married and never lived together……………...4 |
| 10<br>5 | Ethnicity | 1. Sisala<br>……………………………………………...1<br>2. Dagomba<br>…………………………....…………2<br>3. Dagbani.<br>..……………………………..……….…..3<br>4. Mamprusi……………………………...........…<br>..4<br>5. Other (specify) ___________________________ |
| 10<br>6 | Place of origin | __________________________ |
| 10<br>7 | Duration of work as a head porter | |
| 8 | Number of hours working per day | |

**Ground rules**

- Only one person speaks at a time. There may be a temptation to jump in when someone is talking but please wait until they have finished.
- There are no right or wrong answers.
- You do not have to speak in any particular order.
- When you do have something to say, please raise your hand and we will call you to speak.

Does anyone have any questions?
Can we please begin the discussion? (If yes, then start the main discussion)

**Introductory question**

- I am going to give you a few minutes to think about your experience as a Kayayei. Is anyone ready to share her experiences?

**SECTION B: REASONS FOR MOVING TO ACCRA**

23. Why did you decide to move to Accra, when did you move? For how long have you been in Accra? (Probe for other reasons)

**SECTION C: DAILY LIVED EXPERIENCES**

24. Please tell me how a typical working day is like for you as a head porter (Probe for time participant usually starts work, the main locations they carry loads to, the usual types of load they carry, the time they close from work, and the time they normally sleep).
25. How would you describe the general attitude of clients towards you? (Probes: Positive, friendly, entertaining, accommodating, generous, negative, annoying, intimidating, and insulting).
26. How much do you charge your clients for loads you carry for them? (Probe for the type of item it is, weight of the item)
27. How has your experience with payments for loads you carry for clients been? (Probes: Do they pay exactly what is charged? Do they refuse to pay the exact amount charged upon reaching their destinations? Do some even refuse to pay you entirely)?
28. What have been your experience regarding sexual harassment from (male) clients?
29. Is there anything else you would want to tell me regarding your work on a daily basis?

**SECTION D: RISK FACTORS**

30. Tell me some of the dangers you face in your line of work on a daily basis (Probe for rape, ritual murders, dislocation of neck, theft/robbery)
31. What are your experiences with accommodation? (Probe for places where they sleep, risks they are exposed to in search for [decent] accommodation, have they ever been duped by any [supposed] landlord? Have they been evicted unjustly from an accommodation they paid for? Has someone [forcibly] had sex with them so as to offer them accommodation?).
32. What other risks are you exposed to in your line of work?

**SECTION E: PHYSICAL HEALTH CHALLENGES**

33. How do you define your physical Health?
    - How does your work impact on your physical health? (probe for specific health problems associated with their work)
    - During the past 6 months, how much difficulty have you had doing your work as a result of your physical health? (probe for level of difficulty experienced: a little, much, severe)

**SECTION F: MENTAL HEALTH CHALLENGES**

34. How do you define your mental health?

- Will you say you are in good health? (if yes probe for attribution, if no explore health problems and responses to health problems)
- Probe for problems of anxiety, depression and stress

- Anxiety:
    - Do you sometimes experience trembling of hands?
    - Have you been experiencing loud heartbeats when you have not done anything strenuous?
    - Do you sometimes experience fear without reason?
      (for all these issues if yes, probe for frequency and severity)

- Depression:
    - Generally how happy/content are you in life?
    - How useful do you feel you are to yourself and your community?
    - Have you ever felt that you are tired with life? (How serious it is?)
    - Have you ever planned to end your life? (probe for reasons for suicide contemplation, frequency of such ideas)

- Stress:
    - How difficult is it for you to relax?
    - How often do situations agitate you and getting to over react? (probe for scenarios to gets participants agitated?
    - To what extent are you able to tolerate frustrations?

- Relationship between physical and mental health problems
    - How do you think about your physical health problems?
    - Do they hinder your work?
    - Do you get frustrated because of your physical health?
    - Do you get agitated because of a physical condition?
    - Do you feel sad when you have a physical condition?
      (Probe for more mental health problems due to physical condition)

## SECTION G: COPING STRATEGIES

**35.** How do you deal with the dangers and risks you are exposed to in your work? (Probe for coping strategies, the role of religion, inner strength resilience and unhealthy forms of coping such as alcohol and drug use (emotional Focused) Reducing the demand of the situation such as information seeking, redefining the problem (problem focused)

- Types of coping personality, adaptation
- Recreational activities such as spots, music and dance, jokes etc.

