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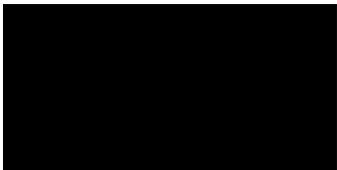
BIBLIOMETRIC AND CONTENT ANALYSIS OF THE SOUTH AFRICAN JOURNAL OF HUMAN RESOURCE MANAGEMENT AND THE SOUTH AFRICAN JOURNAL OF INDUSTRIAL PSYCHOLOGY FROM 2006 TO 2016

By

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**A dissertation submitted in fulfilment of the requirements for the degree of
Master of Commerce**

School of Management, IT and Governance
College of Law and Management Studies

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2019

DECLARATION

I, Rylla Pillay, declare that

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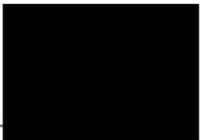
DEDICATION

I dedicate this dissertation to my parents.

To the strongest person in my life, my mum, I have only reached this milestone because of the invaluable opportunities you have given me. I am eternally grateful for the untold number of sacrifices you have made to ensure that my life was and is as smooth as possible. Thank you for teaching me how to persevere and be triumphant in the face of adversities. You're my greatest inspiration and I am certain that this dissertation would not have been completed without your constant support.

To my late dad and guardian angel, thank you for enforcing the value of education and for being a source of motivation and guidance as I walk through this journey of life. You'll forever be missed.

My only aim is to become a person that my parents would be proud of, this is one step closer to the attainment of that goal.

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There are four very important people to whom I accredit the completion of this dissertation.

Firstly, I express my sincere gratitude to my supervisor Prof. S. Ruggunan for his continuous support and valuable expertise. His supervision helped me immensely during this process. I could not have had a better supervisor.

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My Grandmother, Saroj Pillay, who has been my biggest advocate ever since I can remember. The gratitude I have for her selfless love cannot be expressed enough.

Lastly, I would like to thank Max, for being the most positive person in my life. Whenever I think I might not succeed his confidence in my abilities aspires me to persevere.

LIST OF ABBREVIATIONS

APJMRI: Asia-Pacific Journal of Management Research and Innovation

C&CR: Current & Completed Research

DHET: Department of Higher Education and Training

DST: Department of Science and Technology

ETQA: Education and Training Quality Assurance

GDP: Gross Domestic Product

HR: Human Resources

HRM: Human Resource Management

HWU: Historically White Universities

IGLYO: International Lesbian, Gay, Bisexual, Transgender, Queer & Intersex Youth & Student Organisation

IP: Industrial Psychology

IPM: Institute of Personnel Management

ISAP: Index to South African Periodicals

MRC: Medical Research Council

NRF: National Research Fund

NWU: North-West University

PBP: Professional Board for Psychology

Ph.D: Doctor of Philosophy

SA: South Africa

SABPP: South African Board for Personnel Practice

SAJEMS: South African Journal of Economic and Management Science

SAJHRM: South African Journal of Human Resource Management

SAJIP: South African Journal of Industrial Psychology

SAQA: South African Qualifications Authority

SARIR: South African Research Infrastructure Roadmap

SDH: Social Determinants of Health

SES: Socio-Economic Status

SIOPSA: Society for Industrial and Organisational Psychology South Africa

TUT: Tshwane University of Technology

UCT: University of Cape-Town

UJ: University of Johannesburg

US: United States

WWII: World War 2

ABSTRACT

In South Africa there is limited research available on the patterns of knowledge production. Given the discriminatory past of South Africa, there is a special scarcity of research concerning the racial and gender profiles of academic authors.

This study aims to analyse the bibliometric, demographic and thematic trends of scholarly literature within management studies. Particularly within the fields of human resource management and industrial psychology. Articles published in the South African Journal of Human Resource Management and the South African Journal of Industrial Psychology between 2006 and 2016 were analysed.

The scope of this research is concentrated around the author's biographical information as well as the research types, approaches, themes, software packages and types of intersectionality used to produce each article. Gathered data was analysed using a mixed methods approach. Inferential statistics were used to analyse quantitative data and a thematic analysis was applied to generate qualitative themes.

From both journals, a combination of 585 articles were examined and a total of 928 authors were identified. The results revealed that predominantly White male lecturers produced research articles. It was further discovered that authors who published the most frequently were based at historically White universities, however, overall there was a fair international representation of authors. In terms of research methods, over 60% of articles were quantitative with questionnaires being used to collect data. Many authors chose the software package SPSS to analyse raw data. Popular trends included work-family balance, employee wellbeing, emotional intelligence and organisational health and safety, amongst others.

The purpose of this research is to assist universities and policymakers to reassess their research output patterns. Currently, the trends reflect traditional research methods with little variation. Furthermore, the biographical details reveal that black female authors have not been very active in publishing articles over the 10-year period. Going forward it is hoped that this research will help facilitate change in the current status quo and that the research environment becomes a diverse and equal platform for the publishing of scholarly literature

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CHAPTER ONE

INTRODUCTION AND OVERVIEW OF THE STUDY

1.1. Introduction

Elo and Kyngäs (2008) state that bibliometric and content analysis are important tools used in research. These help to identify the existence of any patterns or specific concepts within large pools of literature. This study will be using bibliometric and content analysis techniques to examine publication patterns within the South African Journal of Human Resource Management (SAJHRM) over a ten-year period. Once raw data has been accumulated the researcher will analyse and quantify the meanings and relationships that exist. This will result in specific conclusions about the texts. Aspects that will be studied are author's biographical information such as gender and race. Other information pertaining to each article will also be collected. This includes research types, research approaches, trends and software packages used. However, given the racial divide that South Africa was historically subjected to, specific attention will be applied to the issues of race and gender.

All findings will be compared to another South African journal, namely the South African Journal of Industrial Psychology (SAJIP). By comparing these two journals an accurate conclusion can be made about the publishing patterns of South African academics.

Roodt (2015) explains that the SAJHRM is a journal that focuses on aspects that are imperative to Human Resources (HR). The SAJHRM has the goal to promote sound HR practices and to produce quality theory that will assist in advancing South Africa's fragile labour market. The SAJHRM focuses on constructing a foundation that maintains quality application of business practices. The journal also incorporates theory from a national and international perspective.

The SAJIP was first established by Professor I. van W. Raubenheimer in 1974, making it one of the oldest social science journals in the country. In order to capture vast readership, Professor Raubenheimer enforced multiple strategies. One such strategy was the blind peer reviewing of each article. These strategies enforced that the journal was not associated with any specific ideologies or political standing. The journal's primary focus is to encourage scholars to produce innovative research based on information originating from international and local sources (SAJIP, 2013).

The SAJHRM and SAJIP allow academics in the field of HR and industrial psychology to publish their research in a professional and accessible manner.

From the above review of the SAJHRM and SAJIP it can be determined that these journals are vital tools for generating knowledge in the country. Thus, making them a viable benchmark for assessing patterns of knowledge production in South Africa.

1.2. Background of the study

The Apartheid era was designed to ensure that only white South Africans were considered as whole citizens. All other races were deemed foreigners who were denied many basic rights and opportunities. The government at that time ruled through punishment, segregation was made a law that forcibly separated people. Black South Africans were relocated to rural areas that lacked adequate schooling infrastructure. Furthermore, subjects such as science and mathematics were only allowed to be taught in Afrikaans. This language was foreign to non-whites and resulted in the inability of black students to progress to higher education. These inequalities meant that black people were not able to grow and become productive members of society with quality standards of living.

The legacy of the Apartheid continues to be reflected in South Africa's racial and gendered inequalities. These inequalities are especially acute when it comes to knowledge production. Yet little work has been done to map out the patterns that these inequalities assume. Particularly in the scholarly disciplines of human resource management, industrial psychology and management studies as a whole.

1.3. Problem statement

Demographic, bibliometric and thematic trends in the field of human resource management and industrial psychology have yet to be extensively identified and researched. This research study has recognised the lack of inquiry into the demographic profiles of researchers as a problem and potential gap in understanding the state of knowledge production in these specific disciplines within South Africa.

1.4 Research Questions

The central research question that this dissertation attempts to answer is:

What are the bibliometric and knowledge production trends in the SAJHRM and SAJIP from 2006 to 2016?

The sub-questions are:

1. Which authors have published the most articles in the SAJIP and SAJHRM from 2006 to 2016?

2. Which countries do authors from the SAJHRM and SAJIP originate?
3. Which Universities do authors from the SAJHRM and SAJIP originate?
4. What are the demographic profiles of authors publishing in the SAJHRM and SAJIP?
5. Which software package is most frequently used to analyse data?
6. What are the most widely used research methodologies?
7. What are the main themes explored in the SAJHRM and SAJIP?
8. Which approaches of intersectionality are more evident amongst articles?

1.5. Research objectives

The primary research objective of the dissertation is to determine what a bibliometric and content analysis of the SAJHTM and SAJIP from 2006 to 2016 reveal about the state of knowledge production in these journals. A secondary objective is to assess the types of intersectionality used by researchers to frame their work in these journals from 2006 and 2016.

1.6. Significance of the study

As stated previously, there has not been much research done on the content analysis of journals, especially in South Africa. That basically means that there is hardly any insight into the publication patterns of our authors. This could impact significantly on the diversity of the country's literature. By conducting this study the researcher will be adding to the pool of knowledge. Specifically knowledge about the demographics of authors publishing in the field of social science and management studies.

The study will broadly assist administrators to reassess the diversity of journals. Administrators can use the information to regulate the types of software and research methods used to write articles. The information generated from this study could help decision makers to generate specific guidelines. This strategy will assist in transforming the country's knowledge output and align it with principles of equality. This will help to liberate the underrepresented parties and give them the tools and confidence to add to South Africa's body of knowledge.

1.7. Summary outline per chapter

This research study consists of seven chapters, each of which have been briefly summarised below.

Chapter one: Introduction

The introduction chapter was designed with the purpose of providing the reader with an essence of what the entire research study will entail. It is in this chapter that the researcher states the purpose of the research. The purpose is to ultimately analyse the content of each article published in the SAJHRM and SAJIP between 2006 and 2016 to discover patterns of knowledge production. This chapter also provided a brief outline of every subsequent chapter.

Chapter Two: Literature review

The literature review is a discussion of the pool of literature relevant to this study. The purpose of this chapter is to provide information written by other authors. This serves to enhance the quality and validate the importance of conducting research that bibliometric and content analysis in nature. Chapter two contains information outlining the importance of research in general as well as the contributions that South Africa makes to scientific research. There is also a large amount of information provided on other content analysis research that has yielded results similar to that of this study. Literature on the establishment of human resources in South Africa and the importance of its professionalisation has also been discussed in great detail.

Chapter three: Intersectionality: A Review of its theoretical origins. and relevance to bibliometric research

This chapter outlines the theoretical basis used to guide the study. The study's main focus is on the race and gendered patterns of authors; therefore, the theory of intersectionality was used. Intersectionality is the manner in which social identities intersect to produce an outcome. Each element of intersectionality is explained. The different types of intersectional approaches are explored in this chapter along with theoretical and practical examples of intersectionality. Additionally, the relevance of intersectionality to this specific study is elaborated on.

Chapter four: Research methodology

The methodology chapter reviews the procedures utilised for the collection of data. This section explains how a mixed methods approach was used to gather information. Further information is provided on the bibliometric and content analysis design that the study was based on. Other aspects highlighted in the

methodology chapter are the cluster sampling technique used and the pragmatic epistemology that the researcher adopted. Other critical factors outlined here are that of reliability and validity and how both have been sustained by the researcher.

Chapter five: Data presentation

Data presentation consists of a series of tables and figures illustrating the findings of the research. The illustrations in this chapter are based on the findings analysed in comparison to that of the research questions.

Chapter Six: Data analysis

This chapter provides a detailed discussion analysing the findings presented in chapter five. The analysis is considered as the most important to the research study. It is here where the research findings are explained. The main findings were that mostly White males published in the SAJHRM and SAJIP, majority of the authors were born in South Africa. A substantial amount of research articles were quantitative and used the software package SPSS to analyse data. The main themes appearing in the journal are examined along with the types of intersectionality used.

Chapter Seven: Conclusion

The conclusion chapter consists of the limitations faced during the research as well as recommendations that can be taken into consideration for future studies. The practical value of the study and answers to the research questions are emphasised. It is further established that policymakers and employers can use this research to put regulations into action. This will diversify the research output in South Africa and can assist organisations to enhance the way social identities interact.

Every chapter has been constructed in a strategic manner. This assists in providing accurate answers to the research questions and ensures the generalisability of the research findings.

1.8. Conclusion

In essence, this research is focused on studying the demographics of authors and the methods they employ to complete scholarly research. The above chapter has provided a general overview of the structure that this study will follow. The chapter elaborates on how the finding of the study can be significant to strengthening the research environment in South Africa. It also gives insight into the main concepts that will be discussed in great detail in subsequent chapters.

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

The aim of this chapter is to critically explore available literature based on concepts relevant to this research study. Topics being addressed in this chapter are related to the condition of the research environment in South Africa. The practicality of bibliometric and content analysis studies will be explored, with the provision of examples. The history of HR and industrial psychology will be touched on and a correlation between the two disciplines will be elaborated.

Kumar (2005) explains that the preliminary task that one undertakes when conducting a research study is to collect and evaluate existing literature. This is done with the purpose of familiarising one's self with the body of knowledge relevant to one's area of interest. The review of literature can be frustrating and time-consuming. However, it is an integral part of the research process which provides the foundation for all subsequent steps.

2.2. The Research environment in South Africa

The purpose of this section is to explain the components and quality of the research environment in South Africa.

2.2.1. Research Defined

Research is a word that is subject to various interpretations. In some instances research refers to finding information or developing notes that can later be used in a documented report. In another situation, research could denote the act of making oneself aware of facts one has never learnt before. Bouma and Ling (2004) explain that research is systematic in nature and entails a complex process. The process deals with gathering, examining, forming and interpreting data. This is done to gain a wider understanding of the phenomenon that one is concerned with.

Research for the purpose of this study equates to articles published in a university environment as well as other scholarly pieces of literature.

2.2.2. Research in South Africa

Jordaan, Wiese, Amade and deClercqe (2013) explain that the research atmosphere within South Africa is shaped by a multitude of factors. This atmosphere is characterised by tremendous amounts of pressure put onto academics to publish research articles in accredited and peer-reviewed journals. There are two main organisations that exert this pressure onto academics; the National Research Fund (NRF) and the Department of Higher Education and Training (DHET). In 2003, the DHET declared that institutions will only qualify for research funding if the article published was a part of the directories of the Institute of Scientific Research or the International Bibliography of Social Sciences (Jordaan *et al*., 2013).

The NRF focuses on encouraging researchers to acquire ratings through its Researcher Evaluation and Rating (RE & R) programmes. This ensures that high performing researchers can be identified effortlessly, and that research produced is of supreme quality. Ratings are generated by peers while the NRF merely supervises the process. Pouris (2007) explains that academics are benchmarked on the excellence of any research previously published by them. This system of rating is aligned to international standards to ensure that South African researchers will thrive in a global arena (Vaughen, 2008). The ratings given to researchers range from A-C. Any academic receiving an A symbol for their research means that they are universal leaders in that specific field of study. Vaughen (2008) further elaborates that the rating a researcher receives will determine the level of funding that they qualify for.

The DHET as well as the NRFemphasise the great importance of publishing articles in journals that are peer-reviewed. Therefore, it is imperative that academics have a wide understanding of the dynamics of these institutions.

2.3. Opportunities for research in South Africa

Jeenah and Pouris (2008) explain that the South African government has recognised the significance that research has in improving the quality of life that people lead. Since early 2002 the DHET has started to significantly increase the amount of money spent on research development. From 2010 approximately 1% of the country's gross domestic product (GDP) has been allocated to research outputs. This means that more people will be granted opportunities to conduct research studies in South Africa.

Uthman and Uthman (2007) conducted a research study that scrutinised the publishing activity of African countries from 1996 to 2005.

Uthman and Uthman (2007) found that African countries that are deemed to be popular and rich tend to generate higher research outputs. These countries include South Africa, Egypt and Nigeria. The findings

illustrated in table 2.1 presents the top 20 African countries. These countries have produced research articles that have been indexed by PubMed. Table 2.1 shows that South Africa published 11 218 (29.9 %) articles for that period followed by Egypt and Nigeria. In total, these 3 countries produced approximately 60% of Africa's research. However, it was also noted that other smaller African countries continued to increase their research productivity over the years. Uthman and Uthman (2007) grouped the countries into quintiles. Countries that published more than 75 articles yearly were placed in quintile 1. South Africa and ten other countries were placed in the first quintile. Indicating that Africans, specifically South Africans are in fact provided with opportunities to generate and publish research studies.

A study done by Tijssen (2007) reinforces the conclusions made by Uthman and Uthman (2007). Figure 2.1clearly indicates that South Africa has evidently outperformed many other African countries in terms of research production. Figure 2.1shows that over the period between 1996 to 2004 South Africa's research output was 14809. These statistics coupled with those produced by Uthman and Uthman (2007) indicate that South Africans have ample opportunities to conduct meaningful research.

Table 2.1: Number of articles published yearly 1996-2005.

	Number of articles (% within a calendar year)			Relative growth
	1996 – 2005	1996	2005	(%)
South Africa	11218 (29.9)	829 (34.0)	1536 (28.4)	85.3
Egypt	6557 (17.5)	414 (17.0)	956 (17.7)	130.9
Nigeria	4795 (12.8)	38 (1.6)	834 (15.4)	2094.7
Kenya	1887 (5.0)	189 (7.7)	246 (4.6)	30.2
Tunisia	1027 (2.7)	27 (1.1)	267 (4.9)	888.9
Zimbabwe	945 (2.5)	123 (5.0)	58 (1.1)	-52.8
Senegal	875 (2.3)	65 (2.7)	117 (2.2)	80.0
Morocco	863 (2.3)	33 (1.4)	141 (2.6)	327.3
Ethiopia	860 (2.3)	79 (3.2)	116 (2.1)	46.8
Tanzania	761 (2.0)	71 (2.9)	107 (2.0)	188.4
Uganda	761 (2.0)	43 (1.8)	124 (2.3)	50.7
Ghana	691 (1.8)	50 (2.1)	94 (1.7)	88.0
Ivory coast	516 (1.4)	24 (1.0)	55 (1.0)	129.2
Cameroon	512 (1.4)	24 (1.0)	83 (1.5)	245.8
Malawi	450 (1.2)	34 (1.4)	57 (1.1)	67.6
Sudan	442 (1.2)	34 (1.4)	68 (1.3)	100.0
Guinea	428 (1.1)	65 (2.7)	33 (0.6)	-49.2
Burkina Faso	365 (1.0)	22 (0.9)	39 (0.7)	77.3
Eritrea	337 (0.9)	34 (1.4)	54 (1.0)	58.8
The Gambia	335 (0.9)	31 (1.3)	33 (0.6)	6.5

Source: Uthman and Uthman (2007).
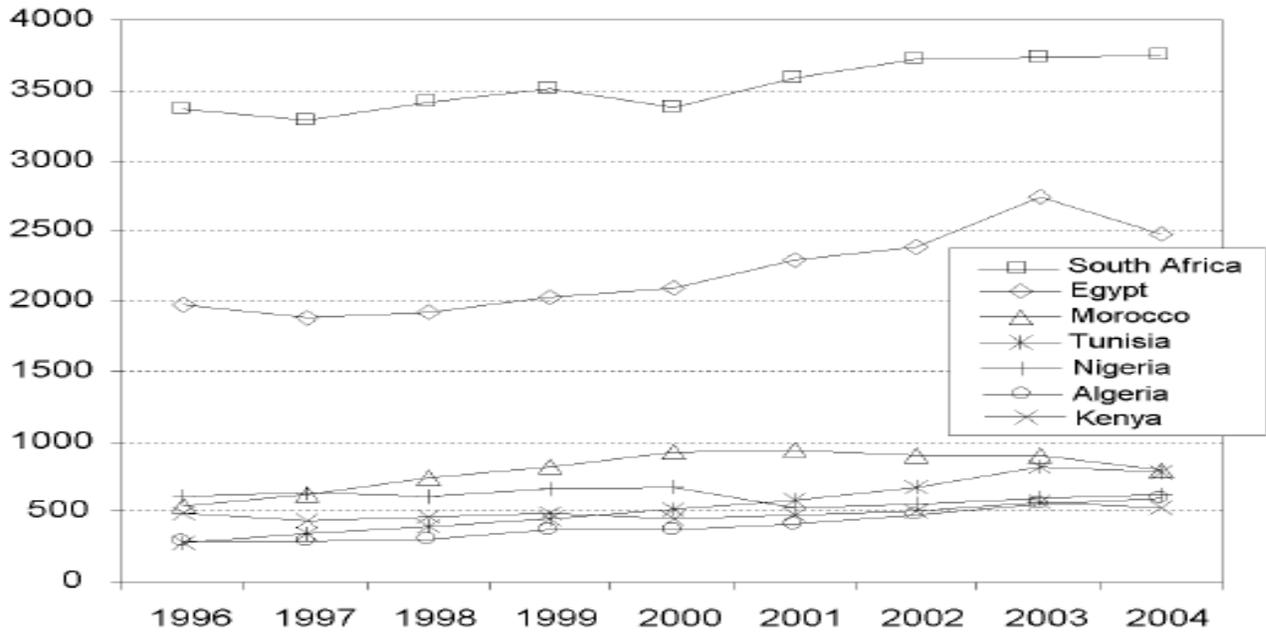
Figure 2.1: Research produced by 7 African countries.

Source:(Tijssen, 2007, p.312)

It is important to note that as of 2018 there have been no further updates to the information provided by Tijssen (2007) and Uthman and Uthman (2007). However, the South African government has published a research infrastructure roadmap in 2016 which serves to guide current academic researchers in the country.

2.3.1. Research Infrastructure Roadmap

There has been a realisation that adequate research infrastructure is crucial to stimulate the quality and outcomes of research. This means that for South Africa to reap the rewards of research, researchers are required full access to appropriate and modern infrastructure. Therefore, in an effort to maximise the returns from investing in research an agreement between the European Union and South Africa was formed. Resulting in the development of the South African Research Infrastructure Roadmap (SARIR) framework. The SARI commenced at the beginning of 2017 and be completed over a duration of five years.

The SARIR focuses on six domains where research framework is in dire need. Including areas of social and human science, engineering and physical science, earth and environment, food and biological security, materials and infrastructure and lastly energy.

According to the Department of Science and Technology (DST) (2016) there are three main types of research infrastructure that has been designed, these are:

Single cited Global facilities:

This type of infrastructure is unique because it is contained internationally, and the characteristics of the infrastructure are aligned to international influences.

Globally distributed research infrastructure:

This infrastructure provides researchers with relevant equipment that is located at multiple institutions throughout the country. The aim of having this type of infrastructure is to assign resources to a centralised structure. Allowing those responsible to distribute resources to other institutions according to a predetermined strategic plan. Thus, ensuring services of high quality. The government hopes that this will serve as an instrument that supports compliant research of a multidisciplinary nature.

National facilities of global interest:

These are research facilities that are located nationally. Characterised by the distinctive capability to attract interest from a wide range of researchers. Specifically, those that are located outside the host country, thus enticing foreign researchers to publish research within the country.

It has been emphasised by DST (2016) that these research infrastructures should have certain distinct and compulsory features. Infrastructures should provide open and free access to every user. All those who make use of the facility will be required to share the results on a public platform. Each facility should manage and provide quality training and development activities for the users. Each should have clear goals and a mission that prioritises the national science discipline.

The DST (2016) explains that in South Africa social science is vital for economic, cultural and social transformation. However, according to DHET (2011), the social science discipline is diminishing and needs to be enabled to play a more prominent role in developing the country. The need for elevated social science development in South Africa has further been recognised by the DST. Which emphasises social dynamics as being a part of the grand challenge. Academics in the discipline do not consider the importance of sharing and cooperating via national research infrastructures. Existing research infrastructure includes the Resource Management Agency established at the North-West University. This is a centralised mine for archiving and reusing digital resource. There are also surveillance sites for health and demographics located at the University of KwaZulu-Natal and the University of Limpopo. These sites are connected to the South African Medical Research Council (MRC) that has great potential to cater to social science.

The government is working on additional infrastructure to boost social science research. Including the development of digital libraries, platforms will also be set up that encourage socio-economic and health research. Aiming to provide support and updated information to social science researchers. Government is also considering the multicultural and multilingual society in South Africa and will be developing resources

on a large scale that will digitally test the speech of users. This is not only relevant to communication and language studies but will also be beneficial to the advancement of language technology applications (DST, 2016).

The past research conducted by Uthman and Uthman (2007) and Tijssen (2007) coupled with the initiatives implemented in the SARIR framework are positive. Creating an impression that researchers in South Africa have a wide range of opportunities to publish research of grander substance.

2.4. An overall analysis of research journals in South Africa

Pouris (2015) explains that in an academic setting one of the vital modes of communication between scholars are journals. Therefore, the assessment of journals is given particular interest by policymakers, scientists, librarians and research administrators.

Journals are assessed by using two approaches. The first approach is referred to as expert opinion analysis. In this approach deans of faculties and renowned researchers are chosen to conduct assessments on certain journals (Pouris, 2015). Each individual analysis is collected and a collective opinion about the journal is reached. However, Rousseau (2014) states that expert opinions may be unreliable as they are subjected to individual bias. The second approach is called citation analysis and it is used as a method to allocate journals into specific ranks. Citations occur when a researcher formally acknowledges the use of intellectual property that has been published by another author (Pouris, 2015). When citation analysis is used a yearly calculation is done based on the citation frequency of an article. Rousseau (2014) explains that this method could yield incorrect frequencies. Researchers could easily duplicate citations from the bibliography of other published research papers.

In South Africa authorities pay specific attention to the manner in which journals are assessed. Universities throughout the country receive funding in accordance with the total number of research articles that are published in accredited journals (Pouris, 2015). Therefore, the journals have to have an authentic and ethical reputation.

There has been a study conducted by Jeenah and Pouris (2008) on the citation percentages of South African research journals from the years 1995 to 2005. The results clearly indicate that there was a significant improvement in citation rates. There has been a slight 1.1% increase in physics and an impressive 26% improvement in social science. An increase of at least 12% can be noted for 9 of the 22 disciplines under analysis. However, there has been a decrease of 46% in the area of multidisciplinary research. Despite this decline, there has been an overall increase in research citation rates of South African researchers.

Jeenah and Pouris (2008) explain that the overall increase in the citation of research journals could be accredited to South Africa's rehabilitated political status since 1994.

The DHET (2018) released a report based on the research output in South Africa. The report stated that in one year from 2012 to 2016 research being published in the social science discipline has risen by more than 20%, this reinforces the finding made by Jeenah and Pouris (2008) stating that social science is becoming impressively more popular.

One of the main findings in the report, as represented in figure 2.2 is that there has been a consistent growth of research being published over the years. From 2012-2016 research being published in journals has not only increased by 32.40%, journals consistently account for most of the publication outputs in South Africa, thus proving that journals are a vital part of the research environment. Publication outputs in books have escalated by 290.68% and contributions in conferences has risen by 77.46%. This tenacious growth of publication patterns is a testament that research initiative implemented by the government is successful (DHET, 2018).

The DHET (2018) further reported that in 2016 White male authors contributed to 68.22% of research produced in South Africa. White females contributed to 42.43% of research, while African females only produced 13.81%. Individuals that contributed the least to academic research in South Africa were Coloured females (3.35%). This helps paint a picture of the severe skewness of the gender and race that produce research in the country.

Total Research Output

- Journals
- Conferences
- Books

Year	Journals	Conferences	Books
2012	11035,72	747,29	580,8
2013	11997,38	1236,92	774,37
2014	13135,86	1301,32	879,...
2015	13976,41	1349,58	994,77
2016	14612,27	1326,18	2269,07
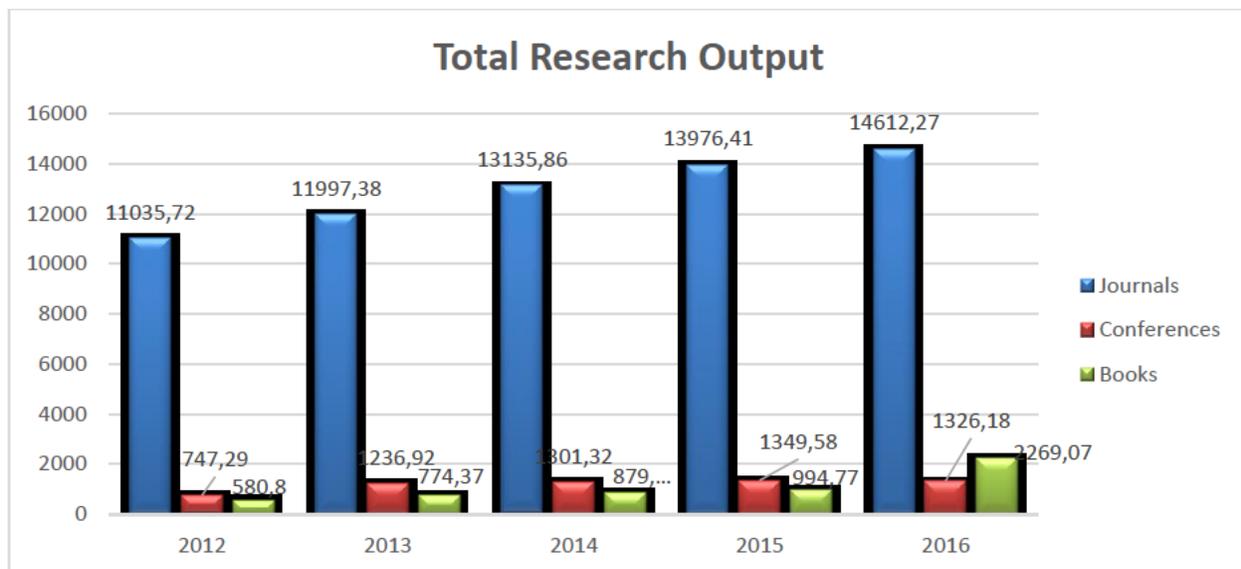
Figure 2.2: Total Research Output by type of publication, 2012-2016

Source: (Department of Higher Education and Training, 2018, p.29).

2.5. Bibliometrics and Scientometrics

Glänzel (2003) explains that the expression scientometrics and bibliometrics were presented almost concurrently by Pritchard, Nalimov and Mulchenko during the year 1969. Pritchard described bibliometrics as the application of mathematical methods to analyse books and other mediums of communication. Mulchenko and Nalimvo defined scientometrics as the application of quantitative methods that deal with the analysis of science (Glänzel, 2003). On inspection of these explanations, there seems to be a fine distinction between the two terms. Scientometrics deals with the scientific measurement and bibliometrics has a more general application. However, Glänzel (2003) further explains that over the years this distinction between the terms has disappeared and academics have started using both terms synonymously.