## SECTION G: PSYCHOSOCIAL SUPPORT

36. Do you have support when you need it?
    - (probe to find out the support available to participants such as family, friends, NGO's etc)

## NEUTRAL PROMPTS TO TEASE OUT MORE INFORMATION

5. Could you please say a bit more on?
6. I did not understand what you said …………………….. can you please explain further?
7. I shall return to this question in a little while.
8. What do you mean by?

## CONCLUSION

Thank you for participating in our research and answering all our questions. Do you have some other information that you need to share with us?

Thank You

## APPENDIX 6: OBSERVATIONAL STUDY GUIDE

UNIVERSITY OF KWAZULU NATAL-SOUTH AFRICA
DEPARTMENT OF PSYCHOLOGY (HEALTH PROMOTION)
*IN-DEPTH INTERVIEW GUIDE FOR FEMALE HEAD PORTERS*

1. Physical environment of the Agbogbloshie market
2. The nature of load the Kayayei carry
3. Distances covered
4. Vehicular traffic
5. Attitudes towards the Kayayei
6. How much they charge their clients

**APPENDIX 7: INTERVIEW GUIDE FOR KEY INFORMANTS**

UNIVERSITY OF KWAZULU NATAL-SOUTH AFRICA
DEPARTMENT OF PSYCHOLOGY (HEALTH PROMOTION)
*IN-DEPTH INTERVIEW GUIDE FOR FEMALE HEAD PORTERS*

SECTION A

1. Background Characteristics
   a. Age
   b. Level of Education
   c. Occupation

SECTION B

1. General overview of the north-south migration

   (probe for follow up, what are the reasons for migration, is there a way to limit the influx of young women coming to Accra?
2. How does the Kayayei business affect the physical and mental health of the Kayayei?
3. Do the Kayayei receive any support from Government and other relevant agencies?
4. In your opinion what should be done to improve the health and wellbeing of the Kayayei and other vulnerable groups in society?

**APPENDIX 8: QUESTIONNAIRE**

UNIVERSITY OF KWAZULU NATAL
DEPARTMENT OF PSYCHOLOGY (HEALTH PROMOTION)

My name is _____________ I am collecting data for a study on **Risk and Protective Factors in the Mental Health of Migrant Female Head Porters in Ghana.** I would like to interact with you for about 30 minutes on your experiences as a head porter. The information is required purely for academic purposes. You have the right not to answer questions that make you feel uncomfortable and even discontinue the whole process if you feel so. All the answers you give will be confidential and will not be shared with anyone other than members of my study team. Thank you for agreeing to be part of this study.

**Instructions**

Tick [√] or provide responses in writing in the boxes where applicable.

**SECTION A: Background Characteristics**

| 1. Age | 10-19 | 20-29 | 30-39 | 40-49 | 50+ |
|---|---|---|---|---|---|
| | | | | | |

| 2. Level of education | None | Basic | JHS | SHS |
|---|---|---|---|---|
| | | | | |

| 3. Religion | Christianity | Islam | African Traditional | Other (specify) |
|---|---|---|---|---|
| | | | | |

| 4. Ethnicity | Dagomba | Nanumba | Frafra | Grusi | Gurma | Mossi | Other |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

| 5. Marital status | Never married | Married | Co-habiting | Divorced/separated |
|---|---|---|---|---|
| | | | | |

| 6. No of children | 1 | 2 | 3 | 4 | 5+ |
|---|---|---|---|---|---|
| | | | | | |