Weingart (2005) states that bibliometrics is formed on an assumption that conducting research and conveying the results are two interrelated activities. Bibliometrics utilises the classical research process model of input-output. Proposing that publications are a good representation of the output of scientific research. The most common form of publications are articles and scholarly papers which are regarded as conclusive statements of the outcomes. These publications can be measured and analysed to determine the nature and size of a specific research project. Bibliometric studies can be accomplished at a micro level or macro level to decipher global, national or regional trends (Weingart, 2005).

Pouris (2016) states that bibliometric research has various advantages, for instance the exercises are verifiable and repeatable. Bibliometric studies are also not dependent on the opinions or choices of experts which may be subjective. The most important advantage stated by Pouris (2016) is that bibliometrics allows for comparisons to be made between countries and disciplines. This is difficult to do through peer-review methods as it is nearly impossible to locate peers with extensive knowledge in multiple fields across different countries.

2.5.1. Categories of bibliometrics

Roemer and Borchardt (2015) explain that bibliometrics can be clustered into four levels. These levels distinguish between the various items that a metrics chooses to concentrate on rather than how the metrics produce their results. As explained by Roemer and Borchardt (2015) the four levels of bibliometrics are:

Level 1: Individual scholarly contribution

This deals with the citation occurrence of a single article. The primary principle behind this is that an article can only be considered to have impacted someone's work if the article was cited. Many journal databases have a "times cited" link for those interested to find out the impact of that article. Often when this link is followed it reveals multiple other sources that reference the original article. Roemer and Borchardt (2015) state that currently there are three sources that are considered as the most comprehensive for finding connections based on the citations of scholarly articles. These are Google Scholar, Scopus and the Web of Science.

Level 2: Venue- level metrics

Academic articles are viewed as the traditional contribution to bibliometrics, but academic journals are the preferred venue for production to be viewed and addressed quantitatively. Roemer and Borchardt (2015) explain that for a researcher the quality of a journal plays an important role when deciding what research article to read. Researchers also use the reputation of a journal to decide where to publish their own article.

Level 3: Author level Metrics

This type of bibliometrics focuses on quantifying the influence that a researcher has over the course of their career. Author-level bibliometrics has sparked the interest of many scholars. Some find it intriguing to be able to track the influence of researchers based on citation frequency or acceptance into a journal. However, some scholars do not approve of this metric and view it as a flawed method of assessing scholars. It is believed to be absurd that a scholar can be compared and quantified in a similar fashion as an entire journal (Roemer & Borchardt, 2015).

Level 4: Institutional-level metrics

Bibliometrics and institutions have an interesting connection due to the ordinary competition that is represented between units of higher education. Just as researchers are pressured to warrant quantitative proof of their contribution to their field, administrators are pressurised to quantify the achievements of their universities. This type of metrics has been slow to prosper because there is much more information required than simply recording data related to author output. Researchers often simply hijack level 2 and 3 metrics to satisfy the needs of institution-level metrics.

2.5.2. Bibliometric research previously conducted

2.5.2.1. patterns of 'Knowledge Management' research in South Africa

Onyancha (2006) analysed two databases called the Current & Completed Research (C&CR) database and the Index to South African Periodicals (ISAP) for the purpose of gathering bibliographic data. C&CR is a database that holds projects based on humanities, social science and economic research done in South Africa. ISAP is a bibliographic database that contains approximately 900 periodicals from South Africa. Periodicals are publications that are published in intervals. The ISAP database is maintained by the National Library of South Africa.

Onyancha (2006) analysed documents in the databases from 1980-2005. Both databases contained 554 documents. Ninety from C&CR and 464 from ISAP, each record was a representative of the activities of knowledge management in South Africa. The documents from C&CR were dominantly dissertations and thesis while ISAP contained mostly articles.

Data was analysed and presented in terms of the individuals who helped produce knowledge management research. Some of the results are presented below.

It was found that in both databases there were 101 researchers involved in knowledge management research from higher learning institutions around South Africa. Fifty-four researchers were master's students, 22 were PhD students, and the other 25 researchers did not conduct research for the award of a degree. Onyancha (2006) states that study leaders, better known as academic supervisors, play an important role in the development of any research project. They provide guidance to the students for the duration of the research period and in many instances become co-authors of such research papers. In Onyancha (2006) supervisors co-authored 341 articles.

2.5.2.2 Asia-Pacific Journal of Management Research and Innovation, 2005-2015: A Bibliometric Study

Sankar and Kavitha (2016) conducted a bibliometric research study based on the Asia-Pacific Journal of Management Research and Innovation (APJMRI) from 2005-2015.

The APJMRI is a quarterly peer-reviewed journal of the Asia-Pacific Institute of Management in New Deli. APJMRI publishes articles every year in March, June, September and December. APJMRI publishes empirical and theoretical papers such as research notes, case studies and articles. The aim is to disseminating knowledge that is related to different management disciplines including HRM, accounting, corporate governance and information management. The APJMRI provides a platform for practitioners, organisations and academics to exchange information and conduct discussions.

Sankar and Kavitha (2016) analysed each article within the APJMRI from 2005-201. The objectives were to determine the degree of collaboration, the length of articles, authorship patterns and the number of cited articles.

Sankar and Kavitha (2016) yielded the following results for their study.

Table 2.2 shows the authorship patterns identified in the APJMRI from 2005-2015. Out of 533 articles, 237 (44.5%) were published by single authors, followed by 210 (39.4%) of articles being published by two authors. 65 (12.2%) were authored by three individuals and only 21 (3.9%) articles were authored by more than three individuals. This indicated that most academics and other individuals producing articles prefer to work independently. Sankar and Kavitha (2016) additionally analysed the citation patterns of each article per year as illustrated in table 2.3. Citation analysis in this study was based on the reference list provided at the end of each publication. It is inferred in table 2.3 that over 11 years the greatest number of citations were used in 2008 accounting for 2213 (12.61%) of citations. 2010 had the second highest number of citations adding up to 2160 (12.31%), while 2007 only produced 1039 (5.92%) of citations which is the least. It was further found that 194 articles used 20 or fewer references, 218 articles used 21-40 references and only 20 articles contained 80 or more references. This means that authors were not consulting multiple sources when conducting their research.

Table 2.2: Authorship patterns of APJMRI 2005-2015.

Year	Single	Two	Three	Above 3
2005	24	9		
2006	26	6	2	
2007	21	9	1	1
2008	32	26	9	1
2009	17	31	8	2
2010	24	27	9	6
2011	23	26	7	2
2012	21	26	12	1
2013	16	19	8	
2014	19	15	5	4
2015	14	16	4	4
Total	**237**	**210**	**65**	**21**
%	**44.5**	**39.4**	**12.2**	**3.9**

Source: (Sankar and Kavitha, 2016, p.6)

Table 2.3: Citation patterns of APJMRI per year.

Year	Total Citation	Average
2005	1170	6.67
2006	1085	6.18
2007	1039	5.92
2008	2213	12.61
2009	1870	10.65
2010	2160	12.31
2011	1894	10.79
2012	1940	11.05
2013	1464	8.34
2014	1392	7.93
2015	1326	7.55
Total	17553	100

Source: (Sankar and Kavitha, 2016, p.8)

While it is evident that bibliometrics can be used powerfully in management studies, the following study by Wambu and Ho (2016) proves that it can be used in other disciplines, such as agriculture.

Wambu and Ho (2016) conducted a study in which they analysed previous research based on drinking water in South Africa. These articles were published in the Web of Science Core Collection from 1991-2003. Wambu and Ho (2016) focused on analysing patterns of international partnerships, research productivity and author contributions. It was expected that the findings from the study would help researchers to distinguish the scientific course that drinking water research was taking in Africa.

Wambu and Ho (2016) yielded the following results:

A sum of 1 719 documents was found to be located within 9 types of documents. Research articles were concluded to be the most common type accounting for 95% of all documents. Proceedings papers made up 8.3% of all documents making it the second most popular document type. These two types were followed by review papers (3.2%), meeting abstracts (0.70%), notes and letters (0.47%), editorials (0.12%), lastly, book chapters and corrections accounted for 1 document each.

These three examples were chosen in an effort to emphasise the diverse use of bibliometrics. This method of analysis could be used to investigate citation patterns of all publications in a single journal as the researchers did in example two. It could be used to study the patterns of a specific topic in a single database in a similar fashion as example three. Bibliometrics could also be used to examine the patterns of authors publishing a topic of interest in multiple databases as example one illustrates. This proves that bibliometrics can be adapted to suit the research objectives of the researchers.

2.6. Content analysis

Content refers to something that is contained, therefore content analysis is the process of analysing what is contained in a message. Prasad (2008) explains that content analysis can broadly be defined as a method used to scrutinise a piece of literature to draw conclusions about the content. Krippendorff (2013) states that content analysis is a technique used to make systematic and objective descriptions of the characteristics of communication. For content analysis, a set of measures are used to make inferences about a text which are usually based on the message, the sender and the audience. According to Prasad (2008) content analysis also refers to procedures that are used to assess the extent to which specific attitudes and themes are used in a text.

Jordaan *et al*. (2013) state that previous content analysis studies done on scholarly journals show that emphasis is generally put only two aspects, inputs and outputs. Inputs can be described as factors concerning details of authors, the university affiliations of authors and the number of authors publishing a single article. Outputs focus mainly on the actual article, including aspects such as research methods and article length.

2.6.1. Input characteristics

2.6.1.2. Number of authors

West (2007) has found that there has been a rise in articles that have been co-authored by three or more individuals. This phenomenon can be attributed to knowledge sophistication. Which is basically a term used for the increase in multidisciplinary topics. The use of complex statistical methods and software usually requires the contribution of more than one expert. Knowledge sophistication, therefore, accounts for the need of more than one author (Manton & English, 2007).

2.6.1.3. Author affiliation

Jordaan *et al*. (2013) explain that the institutional affiliation of authors is an area that has been extensively researched in the content analysis of journals. Research has revealed that there has been a distortion of international borders due to the technological age. This has resulted in a body of multinational authors in a single academic journal. Karolyi and Rhee (2002) and West (2007) have all noted the increase in foreign authors when they conducted content analysis studies. Another trend found by Gallagher (2006) is that there is an increase of publications in a journal by authors affiliated with the journals home institution. Gallagher (2006) concluded that the institution that published most of the articles in the Australian Journal of Management was the Australian Graduate School of Management which is the home institution of the journal.

2.6.2. Output characteristics

2.6.2.1. Research methods

Jordaan *et al*. (2013) states that one of the most widely used platforms to analyse the content of articles is the research method used. It has been observed that empirical research methods are commonly used in management and science, with the most utilised tool being surveys. Cooper and Schindler (2008) explain that empirical methods are constructed through observation and experience.

Yale and Gilly (1998) conducted a content analysis of six journals and their results were that 70% of all published research articles were empirical. West (2007) examined the International Journal of Advertising and found that over a period of 15 years 70% of articles published were empirical in nature. This advocates

that there has not been much change in terms of the most dominant research method used between the years 1998 and 2007. During the year 2006, Svensson (2006) analysed articles in the European Journal of Marketing for years 2000 until 2004. Svensson (2006) found that 120 out of 150 articles utilised quantitative methods. In 2007 Hanson and Grimmer (2007) examined 1195 published scholarly articles over a ten-year period of 1993 to 2002. Their findings were that a mere 6.5% of articles employed qualitative methods. When the two studies are compared it can be confirmed that quantitative research methods are used more than qualitative.

2.6.2.2. Sampling

In a study conducted by Poon and Roley (2007) based on the Journal of International Business Studies, they established that non-probability sampling was utilised in the bulk of the articles. West (2007) found that the group ordinarily sampled were professionals. Research conducted by Scandura and Williams (2000) supported those observations made by West (2007). Scandura and Williams (2000) found that 23% of all sampling units were professionals, 10.7% were students and 11.9% was a mixture of both students and professionals.

2.6.2.3. Analysis techniques

Gupta and Victorino (2006) analysed 150 articles within the Production and Management Journal between 1992 to 2005. They concluded that a variety of techniques were used to analyse data. Some of the techniques used were MANOVA, time-series analysis and factor analysis. Gupta and Victorino (2006) also reported that many researchers utilised approaches of an analytical nature such as simulation. It was further concluded that researchers that used surveys to gather data used descriptive statistics and ANOVA. Lastly, it was noted that the most commonly used analysis technique was descriptive analysis rather than other statistical analysis techniques (Gupta & Victorino, 2006).

The publication of scholarly research contributes significantly to the body of knowledge. Periodically analysing the content of journals leads to the realisation of patterns that exist amongst research practices; content analysis also helps to detect challenges faced by researchers.

2.6.3. Content analysis research previously conducted

In South Africa there has been two large scale content analysis type of research. These were based on the South African Journal of Industrial Psychology (SAJIP) and the South African Journal of Economic and Management Science (SAJEMS). Each will be discussed below.

2.6.3.1. The South African Journal of Industrial Psychology

As stated previously the SAJIP was established 43 years ago and since then the journal has gained national and international recognition.

Coetzee & Van Zyl (2014) conducted a research study where they analysed the content of all articles published in the SAJIP for a ten-year period, from 2004 to 2013. The analysis focused on generating statistics based on research approaches and types used, software packages as well as bibliographic data of authors. It is important to note that while this study primarily used content analysis techniques to analyse the journals there is also a small portion that leans towards bibliometric analysis.

Their conclusions were as follows:

The bibliometric portion will be discussed first. It was found that the University of Johannesburg published an estimated amount of 103 articles over the 10 years. This is more than any other university during that period. The least productive institutions in terms of psychology were the Mangosuthu Technikon, University of Venda, Vaal University of Technology and University of Fort Hare each of which only produced one article. Out of a total of 341 authors, 173 which is over 50 % were female. It is indicated by Coetzee & Van Zyl (2014) that 295 (80.86%) authors were of White descent and only 24 were Black which shows that even though South Africa has been undergoing a transformation for the past 23 years there is still one race that is dominating, even in the world of academics.

The content analysis part of the study will now be discussed. Table 2.5 shows that total articles published per year ranged from 23-44. 2004 was the most productive year for the SAJIP because there were 44 articles published. It is also evident that the dominant research approach utilised over a decade was quantitative. Although not represented in the table the researchers explained that the most popular research analysis technique was tied between content and thematic analysis. Each technique was used 22 times and 89.4% of all articles were analysed using the statistical software programme SPSS.

The themes were also studied, and the most frequent theme was assessments, test development and selection techniques which were used 132 times. Followed by employee and organisational wellness which occurred

in 81 articles and the third most common theme was organisational development which was present 42 times. The three themes that were most underrepresented were group behaviour which had a frequency of 13, consumer behaviour which was present 9 times. The least occurring theme was coaching and mentoring which accounted for only 2 articles.

Table 2.4.: an overview of articles published in the SAJIP 2004-2013.

Year	Number of issues	Articles published	$f(\%)$	Special editions	Most utilised research approach	Most frequent HPCSA I-O psychology domain	Research institution mostly represented
2004	4	44	12.87	1	Quantitative	Psychometrics	University of Johannesburg
2005	4	38	11.11	1	Quantitative	Organisational Psychology	University of Johannesburg
2006	4	42	12.28	1	Quantitative	Psychometrics	University of Johannesburg
2007	3	32	9.36	0	Quantitative	Psychometrics	University of Johannesburg
2008	3	27	7.89	0	Quantitative	Organisational Psychology	North-West University
2009	1	23	6.73	0	Quantitative	Organisational Psychology	North-West University
2010	2	37	10.82	1	Quantitative	Organisational Psychology	North-West University & University of Johannesburg
2011	2	27	7.89	1	Quantitative	Organisational Psychology	University of Johannesburg
2012	2	31	9.06	1	Quantitative	Organisational Psychology	University of South Africa
2013	2	41	11.99	1	Quantitative	Organisational Psychology	North-West University
TOTAL	27	342	100	7	.	.	.

Source: (Coetzee and Van Zyl, 2014, p.4).

2.6.3.2. South African Journal of Economic and Management Science (SAJEMS)

Jordaan *et al.* (2013) conducted a content analysis research on the SAJEMS. The authors claim that the SAJEMS contains the most influential research in the managerial and economics field. Jordaan *et al.* (2013) analysed 257 published articles over a period of seven years spanning from 2004 to 2010. The focus of the study was to scrutinise articles published for input and output factors.

The findings of the study were as follows:

Table 2.6 illustrates the institutional affiliation of all authors who have published in the SAJEMS. The university producing the most articles was the University of Pretoria with a contribution of 25.7% of articles. The second-best university in South Africa was the North-West University with a contribution of

9.4% of articles. Table 2.6 shows that research affiliated with foreign universities is higher than that of some local universities. Forty-five foreign contributions were accounted for in seven years. Which adds up to 15.6% thus making overseas contributions one of the second most frequently published institutions in the SAJEMS.

Table 2.5: institutional affiliation.

Institution	N	Per cent
University of Pretoria	74	25.7%
Foreign institutions	45	15.6%
North-West University	27	9.4%
University of South Africa	21	7.3%
University of the Witwatersrand	21	7.3%
University of Stellenbosch	19	6.6%
University of KwaZulu-Natal	17	5.9%
Nelson Mandela Metropolitan University	17	5.9%
Other South African institutions	14	4.9%
University of the Free State	13	4.5%
University of Johannesburg	8	2.7%
University of Cape Town	3	1.0%
Central University of Technology Free State	2	0.7%
University of Zululand	2	0.7%
University of the Western Cape	1	0.3%
Damelin College	1	0.3%
Rhodes University	1	0.3%
University of Fort Hare	1	0.3%
Walter Sisulu University	1	0.3%
Total	288	100%

Source: (Jordaan *et al*., 2013, p.441).

Jordaan *et al*. (2013) also found that 91 articles utilised secondary methods of data collection. Researchers opted to analyse databases or official documents as a source of information. Jordaan *et al*. (2013) explains that it was mainly researchers in the fields of accounting, finance and statistics that made use of secondary data collection methods. Surveys were the second most utilised method for collecting information in the fields of HR and marketing. However, the use of surveys experienced a rapid decline in 2004. Survey usage dropped to 20% and remained low until 2009 but by 2010 survey utilisation rose to 48%. Jordaan *et al*. (2013) state that future analysis of the SAJEMS should focus on drawing connections between specific academic fields and the methods of data collection used. This will help explain why the use of data collection methods drop and rise periodically.

The SAJEMS was also analysed for the most frequent disciplines represented from 2004-2010. It can be seen in table 2.6 that authors publishing in the journal remained true to its focus. Economics and general management were the two best-represented disciplines accounting for 62% of all articles combined. HR was the discipline of choice for 24 articles followed by finance with 22 articles and lastly, marketing was present in only 19 articles.

Table 2.6: Academic disciplines present in SAJEMS from 2004-2010

Discipline	N	Per cent
Economics	99	38.5%
General business (including management)	60	23.3%
Human resources (including industrial psychology)	24	9.3%
Marketing (including communication)	19	7.4%
Finance and accounting	22	8.6%
Other	33	12.8%
Total	257	100%

Source: (Jordaan*et al*., 2013, p.442).

These two examples shed light on the practical uses of content analysis. The study done on the SAJIP demonstrates that bibliometrics and content analysis can work in collaboration to produce results on patterns of knowledge production.

The following sections, 2.7 and 2.8 focuses on the developmental trends within the discipline and practice of HRM and industrial psychology. This information is important because it shows the impact that scholarly research has on the direction that a profession follows. In sections 2.7 and 2.8 a picture is painted of how the advancements in scholarly publications have influenced and enforced the professionalisation of HRM and industrial psychology.

2.7. Human Resource Management as a discipline and practice

Workers are the human resources of any organisation and can be considered as its most important asset. Considering this, HRM may be defined as a structure of plans and activities that focus on managing humans in every department within an organisation. The aim of HRM is to achieve a set of predetermined goals (Guest, 2011).

HRM is a distinctive approach to employee management. HRM seeks to achieve a competitive advantage through the strategic development of a highly committed and capable workforce. By using an integrated group of cultural, structural and personnel techniques the workforce is advanced. In addition, Fajana,

Owoyemi, Elegbede & Gbajumo-Sheriff (2011) defined HRM as a strategic approach to the management of human resources. Which involves all management decisions and actions that affect the relationship between the organisation and employees. Similarly, Armstrong (2006) defines HRM as a strategic, coherent and comprehensive approach to the management and development of the organisation's human resources. An approach where every aspect of that process is wholly integrated within the overall management of the organisation.

Bratton and Gold (2003) state that HRM is a tactic that strategically manages employment relations by leveraging individual capabilities. Therefore, sustaining a competitive advantage. However, the main aim is to integrate the behaviours of employees in a workforce. This is based on aptitude, skills, abilities and role perception of individuals. HRM strives to develop the employee's abilities in terms of their individual circumstances.

2.7.1. The historical development of human resource management

In the prehistoric era constant methods were used to select tribal leaders and systems of health. Additionally, safety methods for hunting were passed down from one generation to the next. From the year 2000 BC, the Asians utilised techniques to screen employees while the Greeks made use of an apprentice arrangement. These activities confirm that a need to train, develop and select employees for various jobs existed many millenniums ago.

Rotich (2015) provides a precise four stage timeline of how HR developed over the years. These stages are discussed below.

Stage one: Welfare Stage (1900–1940s)

This period was characterised by personnel tasks which were performed by line managers and supervisors. Nankervis, Chatterjee and Coffey (2007) explain that during this time personnel functions were limited to administrative functions such as wage records, disciplinary processes and compensation activities.

Stage two: administration Stage (1940s–1970s)

The second stage is marked with the start of a more professional and specialised style of personnel management. The repercussions of World War II were significant for economies, businesses and various labour markets. Throughout the World War II period, labour was scarce in essential industries. To replace males that were away in the military, women became involved in the business sector. The family and social pressures began to hamper the output and productivity of female employees. This resulted in difficulties to recruit these individuals. At the end of the war the soldiers returned with very few industrial skills and began to swamp the labour markets. Thus, leading employers to focus on a broader array of personnel

activities. During this period organisations began employing personnel specialists to recruit and train employees instead of relying on managers to perform these tasks.

Stage Three: HRM and Strategic Human Resource Management (mid-1970s–late 1990s)

Ogier (2003) explains that the 1970's were enriched with industrial changes. Including increased labour legislation, enterprise agreements and economic realities. These changes led to the transformation of personnel management to HRM, focusing strategically on overall organisational effectiveness. Taylor (2011) states that this evolution to HRM signalled a new way of thinking for managers and supervisors. According to Cengage (2010), the 1990's was represented by the integration of industrial relations, personnel management and HRM into a strategic and coordinated approach to managing people. Resulting in the birth of strategic human resource management (SHRM). Nankervis (2011) explains that SHRM is macro in nature and focuses on policies and strategies. While HRM is a micro method of dealing with processes and functions.

Stage Four (2000 and beyond)

Rotich (2015) states that it is challenging to forecast the future of HRM. However, there are solid indications that HRM practice and theory will continuously evolve due to modern technology and globalisation.

Observers of the theory and practice of HRM such as Bartlett and Ghoshal (2003) and Boudreau and Ramstad (2009), propose that economic and global forces will demand increased attention towards the adoption of international models of HRM. Additionally, Hunt (2003) explains that globalisation means that professionals in HR need to become proactive in managing work-life balance, business ethics and corporate governance.

2.7.2. History of Human Resources and its professionalism in South Africa

The progression of HRM in South Africa is explained below, spanning from 1973 to the present.

Initial phase: 1973-1980

The professionalisation of HR in South Africa was a topic that started to be discussed within the Institute of Personnel Management (IPM) in 1973. Van Rensburg (2009) States that it was in 1973 that South Africans realised that HR would be vital for the sustainability of organisations. During this same year the HR field was characterised by a strike within the industry of sugar. This lead to the realisation that HR was not adequately professional to handle the predicament. However, awareness of the contribution that HR had to the economy and society was realised.

In the year 1980 research was conducted by Langenhoven and Daniels (1980) in order to define what professional personnel management was. Langenhoven and Daniels (1980) asked questions such as:

- Is personnel management important and adequately complex?
- Can the work of personnel management be professional in nature?
- Will personnel management be purposeful?
- Will it solve or create more problems?
- Are there enough people interested in personnel management?

Some of the results of the research were as follows:

- Personnel staff contributed to a small portion of the organisation this being 0.82% in 1975 and 0.92% in 1890. However, there was a transparent trend that the number of personnel staffs in organisations were rapidly increasing.
- Only a small number of personnel staff were qualified to perform work on the level of expert. 61% of personnel staff had not received any tertiary training.
- A large amount of time was occupied by semi-professional duties rather than professional, which would be more beneficial to the organisation.

The body of knowledge generated by Langenhoven and Daniels (1980) is still the core of today's HR qualifications offered at South African universities.

The formation of the SABPP: 1981

Van Rensburg (2009) explains that in 1981 the establishment of the South African Board for Personnel Practice (SABPP) was proposed to the IPM by the Ad Hoc Committee. The Committee decided that a primary principle of the SABPP would be equality. The mission, strategy and philosophy of the SABPP were then developed.

Mission: To establish, direct and sustain a high level of professionalism and ethical conduct in personnel practice.

Philosophy: To enable those engaged in the personnel profession to make a significant contribution to the organisation in terms of its management and utilisation of personnel. To the individual, in the realisation of their goals. To the community at large, in terms of an enhanced quality of life.

Strategy: To promote, direct and influence the development of the personnel profession. To set competency standards for the education, training and conduct of those engaged in the profession. To advise involved parties on the development and attaining of those competencies.

SABPP initiates actual work: 1983 – 1984

In 1983 individuals at the level of technician, Candidate and practitioner were allowed to register with the SABPP. The fees were R15, R10 and R15 respectively (Van Rensburg, 2009).

The creation of the SABPP Coat of arms: "Heraldic Device": 1984

In February 1984 the design of the SABPP coat of arms was officially completed as seen in figure 2.3. Each element of the coat of arms has a symbolic meaning.

Arms: The bar is a representation of the standards that guide the profession of H.R. The arrows signify the groupings of personnel practice.

Crest: The significance of the hand is the driving force of manpower. The torch represents the SABPP's advancement of training and education.

Motto: the motto of the SABPP is "Pro Facultate" which means "according to one's ability".
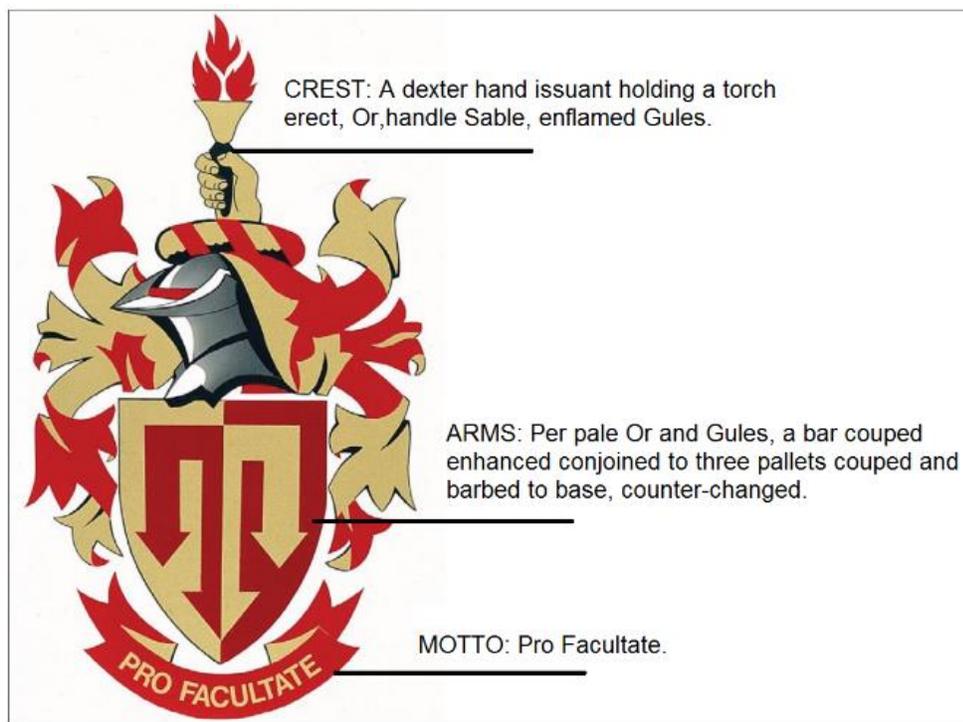
Figure 2.3: The SABPP Coat of arms: "Heraldic Device"

Source: (Van Rensburg, 2009, p.57).

Legal recognition: 1985 – 1986

Van Rensburg (2009) states that after the 1982 inauguration of the SABPP, a Committee was organised. The committee could draft any legislation that would motivate the legal recognition of the SABPP. Once this task was completed, a meeting with Mr du Plessis (ex-Minister of Manpower) was set up. On the 4th of October 1985, the Personnel Practice Bill was a featured publication in Government Gazette volume: 244, number: 9957. A replication of this publication can be found in Appendix A.

Research and Accreditation: 1990

For the first time, in 1990 the curriculum of tertiary institutions was audited by the SABPP and 2 senior H.R practitioners. In August 1990 accreditation of curricula was published. The article stated that the aim of establishing Board examinations was to allow individuals who met strict criteria, other than educational qualification to become H.R practitioners. The Board exams were designed not to lower the registration standards but to maintain the standards of professionalism.

Education and Training Quality Assurance: 2000-2008

In 2000 the Board applied to be accredited as the HR Education and Training Quality Assurance body (ETQA). In 2002 an ETQA for HR was granted with complete statutory status and accreditation as per the South African Qualifications Authority (SAQA) Act No 58 of 1995. According to the Annual Report of the SABPP 2007/2008, the Board was operating and successfully accredited 22 HR practitioners (Van Rensburg, 2009).

Present:

It can be concluded that in South Africa there is currently a surplus of practitioners in the field of HR. This abundance is not related to an increased supply of HR graduates. It is a result of individuals who have other qualifications, such as industrial psychology and are being employed as HR personnel. Furthermore, there is an absence of detailed requirements for professional registration. Which contributes significantly towards the influx of individuals with qualifications other than HR into the field.

Nevertheless, HR has satisfied all measures, therefore, it can be considered as a profession according to all standards of the word. The HR profession has many achievements to be proud of. However, there is still a vast amount of work that needs to be done to maintain and enhance HR's professionalism in South Africa (Van Rensburg, 2009).