**SECTION B: LIFE EXPERIENCES**

| | | |
|---|---|---|
| 1. How long have you been in Accra? | Less than a year [ ]<br>1-5 years [ ]<br>6-10 years [ ]<br>> 10 years [ ] | |
| 2. How do you rate your work? | Very easy [ ] | |

| | | |
|---|---|---|
| | Easy [ ]<br>Difficult [ ]<br>Very difficult [ ] | |
| 3. Do you have accommodation? | Yes [ ]<br>No [ ] | |
| 4. Where do you regularly sleep?_________________ | | |
| 5. Which type of accommodation is it? | Block building [ ]<br>Kiosk [ ]<br>Container [ ] | |
| 6. How do your patrons treat you? | Very nicely [ ]<br>Nicely [ ]<br>Normal [ ]<br>Badly [ ]<br>Very badly [ ] | |
| 7. How long do you work in a day | ____________ | |
| 8. How much money do you make in a day on average? | _________________ | |

**SECTION C: Mental Health**

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:

**0** Did not apply to me at all **1** Applied to me to some degree, or some of the time **2** Applied to me to a considerable degree or a good part of time **3** Applied to me very much or most of the time

| | Please tick the answer that is correct for you | 0 | 1 | 2 | 3 |
|---|---|---|---|---|---|
| 1. (s) | I found it hard to calm down | | | | |
| 2. (a) | I was aware of dryness of my mouth | | | | |
| 3. (d) | I couldn’t seem to experience any positive feeling at all | | | | |
| 4. (a) | I experience breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion.) | | | | |
| 5. (d) | I found it difficult to work up the initiative to do things | | | | |
| 6. (s) | I tended to over-react to situations | | | | |
| 7. (a) | I experienced trembling (e.g. in the hands) | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 8. (s) | I felt that I was using a lot of nervous energy | | | | |
| 9. (a) | I was worried about situations in which I might panic and make a fool of myself | | | | |
| 10. (d) | I felt that I had nothing to look forward to | | | | |
| 11. (s) | I found myself getting agitated | | | | |
| 12. (s) | I found it difficult to relax | | | | |
| 13. (d) | I felt downhearted and dejected | | | | |
| 14. (s) | I was intolerant of anything that kept me from getting on with what I was doing | | | | |
| 15. (a) | I felt I was close to panic | | | | |
| 16. (d) | I was unable to become enthusiastic about anything | | | | |
| 17. (d) | I felt I wasn't worth much as a person | | | | |
| 18. (s) | I felt that I was rather touchy | | | | |
| 19. (a) | I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat) | | | | |
| 20. (a) | I felt scared without any good reason | | | | |
| 21. (d) | I felt that life was meaningless | | | | |
| | | | | | |

**Physical Health**

- 1 never; **2** rare; **3** occasionally **4** regular; **5** constant

| | | | | | |
|---|---|---|---|---|---|
| 1. | Presence of physical pain (neck/back ache, sore arms/legs, etc | 1 | 2 | 3 | 4 5 |
| 2. | Feeling of tension, stiffness, or lack of flexibility in your spine | | | | |
| 3. | Incidence of fatigue or low energy | | | | |
| 4. | Incidence of colds and flu | | | | |
| 5. | Incidence of headaches (of any kind) | | | | |
| 6. | Incidence of nausea or constipation | | | | |
| 7. | Incidence of menstrual discomfort | | | | |
| 8. | Incidence of allergies or eczema or skin rash | | | | |
| 9. | Incidence of dizziness or light-headedness | | | | |
| 10. | Incidence of accidents or near accidents or falling or tripping | | | | |

**Coping Strategies**

(1= I haven't been doing this at all; 2 = I've been doing this a little bit; 3 = I've been doing this a medium amount; 4 = I've been doing this a lot)

| | | 1 | 2 | 3 | 4 |
|---|---|---|---|---|---|
| 1. | I've been turning to work or other activities to take my mind off things. | | | | |
| 2. | I've been concentrating my efforts on doing something about the situation I'm in. | | | | |
| 3. | I've been saying to myself "this isn't real.". | | | | |
| 4. | I've been using alcohol or other drugs to make myself feel better. | | | | |
| 5. | I've been getting emotional support from others. | | | | |
| 6. | I've been giving up trying to deal with it. | | | | |
| 7. | I've been taking action to try to make the situation better. | | | | |
| 8. | I've been refusing to believe that it has happened. | | | | |
| 9. | I've been saying things to let my unpleasant feelings escape. | | | | |
| 10. | I've been getting help and advice from other people. | | | | |
| 11. | I've been using alcohol or other drugs to help me get through it. | | | | |