2.7.3. Human Resource Functions

According to Danila (2009) an HR department that is efficiently run will be able to provide an organisation with a stable structure to satisfy all business requirements by managing the organisations most precious resources; the employees. There are multiple HR areas or disciplines, however, HR experts in each area are allowed to perform an array of functions. Some of these possible functions will be explained in detail below.

2.7.3.1. Recruitment and selection

Hunter (2012) explains that recruitment is a process where HR practitioners and managers have to work together to identify the need for additional staff. Zinyemba (2014) states that recruitment and selections are active procedures undertaken to source quality employees for vacant positions in an organisation. Zinyemba (2014) emphasises that this crucial for the organisation to be equipped with staff that hold the required competencies, experience and knowledge.

2.7.3.2. Training and development

Training and development are two different concepts that operate as one process. During training and development, HR personnel are tasked with the duty of providing employees with relevant knowledge, skills and abilities (Niazi, 2011). In order for employees to overcome present and future challenges, they have to be equipped with a wide range of skills. Providing an employee with a skillset does not only increase organisational effectiveness but also allows the individual to grow in their career (Niazi, 2011).

2.7.3.3. Remuneration and benefits

Jiang (2009) explains that remuneration is the compensation received by an employee in exchange for their services to an organisation. Remuneration does not simply consist of direct currency. It can be in the form of comfortable working offices, access to growth opportunities, favourable interpersonal relationships and medical aid.

Danila (2009) sates that HR practitioner's function under multiple domains. The above-mentioned are six of the most important functions that an HR department has to focus on.

2.7.4. Challenges facing human resource managers in South Africa

Globalisation is one issue that HR managers face in South Africa. Advanced methods of communication and technology have brought the world closer together. This places an extreme amount of pressure and stress onto South African organisations to be relevant and up to speed with global challenges (Maritz, 2002).

HR Managers have to now constantly design training and development programmes for employees. With every new trend the entire HR department needs education and training to broaden their knowledge.

Another challenge facing HR managers in South Africa is that talented employees are often constantly seeking better opportunities globally. This results in the issue of brain drain (Maritz, 2002). The depreciation of the rand and the high tax levels means that it makes financial sense for professionals to seek employment internationally.

The Public Service Commission (2010) conducted projects focusing on the state of HRM activities in the South African public sector. The report has noted that although there has been a slight transformation of HRM there are still multiple challenges that exist. Some of the challenges highlighted by the Public Service Commission (2010) are:

2.7.4.1. Qualification Fraud

The Public Service Commission (2010) outlined that the verification of applicant's qualifications is a significant activity of the recruitment process. In the year 2000, the Minister of Public Services declared that all existing and new employees will have their qualifications verified. The Public Service Commission (2010) conducted two studies to assess the validity of qualifications at different levels. The first study was conducted amongst managers. It was found that out of a total of 24 604 qualifications that were submitted 2 583 were fraudulent. The second study was based on lower level employees. For this study, many individuals were reluctant to submit their qualifications. Majority of employees failed to meet the submission date. From the undisclosed number of public servants that did submit on time, 16 qualifications were found to be fake.

Du Plessis, Vermeulen, van der Walt and Maekela (2015) explain that HR personnel have multiple challenges when attempting to verify qualifications. Most of the time paying for the verification is a hindrance because verification fees often change without ample notice. Another pressing issue faced by HR is the quality of academic qualifications. Often the quality of original documents are tarnished. In many cases the originals are stained with food or covered in a plastic adhesive which makes it hard to verify the originality.

2.7.4.2. Retention of employees

The Public Service Commission (2010) report discovered that there are extremely high levels of employee turnover in the public sector. The report further stated that staff-turnover occurs in conjunction with retention and attrition challenges.

Goswami and Jha (2012) provide a few strategies that can be used by HR staff to retain employees. First, management needs to ensure that there is no miscommunication that exists between employees and executive staff. Misinterpretation of information could be dangerous for all stakeholders. Second, HR personnel should also design work arrangements to allow for work-life balance. This eradicates the notion that to succeed in one aspect of life employees should sacrifice the other.

2.7.5. Human Resources education

Omebe (2014) explains that HR in teaching or academia is extremely important, and if not taken seriously could have severe repercussions. HR education is the solution to socio-economic development, political compliance and issues surrounding the efficient delivery of services.

South Africa has an ever-evolving organisational environment. There is a continuous need to update the knowledge and competencies of the HR staff. Becker, Huselid and Ulrich (200l) state that with the existing economy the foundation to creating value is human capital. Becker, *et al.* (200l) further explain that the above statement brings forth a unique problem. The asset that is deemed to hold the most importance is the least understood. This lack of understanding provides a convincing reason for HR students to have the proper knowledge. This can be determined by a minimum standard which should be set by the professional board.

McCrea and Ehrich (2006) express that HRM modules should not only be taught to individuals who want to pursue a career in that field. HR should be included in all management courses. HR should also be a compulsory module for individuals studying towards a Bachelor of Education. Teachers and principals are responsible for a range of activities that require human interaction. They oversee induction programmes, parent-teacher meetings and childhood development. All these activities require human contact. Furthermore, with the current changing of roles principals are required to design staff programmes and run the recruitment and selection programme of new teachers. This requires extensive knowledge of HR (McCrea & Ehrich, 2006).

The above discussion expresses the importance that HR holds. Knowing how to manage human interactions is not a subject exclusively important to those wanting to become HR practitioners.

2.8. Industrial Psychology as a discipline and practice

Shreuder and Coetzee (2010) describe industrial psychology as the scientific analysis of human behaviour in a work environment. Rothman and Cilliers (2007) explain that industrial psychology is the application of psychological facts, knowledge and principles to an organisation. This is done in order to make conclusions about human activities. Similarly, Riggio (2009) defines industrial psychology as a sub-division of psychology that focuses on studying attitudes and productivity in an organisation. Upon inspection, the provided definitions lead one to assume that industrial psychology is a dedicated area of academic research and practical work. An area concerned with the way humans interact in a work setting. However, Landy and Conte (2007) argue that industrial psychology goes far beyond examining the work behaviour of employees. It also focuses on factors that influence employee's family and social life, the culture of workers and labour legislation.

Van Vuuren (2010) explains that industrial psychology is centred around two key objectives which can also be linked to the above definitions. Firstly, industrial psychology aims to carry out extensive research to acquire a comprehensive understanding of the way humans behave in an organisation. Secondly, the knowledge gained should be utilised in a strategic manner to increase the effectiveness of the entire organisation. This in turn will improve the degree of psychological well-being and quality of life of all stakeholders.

2.8.1. The historical development of Industrial psychology

World War I: 1914-1918

According to Schultz and Schultz (2008) Walter Dill Scott was the first to make any real contribution to the creation of industrial psychology. He is said to have pioneered the usage of psychological ideologies to promote advertising. He was also the first to start a company providing psychological advice based on aspects such as the selection of staff and employee efficiency. During World War I from 1914-1918 Walter Dill Scott was recruited by the United States (US) army to train and select soldiers. This provided a basis for industrial psychology to branch out from psychology.

World War II: 1939-1945 through to 1950's

Latham (2007) explains that World War II (WWII) created multiple opportunities for industrial psychology. Products of industrial psychology were being used to mentally test and screen army officers. During WWII submarine and pilot crews were needed to control complex and high-speed machines. Industrial psychologists created essential tools to assist in selecting the suitable calibre of candidate. This resulted in

the creation of two very important tests; the Army General Classification Test and the Aircrew Classification Test Battery. These tests helped the US Army gain highly capable military staff.

After the War, the start of the 1950's was characterised by transforming industries that shifted focus from manufacturing to customer-based organisations. These advances resulted in heightened interest in industrial psychology in academics, by the end of the 1950's an estimated 756 industrial psychologists were employed in the U.S (Latham, 2007).

Metamorphosis: 1960's-1990's

The 1960's saw the beginning of civil rights movements which allowed the field of industrial psychology to transform. With civil rights in existence, employment discrimination became a prevalent issue. This brought on the need to develop industrial psychology tests that were deemed fair in terms of anti-discrimination legislation. The scope of industrial psychology broadened to include aspects such as gender and race, job analysis and performance and cognitive abilities.

2.8.2. History of industrial psychology in South Africa

Although industrial psychology was founded in the U.S, the past 4 decades saw remarkable growth of the field in South Africa (Thompson, 2008). Industrial psychology has become increasingly popular as a profession. Almost every university that offers psychology has an additional industrial psychology department, most of these departments were first established in the 1960's. In the year 1972 there was a mere 3 147 registered students in the department of industrial psychology around South African universities. By 1997 there were 12 000 students enrolled at the University of South Africa for an undergraduate degree in industrial psychology. There were thousands more enrolled at other universities. Industrial psychology became increasingly popular in South Africa. So much so that the South African Journal of Industrial psychology was established in 1975 as a platform for academics to publish their work in the field.

2.8.3. Functions of Industrial Psychology

Schreuder and Coetzee (2010) explain that industrial psychologists in South African industries operate with the aim to maintain the economic safety of the organisation. To assist organisations and employees to be productive, industrial psychologists need to have a comprehensive grasp of the following functions.

2.8.3.1. Ergonomics

Bergh (2009) explains that ergonomics is the interface of humans and machines. It deals with how humans interact with systems such as communication networks, production systems and decision-making channels.

The focus of this function is placed on information technology systems, the various designs of equipment and the actual work. Ergonomics is also extended to study the relation between the physical capabilities of humans and challenging environments surrounding the health and safety of employees.

Schreuder and Coetzee (2010) state that the fundamental goal of industrial psychologists dealing with ergonomics is to create modifications to the working environment. In an effort to increase the organisation's compatibility to the characteristics of the employees. Thus, achieving an enhanced fit between employees and their work activities.

2.8.3.2. Job Burnout

Leiter and Maslach (2014) define burnout as a condition characterised by prolonged exhaustion, lack of individual accomplishment and cynicism. Practitioners in the field have identified a seemingly new trend; employees who are going through burnout and remain at work experience presenteeism. Presenteeism occurs when workers are present at work although they should be on leave, these workers are not productive. Industrial psychologists are tasked with assisting employees who are displaying withdrawal behaviours to be more productive employees.

Bakker and Costa (2014) explain that industrial psychologists can enforce the following strategies to help employees deal with job burnout. A communication blackout can be used. When an employee goes on leave all staff members are notified. This is done to ensure that the individual on leave does not get bothered by other employees. Another strategy that can be used is sponsored pampering. This is when the organisation sets up a monetary plan that is solely dedicated to cutting out burnout. The funds can be used to assign coaches to help the individual manage their stress or employees could be given group spa and pampering days.

2.8.3.3 Consumer Psychology

Schreuder and Coetzee (2010) explain that consumer psychology is a study of the systematic relationship between the consumers, distributors and producers of goods and services. Posavac and Kardes (2012) state that industrial psychologists are required to dedicate much of their efforts towards gaining an understanding of the processes that motivate the way that consumers use the information presented to them.

Schreuder and Coetzee (2010) further explain that the defining characteristic of consumer psychology is that it features aspects of basic and applied science. Consumer psychology is therefore taught in industrial psychology and not marketing.

Industrial psychologists have many functions, as will be discussed in further sections of this chapter. Many of those functions overlap with roles performed by HR practitioners. However, in theory, the functions mentioned above are usually exclusively reserved for industrial psychologists.

2.8.4. Challenges facing Industrial Psychologists in South Africa

A research study conducted by Rothman and Cilliers (2007) investigated the past, present and potential future challenges of industrial psychology. The three main issues that they discovered were the changing context of work and the identity of industrial psychologists.

2.8.4.1. The changing context of work

Rothman and Cilliers (2007) explain that over decades the business arena has endured incredible changes. There has been an increase in the use of technology, globalisation, change of the work structure and the introduction of new terminology. Technological advancement speeds up the working world and introduces a new sense of flexibility for the modern employee (Guest, 2004). Contemporary employees work in teams and in offices equipped with a range of technology. Organisations have evolved and have started emphasising and demanding increased productivity and reduced costs. This evolution has advocated for a mentality that holds profitability at a higher value than the welfare of employees. Due to the straining mental and emotional demands placed on individual's, industrial psychologists are faced with vast amounts of the workforce experiencing job burnout and declining motivation. Rothman and Cilliers (2007) further explain that as the world becomes one global community, people are going to be confronted with diversity, particularly in South Africa. Employees may have a difficult time dealing with individuals who have different attributes to them.

In order to deal with the above challenges, Rothman and Cilliers (2007) proposes that academics from industrial psychology need to conduct extensive research based on the consequences of intercultural differences on individual and organisational effectiveness.

2.8.4.2. The identity of Industrial Psychologists

As stated previously the definition of industrial psychology is the study of human behaviour in organisational settings. Watkins (2001) states that the study of human behaviour in practice or academia is unrelated to general psychology. This has led to an identity crisis and role confusion between an industrial psychologist and HR practitioner. According to Rothman and Cilliers (2007), for industrial psychologist to be recognised, the focus needs to be placed on studying the philosophies that underlie the psychology of organisations.

An additional challenge outlined for industrial psychologists is communication. Communication is a severe challenge to industrial psychologists as professionals. Industrial psychologists use sophisticated techniques and languages that results in the outsider feeling confused. It is important for industrial psychologists to learn how to write and talk in a manner that is understandable to others who are mutually interested or involved in a phenomenon. It has been noted that communication is not only a problem between industrial psychologists and non-psychologists. There are also barriers of communication amongst practitioners in the field. Industrial psychologists and researchers need to ensure that there is adequate dissemination of knowledge amongst professionals.

Industrial psychologists in academia and practice face many challenges. However, professionals need to take steps to proactively address each challenge.

2.8.5. Industrial Psychology as a discipline, profession and science

Veldsman (2001) explains that industrial psychology is a subdivision of psychology that uses three precise terms; discipline, profession and science. Van Vuuren (2006) states that as a discipline industrial psychology is viewed as being divided into a profession and science.

According to Rupp and Beal (2007), the science in industrial is focused on knowledge production and development. Therefore, the scientific element implies that knowledge is systematically assembled through extensive research and meticulous application of scientific methodologies.

A profession can be defined as an elite occupational cluster that attempts to apply intellectual knowledge in order to solve human challenges. In accordance with this Van Vuuren (2006) describes the profession of industrial psychology as the application of scientific theory generated by researchers. Renecle (2001) states that industrial psychology as a profession in South Africa should be questioned for multiple reasons. Firstly, it is argued that industrial psychology should not be considered as a profession. This is because South Africans that are not registered under a professional body are still practising and applying the principles of the discipline. The principles of industrial psychology have been subsumed in multiple professions such as HRM. Secondly, the professional status of industrial psychology is further challenged by findings made by Renecle (2001). Which states that multiple industrial psychologists from professional bodies have de-registered because they feel that they are not benefitting from their memberships. They do not own exclusive rights to activities that should solely be performed by industrial psychologists.

There has been research found that challenges the findings and statements made by Renecle (2001). The HPCSA and the Professional Board for Psychology (PBP) is tasked with regulating the practice of industrial psychology and operates under the Health Professions Act 56 of 1974. The PBP's main objective is to

regulate, develop and control the use of psychological tests in South Africa. In aid to the PBP's objective, the Psychometrics Committee has created a psychological test review and certification system. These efforts will eliminate the chances of other professions incorrectly using psychological tests as stated by Renecle (2001). Furthermore, according to Garbharran and Dowdeswell (2015), the Society for Industrial and Organisational Psychology South Africa (SIOPSA) alone had a growing membership base of 520 psychologists and 120 more pending registrations. Which disputes the point made by Renecle (2001) that most industrial psychologists are deregistering from the profession.

SIOPSA is a society that aims to develop supreme conditions that will enable industrial psychologists to deliver effective services. SIOPSA's vision for 2020 is to realise four objectives. Firstly, the society aims to be the leading professional body for "people matters" in the country. Secondly, the objective is to create an elite professional society that will attract all future and present industrial psychologists. Thirdly, SIOPSA strives to be an independent regulatory body for all South African industrial psychologists. Lastly, SIOPSA strives to maintain close relations with industrial psychologists in order to make certain that the training received and services rendered are of high quality (Garbharran & Dowdeswell, 2015).

It can be concluded that with interventions from SIOPSA and other regulatory bodies confidence will be restored in the profession of industrial psychology.

2.9. Human Resource Management and Industrial Psychology: A Comparison

From research gathered it is evident that HRM and industrial psychology are most similar in terms of the functions that each domain has to perform. This could lead to an identity crisis as previously explained by Rothman and Cilliers (2007). For example, both disciplines are required to partake in training and development initiatives, recruitment and selection and performance reviews. Resulting in misplaced professionals. Industrial psychologists are hired as replacements for HR personnel. Whereas the two professions are supposed to work in a coordinated manner in an effort to increase the results of activities performed by each.

HRM differs from industrial psychology in the sense that the field of industrial psychology focuses on metrics and science. Industrial psychologists are colloquially referred to as the "geeks" of management. They design improvements and interventions for organisational effectiveness based on science, facts and extensive research. HR, on the other hand, is a discipline that is very practical in its focus. HR experts are required to have thorough knowledge of how to maintain an organisation in accordance with laws and regulations. HR practitioners are not required to comprehensively study the science aspect of organisations but are expected to achieve organisational goals and outcomes (Stafford, 2015).

Godara (2015) explains that industrial psychology can assist HR practitioners to maximise the performance and wellbeing of the workforce. Godara (2015) further explains that industrial psychologists differentiate between 3 types of happiness; meaningfulness, engagement and pleasure. When people feel a strong sense of meaningfulness and pleasure simultaneously, they tend to be satisfied with their jobs. However, employees that experience meaningfulness without pleasure will be less satisfied at work. HR practitioners can draw on this knowledge of industrial psychologists to select and place individuals in the right positions. Increasing the employee's sense of meaningfulness, engagement and pleasure as well as organisational loyalty and commitment. This is an example of how professionals in both fields can work together to achieve one goal.

The analyses of HRM and industrial psychology has shown that as a profession and discipline both sectors have evolved and made significant contributions to the way organisations operate. While on the surface it may seem as though industrial psychologist and HR personnel perform the same functions, at closer inspection it can be realised that each profession serves different roles under these functions. Industrial psychology and HRM deal with the wellbeing of employees, but, each discipline has different levels of complexities and places emphasis on varied aspects of employee development.

2.10. Conclusion

In this chapter, the state of the research environment in South Africa was assessed. Insight into the theoretical underpinnings and usefulness of bibliometric and content analysis studies were given. Lastly, the evolution of HR and industrial psychology was analysed and a distinction between these two disciplines was established.

From this chapter, it can be concluded that the research output from South African academics has grown significantly over the years. Although, in order to perform on par with international countries government initiatives such as the SARIR framework need to be executed efficiently. It can further be concluded that South Africa has taken many steps in the right direction towards developing a democratic country. However, there are still lingering inequalities that are present in all sectors of the country. By developing a truly equal system of education, students from all walks of life can gain the knowledge needed to create a brighter future for all.

CHAPTER THREE

INTERSECTIONALITY:

A Review of its theoretical origins and relevance to bibliometric research.

3.1. Introduction

The aim of this chapter is to provide insights into the theoretical basis used to conceptualise the study. As established in chapter 2 a large portion of this study is focused on collecting and understanding demographic information that will inform the gendered and racial patterns and inequalities of the South African academic environment. At its core intersectionality refers to the ways in which multiple racial, gender and other idientities intersect. This makes it relevant to understanding how the identifies discussed in the previous chapter overlap with each other. This chapter also shows how authors demographics identified in the previous chapter may influence the way they write and present participant identities in their empirical work. Therefore, the intersectionality theory was chosen to provide direction to the research. The chapter will be focused on analyzing the literature available on intersectionality. Elements of the theory will be explained to understand how these inequalities affect knowledge production in South Africa. A discussion will be conducted in three parts. The meaning and establishment of intersectionality will be explored. Examples of how intersectionality was used in research across disciplines will be provided and lastly, the usefulness of intersectionality to this study will be explained.

3.2. Intersectionality Theory

Intersectionality has been adopted as the theory that resonates best with the conceptualisation of this study. The following sections will assess intersectionality as a framework and its relevance to the research being conducted.

3.2.1. Intersectionality: Meaning

Gopaldas (2013) explains that the term intersectionality refers to the manner in which social identities such as class, gender and race interact to form life experiences of privilege and oppression. Gopaldas (2013) further explains that researchers from multiple disciplines have joined the discussions on intersectionality. Therefore, many modern definitions of the term have been developed to exclude any mention of a specific social group. Browne and Misra (2003) state that intersectionality refers to the relationship between

multiple modalities and dimensions of social formations. While Davis (2008) describes intersectionality as the interaction amongst groups that have differences in their social activities, institutional engagements and cultural philosophies. Focusing on the degree of power allocation that these interactions result in. Gopaldas (2013) states that by not making specific reference to social identities these definitions extend the concept of intersectionality further than race, gender and class. To now include aspects such as age, body type, education, income, sexual orientation and other methods that are used to categorise humans. Expanding the scope of intersectionality to include all structures of social identity means that the exclusive social advantages and disadvantages of all people should be scrutinised (Lorde, 2007). Figure 3.1 illustrates the expanded scope of intersectionality. The first inner circle represents an individual's distinct circumstance. The second circle from the center depicts the different aspects of identity. Circle three represents the multiple types of attitudes and oppressions that impact one's identity. The circle on the outer end shows forces that interact to maintain exclusion.

Shields (2008) states that although definitions of intersectionality vary, social identities mutually constitute, naturalise and reinforce one another. Mutually constitutes means that a single category draws its meaning from another. Reinforce means that the maintenance and formation of categories of identity are a part of a dynamic process in which humans are actively engaged. Naturalise indicates that identities in one group are seen to be self-evident due to another group. This proposes that being on the privileged side offers much more than the avoidance of oppression. It opens up opportunities for rewards and status unavailable to the other unfavourable intersections. Furthermore, the intersectional position of an individual might be disadvantageous in relation to one group but advantageous to another. For example, the White lesbian could be oppressed because of their divergence from the norm and standards of heterosexuality. However, in relation to other lesbians they could enjoy racial privilege (Shields, 2008).

3.2.2. Intersectionality Theory: Establishment

Intersectionality as a theory was officially created by Kimberlé Williams Crenshaw in 1989. Crenshaw (1989) used the term to explain how gender and race intersect and result in the oppression of Black women in the workplace. Gopaldas (2013) states that although Crenshaw is given credit for inventing the term and theory of intersectionality. The concept was actually developed over the duration of the 20th century by multiple activists of Black feminism. Black feminism was a movement founded on the basis that the interest of Black women was underrepresented. Sometimes even absent from Black or women's movements in America. Gopaldas (2013) explains that Black men led Black movements that were sexist and focused on the equality of Black men with their White counterparts. Women's movements conducted by White women were racist and prioritised the equality of White women with White men. Dill, McLaughlin and Nieves

(2007) state that due to the alienation by the movements of White women and Black men, Black women established their own methods of conceptualising structures of social identity. Unlike the other movements, Black women developed structures that intertwined the matrices of oppression and privilege. They fought against discrimination based on gender, race and class. According to Collins (1990), Black women of the 20th century understood that by combating all forms of classism, sexism and racism the plight of all disadvantaged people could be improved. Gopaldas (2013) explains that the disadvantages experienced by Black women were unique in many ways. However, they recognised that they had similar experiences to other groups. Those whose experiences in life were controlled by more than one disadvantageous category. For example, Indian immigrants or blind Chinese-speaking elders.

To refine the history, the origins of intersectionality arose from the attempts of Black feminist scholars who conceptualised their social circumstances.

3.3. Social Identities

Feitosa, Salas and Salazar (2012) explain that social identity refers to the belonging of individuals to certain groups. Groupings associated through a process of categorisation. By socially identifying with a group an individual is provided with a certain degree of comfort that can have positive outcomes. In groups where commonalities exist, there are higher levels of agreement between individuals and sharing of information. In addition, social identities help individuals avoid peer pressure, poor decision-making and intergroup animosity.

Below is a list of the various social categories and groups that an individual can identify with.

3.3.1. Gender

People often use the word gender as a collective term for male and female. However, gender is not limited to the binary norms of female and male. Gender should include a spectrum of identities such as transgender, genderqueer, pangender and other expressions of gender. Recognising gender by strict binary norms results in the unequal appreciation of qualities in women and men (Deaux, 2001).

3.3.2. Socioeconomic status (SES)

Baker (2014) explains that SES is a societal construct that indicates the economic standing or class that an individual identifies with. SES is typically measured by accounting for an individual's education, occupation and income. Within SES there three major subcategories, high SES, middle SES and low SES. By actively analysing SES and its effects individuals be able to better understand core power structures that influence factors of SES.

3.3.3. Disabilities

The word "disability" is used as an umbrella term that covers individuals with physical and mental impairments, participation limitations and activity restrictions. Disability is an intricate phenomenon. It reflects the interaction between an individual's characteristics and physical body with the society that they exist in (Grönvik, 2007).

3.3.4. Ethnic and racial identities

Santos, Palomares, Normando and Quintão (2010) explain that race is dependent on the physical features of an individual. It is usually manifested on the outside of their body. Ethnicity refers to the cultural characteristics of an individual. Including language or religion and may not be easily identified by physical features. Individuals can share the same race and be of different ethnicities and vice versa. For example, individuals who are White by race could each belong to a different religious group.

3.3.5. Other identities

The previous four categories are the more popular and complex groups that individuals can identify themselves with. However; there are various other identities such as age, educational level, body size, substance addiction, political beliefs and marital status.

In succeeding sections of this chapter words such as category, group or identities will be used as collective terms referring to a combination of the above-mentioned identities.

3.4. The principles of intersectionality

Hankivsky (2013) explains that researchers, activists and policymakers often look for direction on how intersectionality should be applied. In order to obtain valuable guidance, the principles of intersectionality should be analysed and followed.

Figure 3.2. Illustrates the various principles of intersectionality as explained by Hankivsky (2014). Each principle will be explained below.

3.4.1. Intersecting Categories

From the perspective of intersectionality, human life cannot be summarised into one category. Therefore, it can be expected that a single social category cannot be assumed to be the most important. Especially when trying to understand the experiences and needs of people (Hankivsky, 2014). Hancock (2007) explains that intersectionality conceptualises social identities as intermingling and co-constituting each other. This establishes distinctive social situations that vary according to place and time. According to

Hankivsky and Cormier (2009) the intersections and effects of social identities is the main focus of an intersectional analysis.

3.4.2. Multi-level analysis

Dhamoon and Hankivsky (2011) state that one of the concerns of an intersectional analysis is to gain understanding about the effects between multiple levels of society. Including the micro level which consists of global and national structures. The meso level which includes provincial and regional structure. Lastly, the micro level which is the individual community structures. The multi-level dimension of intersectionality requires that the processes of differentiation across all levels of identity, representation and structure need to be addressed.

3.4.3. Power

The intersectional approach highlights that power is relative. A person can experience oppression and power simultaneously in changing contexts and times. The power relationship includes power that one has over others. As well as the power that one has with others when people work together (Guinier& Torres, 2003).

3.4.4. Reflexivity

Bolzan, Heycox, and Hughes (2001) explain that intersectionality can acknowledge power through reflexivity. Reflexivity recognises the importance that power has on a micro level with one's self and at a macro level with society as a whole. Parken (2010) states that reflexivity can help institute transformation. When people become self-aware and role-aware they will start to question assumptions. For example, practices of reflexivity should aid people to consider their personal associations to colonisation. While enabling questioning about the practices and policies that accompanied colonialism of Black people.

3.4.5. Time and space

Intersectionality stresses the importance of time and space when conducting any analysis. However, every individual's perception of time and space depends on where they live and how they interact (Warf, 2008). It is within the multiple dimensions of time and space that one's perception of the world is constructed and given meaning. Hulko (2009) states that oppression and disadvantages change over time. Therefore, time and space are not fixed dimensions but are fluid and changed through individual feelings and senses which are conditioned by social position.

3.4.6. The diversity of knowledge

Intersectionality is particularly concerned with the relationship between power and knowledge. Including the perspectives of people that are marginalised or excluded from the production of knowledge and how they can disturb the forces of power (Dhamoon, 2011). For example, when the colonised are included in policy analysis, colonial or racial discourses could be shifted resulting in decolonised effects.

3.4.7. Social Justice

Grace (2011) states that intersectionality strongly supports social justice. The approaches to instituting social justice differ based on whether the concentration is the redistribution of social processes or goods. However, every approach shares a common concern with the attainment of equity. Potts and Brown (2005) explain that social justice theories challenge inequalities at their sources. Enabling people to question power and social relation, thus creating new improved ways of thinking.

3.4.8. Equity

As expressed by Braveman and Gruskin (2003) equity exists when social systems are developed to equalise the outcomes for advantaged and disadvantaged groups. In intersectionality, equality should not be confused with equity. For example, inequality could refer to any differences in the outcome of interest and inequity will only exist if those differences are unfair.

3.4.9. Resistance and resilience

Dhamoon and Hankivsky (2011) state that resilience and resistance is an integral part of intersectionality. Each of which can unsettle oppression and power. A mechanism commonly used by subordinate groups is the use of collective actions to destabilise dominant beliefs.

3.5. Different Views of intersectionality

Hurtado and Sinha (2008) maintain that focusing on gender only or race only cannot result in a comprehensive understanding of all forms of oppression. In an attempt to broaden the focus of intersectionality Crenshaw (1994) developed three ways from which intersectionality could be viewed. These were structural, political and representational intersectionality.

3.5.1. Structural Intersectionality

According to Carastathis (2014) intersectionality refers to the ways in which social systems and categories intersect to oppress individuals and influence their life experiences. The initial meaning of structural intersectionality was developed by Crenshaw (1994). Crenshaw (1994) stated that structural

intersectionality can be used to explain the reasons why the Black female minority are not considered for certain career position.

3.5.2. Political Intersectionality

Carastathis (2014) explains that political intersectionality deals with the muting of individuals of different social groups from expressing their opinions. This is done because each social structure has its own political agenda, and all are caught at crossroads. Therefore, a minority may not voice their political belief from fear of offending other social categories. Carrim (2012) states that political intersectionality is used to illustrate ways in which people who possess multiple subordinate identities find themselves trapped between two or more agendas. Each of which contradicts each other and therefore become totally isolated from either group. For example, a poor male Hispanic homosexual. If he openly voices his opinions about his sexual orientation, then the risk of being alienated by other Hispanic males increase.

3.5.3. Representational intersectionality

In representational intersectionality, there is a presence of many stereotypes in traditional presentations. Such as films and music that can affect individuals who are categorised by one or more of the mentioned stereotypes (Carastathis, 2014). For example, representational intersectionality would be a song that condemns refugees and degrades females.

The different views on intersectional can be used to quantify the magnitude of oppressions that disadvantaged groups are subjected to and how these disadvantages shape the minorities.