| 12. | I've been trying to see it in a different light, to make it seem more positive. | | | | |
|---|---|---|---|---|---|
| 13. | I’ve been criticizing myself. | | | | |
| 14. | I've been trying to come up with a strategy about what to do. | | | | |
| 15. | I've been getting comfort and understanding from someone | | | | |
| 16. | I've been giving up the attempt to cope. | | | | |
| 17. | I've been looking for something good in what is happening | | | | |
| 18. | I've been making jokes about it. | | | | |
| 19. | I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping. | | | | |
| 20. | I've been accepting the reality of the fact that it has happened | | | | |
| 21. | I've been expressing my negative feelings. | | | | |
| 22. | I've been trying to find comfort in my religion or spiritual beliefs. | | | | |
| 23. | I’ve been trying to get advice or help from other people about what to do | | | | |
| 24. | I've been learning to live with it. | | | | |
| 25. | I've been thinking hard about what steps to take. | | | | |
| 26. | I’ve been blaming myself for things that happened | | | | |
| 27. | I've been praying or meditating | | | | |
| 28. | I've been making fun of the situation. | | | | |
| **Social Support**<br>1Strongly disagree; 2 disagree; 3 agree 4 strongly agree | | | | | |
| 1. | There is a special person who is around when I am in need. | 1 | 2 | 3 | 4 |
| 2. | There is a special person with whom I can share my joys and sorrows. | | | | |
| 3. | My family really tries to help me | | | | |
| 4. | I get the emotional help and support I need from my family | | | | |
| 5. | I have a special person who is a real source of comfort to me. | | | | |
| 6. | My friends really try to help me. | | | | |
| 7. | I can count on my friends when things go wrong | | | | |
| 8. | I can talk about my problems with my family. | | | | |
| 9. | I have friends with whom I can share my joys and sorrows. | | | | |
| 10. | There is a special person in my life who cares about my feelings. | | | | |
| 11. | My family is willing to help me make decisions | | | | |
| 12. | I can talk about my problems with my friends. | | | | |
| | | | | | |

## APPENDIX 9: INFORMED CONSENT FOR QUALITATIVE DATA

**CONSENT FORM FOR INDIVIDUAL PARTICIPANTS (SURVEY)**

**Discipline of Psychology**
**School of Applied Human Sciences**
**College of Humanities**
**University of KwaZulu-Natal**

Good Morning, /afternoon/evening, my name is Joyce Komesuor. I am a PhD student at the University of KwaZulu-Natal, 4041, Durban, South Africa. I am conducting a study Physical and Mental Health Challenges of Kayayei. The purpose of the study is to study the risk and protective factors in the mental health of migrant Head porters (Kayayei) in Agbogbloshie, Accra-Ghana. My research sample consists of women who are 18years and above and involves in the Kayayei business. The knowledge gained from this study will add to the existing body of knowledge regarding the impact of the Kayayei business on mental health in Ghana, provide guidelines for policy development and will also contribute to the development of psychosocial interventions for Kayayei to improve their mental health. I would like to speak to you only if you agree to speak to me.

This discussion will last for about 40 minutes. We will ask you to talk about the following: your reason for moving to Accra, your daily lived experiences, risk that you face, your physical health problems, your mental health problems, your coping strategies and psychosocial support. During the course of the interview, a counsellor will be on stand-by to help you in-case we identify any mental health issue.

All information that you give will be kept confidential and be used for research purposes alone and raw data will be destroyed as soon as the study is completely over. Also, we will not use your actual name or designation in reporting the findings of the study so that no one will be able to link your information to you personally.

You will not be given any monetary payments for participating in the study. Your participation in this study is voluntary and you have the right not to talk to us if you do not want to. If you agree to take part in the study, we will ask you to sign a form as an indication that we did not force you to participate in the study. Please note that you will not be at any disadvantage if you choose not to participate in the study. You may also refuse to answer particular questions if you don't feel comfortable answering them. You may also end the discussion at any time if you feel uncomfortable with the interview. We will also need your permission to use audio-tape recorders to capture our discussion. We are asking permission to quote you verbatim in some of the report if need be, in such cases we will conceal your identity and refer to your coded number. After the study, a copy of the work will be printed and given to your association and a meeting organized to discuss the findings with you.

Should you have any further questions you may call me in the on +233(0) 249377659. If you have any questions about your rights as a participant please contact MS Phumelele Ximba in the research office at the University of KwaZulu-Natal on +27 (0) 31-2603587 or email: **ximbap@ukzn.ac.za**.

**Thank you.**

*Researcher:* **Joyce Komesuor**
Tel: +233(0) 207345323 (Ghana)
Email: jkomesuor@uhas.edu.gh

*Supervisor:* **Prof. Anna Meyer-Weitz**
Tel: +27 (0) 312607618 (South Africa)
Email: meyerweitza@ukzn.ac.za

## APPENDIX 10: PARTICIPANT DECLARATION FORM FOR QUALITATIVE STUDY

**PARTICIPANT'S DECLARATION**

I ……………………………………………………………..... (Full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project as discussed with me based on the previous page of this document, and I give consent to participate in the study. I also grant permission for the survey to be administered and to be used for research purposes only. I fully understand that all the information that I provide will be kept confidential and anonymous.

**I understand that:**

My participation is voluntary [ ]
Confidentiality and anonymity have been assured [ ]
I can withdraw from the study at any time with no negative consequences [ ]

__________________________ ________________________

Signature of participant Date

__________________________ ________________________

Signature of researcher Date

**APPENDIX 11: CONSENT FORM FOR QUANTITATIVE STUDY**

Dear Madam,
My name Joyce Komesuor, a PhD student at the University of KwaZulu-Natal, Durban, South Africa conducting a study as part of my research thesis. I am conducting a study Physical and Mental Health Challenges of Kayayei The purpose of the study is to study the risk and protective factors in the mental health of migrant Head porters (Kayayei) in Agbogbloshie, Accra-Ghana. My research sample consists of women who are 18years and above and involves in the Kayayei business. The knowledge gained from this study will add to the existing body of knowledge regarding the impact of the Kayayei business on mental health in Ghana, provide guidelines for policy development and will also contribute to the development of psychosocial interventions for Kayayei to improve their mental health.
.This study will require you to answer a few questions about yourself e.g. your age, level of education, ethnicity, religion, marital status, etc. and questions on your mental health, physical health, coping strategies and social support. Complete anonymity of all participants will be ensured. The questionnaire will be kept for five (5) years in accordance with the University regulations and thereafter it will be disposed of by means of shredding. During the course of the interview, a counsellor will be on stand-by to help you in-case we identify any mental health issue. Participation is voluntary and you are completely free to withdraw from this study at any stage for any reason. After the study, a copy of the work will be printed and given to your association and a meeting organized to discuss the findings with you.
Your participation will be highly appreciated and it will not take about 30 minutes to complete. Please feel free to contact either me or my supervisors for any further clarification regarding this study.
If you have any questions about your rights as a participant please contact Ms Phumelele Ximba in the research office at the University of KwaZulu-Natal on 031-2603587 or email: **ximbap@ukzn.ac.za**.
Yours sincerely,

***Researcher:*** **Joyce Komesuor**
Tel: +233(0) 207345323 (Ghana)
Email: jkmoesuor@uhas.edu.gh

***Supervisor:*** **Prof. Anna Meyer-Weitz**
Tel: +27 (0) 312607618 (South Africa)
Email: meyerweitza@ukzn.ac.za

## APPENDIX 12: PARTICIPANT DECLARATION FORM FOR QUANTITATIVE STUDY

**PARTICIPANT'S DECLARATION**

I …………………………………………………………….... (Full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project as discussed with me based on the previous page of this document, and I give consent to participate in the study. I also grant permission for the survey to be administered and to be used for research purposes only. I fully understand that all the information that I provide will be kept confidential and anonymous.

**I understand that:**

My participation is voluntary [ ]
Confidentiality and anonymity have been assured [ ]
I can withdraw from the study at any time with no negative consequences [ ]

___________________________ _________________________

Signature of participant Date

___________________________ _________________________

Signature of researcher Date