3.6. The complex nature of intersectionality

Mehrotra (2010) explains that the interpretation of intersectionality varies and depends on the scholar's perspective. It can be considered as a paradigm, method, theory or framework. Scholars are further unsure whether studies based on intersectionality should focus on the multiple identities of individuals. The method in which universal oppressions intersect at a social level or the variety of social-cultural and historical discourses. Nash (2010) states that there are several reasons why academics find it difficult to apply intersectionality. As disciplines vary the meaning of intersectionality is interpreted differently. While there might be a consensus amongst scholars that intersectionality primarily deals with the interaction of dominant social structures that result in advantage or oppression, there is no agreement whether intersectionality is a process or theory. However, due to the popular use of intersectionality by scholars it has been adopted as a theory (Davis, 2008).

Due to the various complexities surrounding intersectionality, Bhattacherjee (2012) has identified three approaches that can be used when studying intersectionality. These approaches are Anticategorical complexity, intercategorical complexity and intracategorical complexity. Each approach serves to present the broad range of current methodologies that can be used to better apply and understand intersectionality.

3.6.1. Anticategorical complexity

This approach is based on the ideals that categorical divisions should be deconstructed and ultimately eliminated. This approach also considers that inequalities stem from relations that are defined by gender, class, race and sexuality. Therefore, the one way to eradicate oppression is to remove the categories that are used to partition people into different groups. Angelucci (2017) states that the anticategorical approach believes that social life is complex, and the development of permanent categories will only serve to perpetuate oppressions in a system that is already unequal. Essentially, in anticategorical intersectionality it is believed that identities and groupings are artificially created and only contain the meanings that humans assign to them.

3.6.2. Intercategorical/ Categorical complexity

This approach acknowledges that inequalities exist in society and uses that as the foundation for the discussion of intersectionality. Wood (2008) explains that in the intercategorical approach individuals are already assigned to certain social categories. Intercategorical intersectionality studies the way that the relationships and interactions between the groups evolve over time. The focus of this approach lies in understanding the intersections of social identities despite the inequalities that exist amongst them.

The significant aspect of this concept is that emphasis is put on the type of relationships that social categories have. The focus is not on the nature of the category itself. The intercategorical approach requires scholars to temporarily assume analytical categories in order to effectively document apparent relationships of inequality (Bhattacherjee, 2012).

3.6.3. Intracategorical complexity

The intracategorical approach is best described as the midpoint between the intercategorical and anticategorical approaches. Bhattacherjee (2012) explains that in this approach it is acknowledged that different social categories exist. However, the focus of an intracategorical study is on the differences that occur within one particular group at a time. Intersectional research using case studies would fall under the intracategorical approach. The study would focus on a single group and their unique characteristics while

acknowledging that the group will have differences within itself. For example, a study could analyse females as a social group, and the focus will be on how females within that group differ from each other.

Scholars should analyse each of these complexities in order to choose the most suitable and relevant intersectional approach for their study.

From personal preference and for the purpose of this study, intercategorical/categorical intersectionality is more practical. It is evident that in everyday life humans are faced with an array of social identities. Some social identities are less apparent than others; nonetheless, they do still exist. By using intercategorical intersectionality each social identity can be assessed vigorously, and patterns of inequality can be marked. These patterns can be used to rectify social injustices.
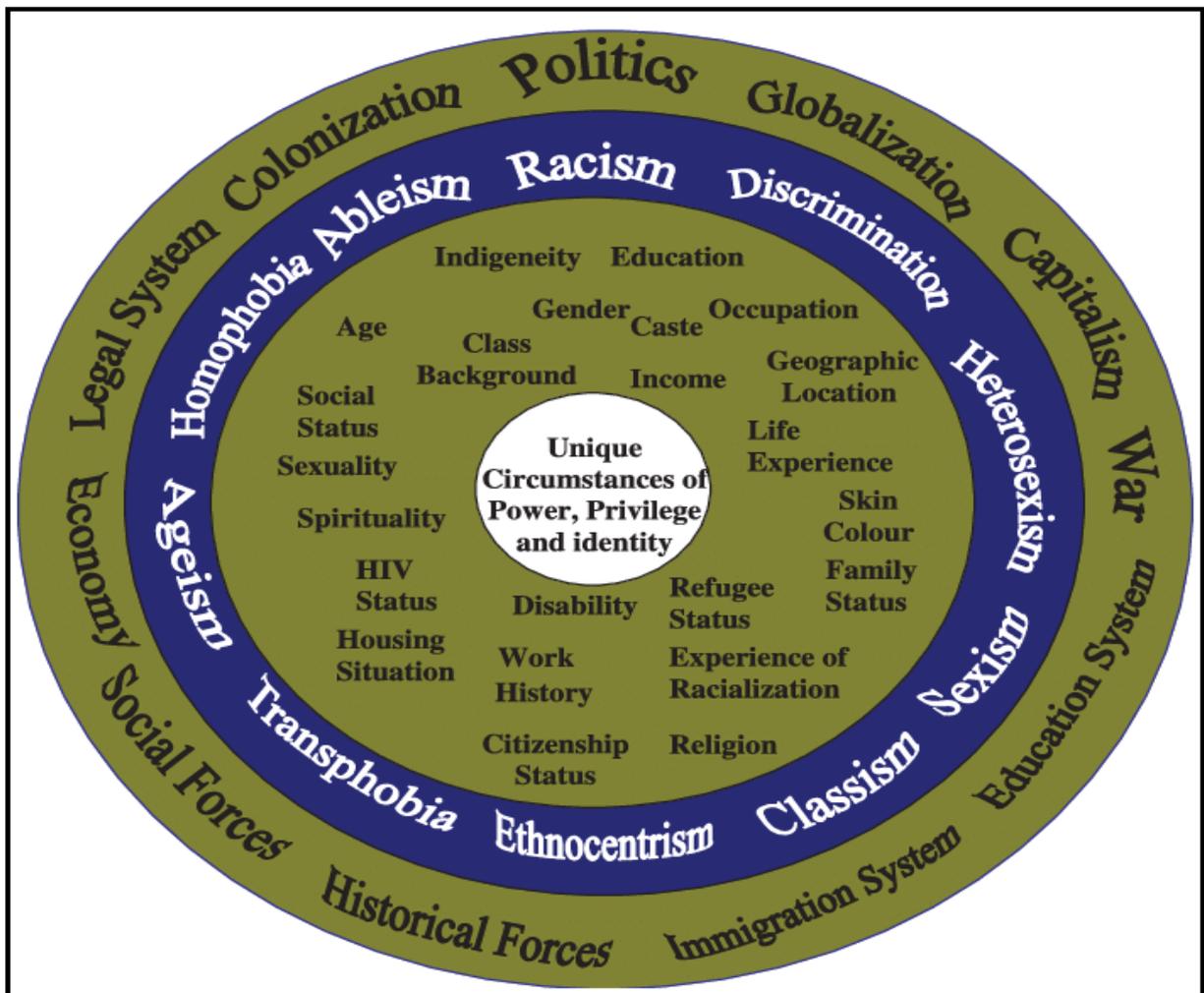
Figure 3.1: Scope of intersectionality

Source: (Hankivsky, 2014, p.5).
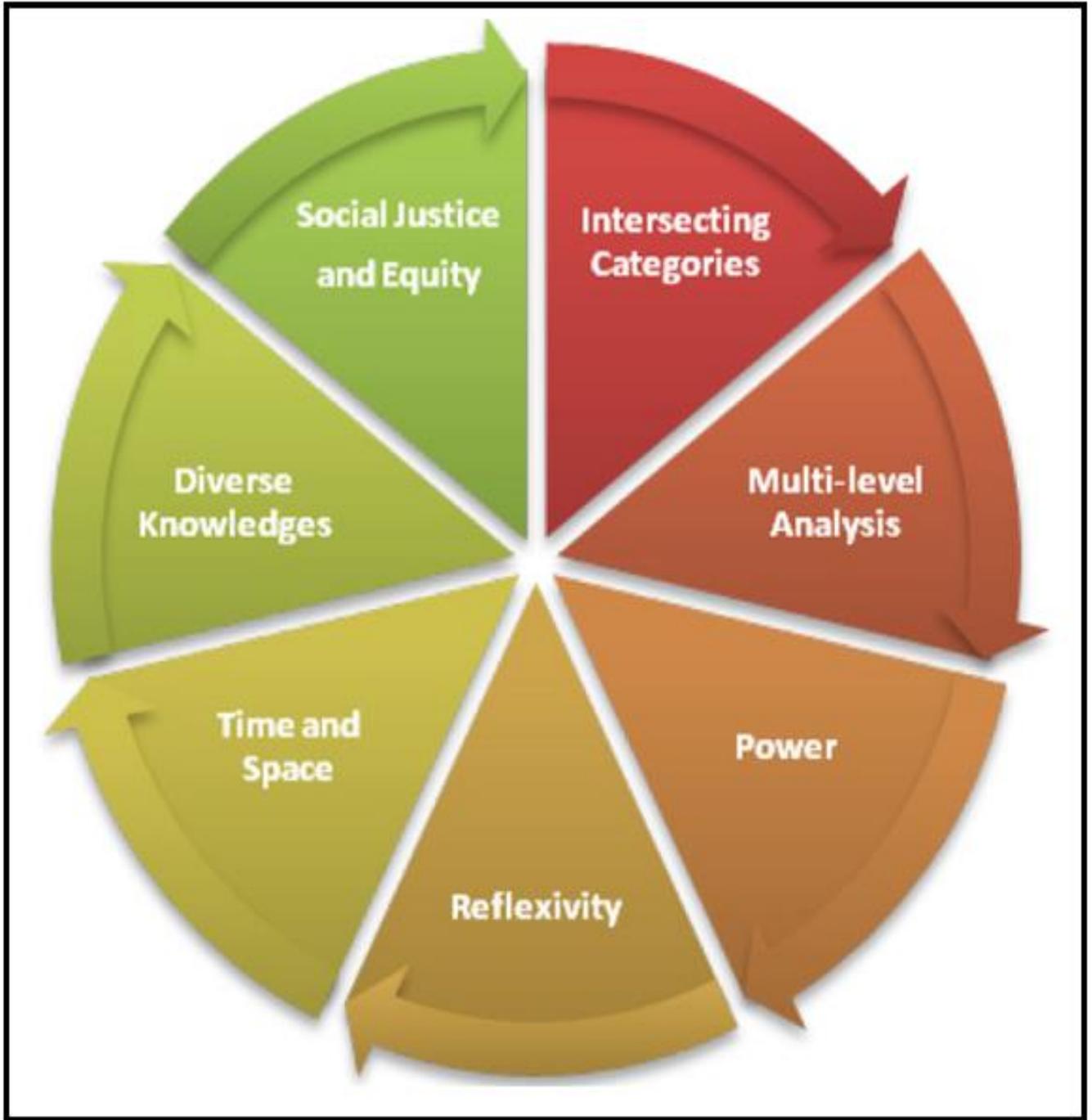
Figure 3.2: The principles of intersectionality.

Source: (Hankivsky, 2014, p.8).

3.7. Intersectionality in organisations

It has already been established that intersectionality refers to the way in which power is distributed inequitably. In organisations social identities such as race, gender and class help to allocate certain groups positions of power (Vardeman-Winter & Tindall, 2010). For example, women have dissimilar experiences to men and in South Africa, Black women have experiences unlike those of White women. Carrim (2012) explains that many researchers' view social identities in economic terms. Browne and Misra (2003) state that in South African organisations the experiences of Black women are compared to that of White women. Black women are regarded as professionally incompetent when compared to White women (Misra, 2003). It is instances such as these that allow social groupings to lead to inequality in the organisation.

Galinsky, Hall and Cuddy (2013) provide a similar explanation as Vardeman-Winter and Tindall (2010). Galinsky *et al.* (2013) state that studies of intersectionality carried out in organisations focuses on how employees from various social categories are treated and perceived. However, some studies concentrate on analyzing the subjective characteristics. Through investigating the way in which more than one identity is constructed and experienced (Essers & Benschop, 2007). For example, Bell and Nkomo (2003) explain that professional identity inhabits a different meaning in the context of race. From their research Bell and Nkomo (2003) found that for Black women the reason for having a professional identity was to give back to their racial community. White women did not share the same sentiments at all.

Carrim and Nkomo (2016) suggest that in order to better understand individuals and the organisations that they form part of, researchers should focus on identity work and the intricate systems of intersectionality. Rather than being fixated on the tensions of social categories and identities. Identity work can be explained as the process through which individuals identify and define themselves in an organisation. Essentially answering the question "who am I in this role?". Carrim and Nkomo (2016) propose that by marrying the study of work identity with the progressions of intersectionality, researchers will gain an enhanced perspective of how institutionalised processes shape the identities of individuals over-time

While authors such as Carrim and Nkomo (2016) and Browne and Misra (2003) focused on organisational intersectionality from a research and academic perspective. The International Lesbian, Gay, Bisexual, Transgender and Queer Youth and Student Organisation (IGLYO) (2014) provided a more practical way in which intersectionality could be adopted into the organisation.

The IGLYO (2014) explains that managers should utilise the following aspects as special tools to maintain an intersectional organisation.

1. Consultation and outreach with key groups:
Intersectionality in practice means that people's opinions have to be taken into consideration. Managers should engage with their diverse staff and take an active interest in learning about the many identities that are present. In special scenarios, the organisation should initiate conversation with human rights organisations to learn more about how these identities oppress individuals. Management can also ask stakeholders to evaluate the organisation. By doing this they can understand how to be more inclusive and ensure that people feel welcome without having to choose between identities (IGLYO, 2014).

2. Inclusion policies in the organisation:
The IGLYO (2014) explains that organisational policies should be designed to protect and support the interests of minority identities. While maintaining and encouraging their participation in organisational activities. For policies to be effective it should be implemented with full participation of the affected group. Often policies that target minority groups are implemented without sufficient representation of the marginalised. According to IGLYO (2014) internal organisational policies should satisfy and consider the following questions:
- Is the organisation welcoming to everyone?
- Is this policy creating a safe space for everybody to function in?
The organisation should have a code of conduct that details the steps that should be followed to avoid situations that would make some individuals feel oppressed or ostracised. Making accessibility a priority in internal policies will attract people from various identities.

3. Practicality:
When managers are enforcing intersectionality in an organisation it is important to reflect on which groups have been left out in the past and which identities have not been considered for projects lately. When an organisation conducts campaigns, a message is sent about who is welcome into the organisation, which groups voices matter and what topics are of interest. Offices, resources and venues need to be easily accessible. This can be done by making physical adjustments such as installing wheelchair ramps, installing signs and providing reading material in braille. In addition, the organisation should approach each individual and make provisions to reasonably accommodate them (IGLYO, 2014).

4. Training:

Board members, staff and volunteers should share the same understanding of the value and need of intersectionality. Training can be used as a tool for development and learning. However, the essential aspect under training is that it should be provided by experts in the areas that the organisation needs information (IGLYO, 2014).

It is important to know how intersectionality can be improved in organisations. Most individuals interact at their place of work. Therefore, managers need to know how to effectively use to tools of intersectionality to maintain equality and satisfaction in an organisation

3.8. Examples of how intersectionality has been used in research

This section will elaborate on three different examples intersectionality, proving that intersectionality can be used by a range of disciplines.

Jones, Misra and McCurley (2013) took a different approach to study intersectionality. They decided to investigate the existence of intersectional research in journals of social science. Jones *et al.* (2013) assessed the impact that intersectionality has on the discipline of social science. They conducted a content analysis of articles published in 18 social science journals in 2009.

Jones *et al.* (2013) coded articles according to the three different approaches identified from the content of the articles. Articles were considered intersectional if they utilised the intracategorical, intercategorical or anticategorical approach.

The results of the coding are presented in table 3.1. 16.7% of articles published in the journals used more than one approach to study intersectionality. Many of the research articles were designed around the intercategorical approach accounting for 9.3%. The intracategorical approach was present in 6.4% of articles. The least used approach was anticategorical accounting for only 2.6% of articles.

Table 3.1: Types of articles published in social science journals in 2009.

Type of approach	Frequency	Percentage
Multiple approaches	117	16.7
Intracategorical	45	6.4
Intercategorical	65	9.3
Anticategorical	18	2.6

Source: (Jones *et al.*, 2013, p.2).

The study done by Jones *et al.* (2013) studied intersectionality from a theoretical perspective. Articles were analysed and elements of the different type's intersectionality were identified. This helped Jones *et al.* (2013) to sort the articles according to different types of intersectionality.

In contrast to the study done by Jones *et al.* (2013), Mophosho (2013) conducted a practical study of intersectionality with the use of focus groups.

Mophosho (2013) conducted a research study to explore the experiences of Black female students in South Africa. The study was focused within the settings of historically White universities (HWU) located specifically in Johannesburg. By adopting the viewpoint of intersectionality Mophosho (2013) explored how access to education affects the social mobility and identity of Black women.

The main method of data collection used by Mophosho (2013) was qualitative. Mophosho (2013) conducted focus groups which consisted of 5-7 women. The discussions were centered around the academic experience of females with HWU's. The focus was emphasised on the way in which education impacts how females conceptualise their identities. Mophosho (2013) asked the participants semi-structured and open-ended questions. There were four focus groups, the first group included students of mixed races. The second was comprised of only Black students, the third group was a combination of post-graduates and undergraduates. The last group consisted of post-graduates only. The reason for having combination groups was to get accurate and generalisable results.

The transcriptions of the focus groups were analysed using thematic analysis. The way the women expressed their HWU experiences fell into five themes:

1. The positive and negative experiences in the HWU:
Mophosho (2013) explains that female students face realities jarringly different from their peers. Despite attending the same HWU under the same elements. Students learn in the same spaces but come from diverse backgrounds, have exposure to different opportunities and resources. This creates severe disparities among their experiences at universities.

2. The triple jeopardy: gender, race and class:
These elements in an HWU are perceived to reinforce the matter of oppression of the Black female. Black female students felt as if their voices were silenced in order to hinder their pursuit of belonging and equality. Mophosho (2013) states that the issue of "Black tax" presented itself numerous times. The participants revealed that as Black females they had to work significantly harder to gain the same amount of experience as their counterparts.

3. Differences in social and cultural capital:
The capital being referred to is those elements of cultural value. Participants revealed that in multiple instances the HWU has ensured that their family responsibilities are devalued. Black females stated that White students could easily gain access to cultural capital. As Whites are higher up on the social hierarchy thus controlling majority of the social capital. The difference in social status meant that Black students have a constant sense of inferiority. The capital disparities amongst races impact the educational success of Black students negatively (Mophosho, 2013).

4. The tensions in social mobility:
The participants identified important elements that impacted their experiences of social mobility. It was found that as a result of historical injustices Black females have difficulties navigating from the lower class to the middle and upper class (Mophosho, 2013).

5. Democracy vs. the struggle continues:
The burden of the apartheid is evidently carried by the Black students through their tertiary experience. Serving as a reminder of what their elders fought for. The participants stated that they felt pressure to fight for a position at the HWU. Whilst still being expected to be grateful and value the liberation of democracy (Mophosho, 2013).

The identified themes inform the array of identities experienced by Black females. These individuals compete with various conflicts and tensions that arise due to their social positions. The manner in which their race, gender and class identities are constructed depends on the contexts that they find themselves in, such as, the HWU, their family and society.

The last study was a research article authored by McGibbon and McPherson (2011). McGibbon and McPherson (2011) describe how the theory of intersectionality can be applied to address the Social Determinants of Health (SDH).

Raphael (2009) explains that biological endowment is important to determine the health of individuals. However, the SDH has a crucial role in determining the health status of nations, communities, families and individuals. For example, the lack of access to education creates income implications that affect an individual's ability to access proper health care. The SDH perspective of intersectionality aims to analyse the causes of social deprivation that lead to poor health.

McGibbon and McPherson (2011) explain that from their research it was found that inequalities in health could be broken down and described as the intersections of three main areas. The characteristics of SDH, the geographic oppressions of SDH and lastly the "ism's". The "ism's" is a collective term used to describe, racism, sexism and classism. Figure 3.4 illustrates how the various SDH inequalities intersect and become inscribed in the bodies of children and women.

It is important to understand that every identified element within the three areas can intersect with each other. For example, inadequate education can impact employment prospects negatively which in turn impacts housing and food security.

3.9. Intersectionality in Apartheid and Post-Apartheid

Groenmeyer (2011) wrote a research article using the theory of intersectionality; the article is based on a case study of Black South African females. The narratives of each woman were used to emphasise the similarities and differences between various identities that influence the restructuring of social relations in South African organisations. Groenmeyer's research is unique because unlike the other examples it critically analyses the intersection of multiple identities during the different periods of history in South Africa.
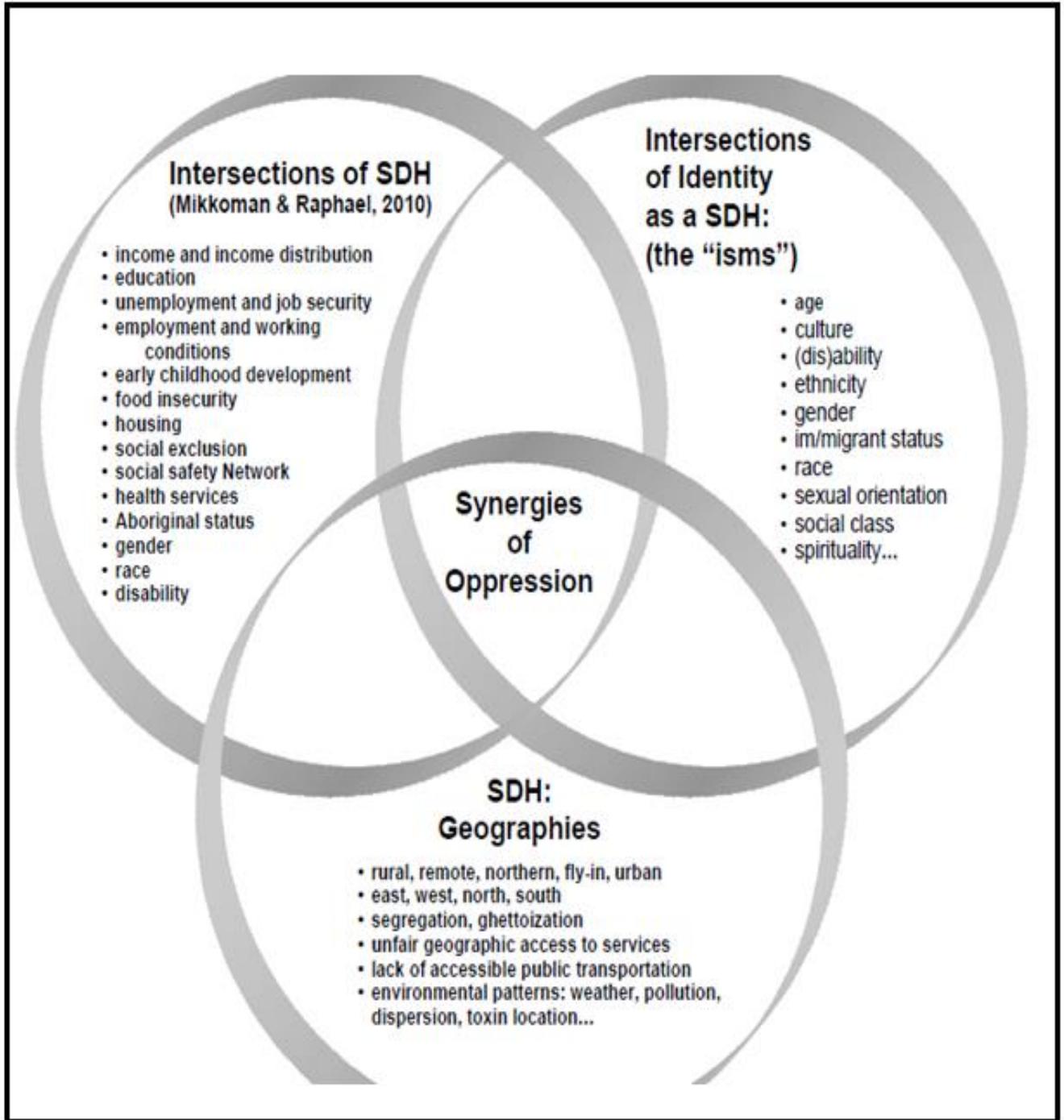
Figure 3.3: Intersectional qualities of SDH.

Source: (McGibbon and McPherson, 2011, p.65)

3.9.1. The intersection of identities during the Apartheid era

Boris (2007) states that by contextualising the history of the apartheid, models of analysing gender was created. Which helped to develop a cultural understanding of the contrasts of social relations between identities. The legislations of apartheid were purposefully engineered to highlight stereotypes of female/male, unproductive/productive and child/adult. In this manner the intersection of identities was used to link dichotomies to the stereotypes contrived by the apartheid government (Boris, 2007). Groenmeyer (2011) states that one of the worst examples of social engineering during the apartheid was the creation of the Blacks Act 67 of 1952. This Act banned Black woman from residing in residential areas without a permit. Therefore, many women were forced to remain in rural areas to care for their children and the elderly. Black women with the requisite permits were able to be employed as nannies and housekeepers for White families in the residential areas. During this era, Black women dominated the secondary labour market which was characterised by inferior working conditions and low wages. The primary labour sector was dominated by White males with higher pay and favourable working conditions. Due to the roots of the labour market being embedded in the foundation of apartheid, the burdens of race and gender discriminations confined Black women to the lowest rungs of the socio-economic ladder (Groenmeyer, 2011).

Case study 1, Appendix B is based on an interview conducted with a Black woman named Nololo. Nololo's parents were born in Lesotho. Her father was in possession of a South African working permit and was, therefore, able to secure employment on the goldmines in Johannesburg. He worked in for the mine for 11 months and then moved to Saldanha Bay to work in the fishery. During this time he would send money to his family in Lesotho, after a few years Nololos mother decided to move to Saldanha Bay. However, being a Black female migrant, she did not possess the required permit to live in a Coloured township. Due to the intersection of male-controlled racial institutions within the social system she had to focus on avoiding the fate of imprisonment. This meant that Nololo had to reside with her father, it is during this time that Nololo picked up her passion for fishing. She would wake up early on school holidays and assist her father out at sea. Nololo completed school at the age of 16 and had no choice except to work at the fish factory; her job was to can the fish.

Groenmeyer (2011) explains that when one examines the experiences of Nololo and her mother within the paradigms of intersectionality. It can be concluded that the identity of a woman cannot be distorted into one-dimensional categories. The identity of a woman is contested and contradictory by disadvantaging some woman and privileging the others.

3.9.2. The working life of Black women post-apartheid

Groenmeyer (2011) explains that the increased participation of women in organisations post-apartheid has aided in feminising certain workplaces. The movement has coincided with the evolving nature of organisations that include forms of casual and part-time employment. This change in organisations was compounded by the 1996 trade liberalisation policies for the textile, clothing and leather industries that resulted in mass retrenchment of females. The restructuring of other fields, particularly in education has further affected women adversely. Women of all races were generally employed in low-paid and low-skilled jobs. Which meant that as technology was introduced into the working environment women either maintained their low-skilled jobs or were the first to be retrenched. Braude (2004) supports the explaination provided by Groenmeyer (2011). Braude (2004) states that majority of females remain employed in the manufacturing, retail and wholesale services where their remuneration rates were far below their male counterparts.

Case study 2, Appendix C is based on Nxolo who is a Black female working in the construction industry.

In Nxolo's interview, she explains that while legislation such as Affirmative Action urges females to seek employment in the male dominated industry of construction. There are large portions of men who oppose this. Nxolo believes that this is based on the beliefs of men that state women do not possess the skill and strength to work in such sectors. Men in the construction industry regard the work as inappropriate for females as the environment gets far too strenuous. Furthermore, men have the notion that women do not have the physical stamina to operate the machinery. According to Nxolo, it is not only men that oppose the involvement of women in the industry. Other females are also in opposition of joining these sectors; while some females are willing to learn construction skills, others simply state they cannot do the work.

Groenmeyer (2011) explains that intersectionality promotes the analysis of social identities that are deeply rooted in the customs of certain communities. Intersectionality serves to challenge the dichotomous identities formed by patriarchal communities. Groenmeyer (2011) further states that the labour market post-apartheid continues to be segregated by gendered divisions of labour. However, affirmative action gives female employees a new platform to challenge these divisions.

Nololo and Nxolo are both Black female entrepreneurs in possession of short-term contracts in their respective industries. The case studies of these two females were used to highlight how intersectionality demonstrates the contradictory process of equality. Additionally, the cases enforce that female entrepreneurs can confront masculine attitudes by breaking or conforming to stereotypes.

3.10. The relevance of intersectionality to the current study

This study is based on a content and bibliographic analysis of the SAJHRM and SAJIP. The main focus will be on the racial and gendered patterns of knowledge production within these disciplines. Intersectionality has been chosen to serve as the primary foundation. Intersectionality is used to explore how biographical characteristics intersect to reveal relationships that exist between social identities and knowledge production. The history of South Africa was characterised by severe discriminations for the minority racial and gendered groups due to the system of Apartheid. Therefore, it is important to investigate the effect that race and gender intersections have on the demographic patterns of academic scholars. Specifically focusing on academics at tertiary institutions since the introduction of democracy. A critical part of this study is expanding knowledge on how social identities such as race and gender intersect to shape the way in which knowledge is produced. In addition to exploring how the social identities of individuals affect the patterns of knowledge production. An investigation will be conducted to assess how or if researchers within the SAJHRM and SAJIP are using intersectionality in their studies. This section will speak to portions of the study done by Jones *et al.* (2013) (table 3.1). However, this analysis will differ in the sense that it will focus on a thorough thematic analysis. In which each article published in the SAJHRM and SAJIP from 2006-2016 will be analysed for any element of intersectionality. Even though the authors may not explicitly state that they used a type of intersectionality, the characteristics of each type will be searched for. The elements discovered will assist to categorise the articles into intercategorical, intragategorical or anticategorical intersectionality. This is important as it will provide insight into two main areas. Firstly, the number of articles being written with the theoretical underpinnings of intersectionality (intentionally or unintentionally used) will be examined. Secondly, it will help identify which categories of intersectionality are being used frequently.

3.11. Conclusion

The above review of intersectionality provided different perspectives from which intersectionality can be studied. It has been concluded that intersectionality is not confined to the relationships between race and gender. Intersectionality includes an array of social identities that can interact to result in advantages or oppressions depending on the situation. An intensive discussion has been conducted on the different ways in which intersectionality has previously been used in research. These uses range from health research to social research. Proving that intersectionality is a diverse theory that can be adapted to suit a collection of research topics. A brief discussion has been provided on intersectionality in organisations, this is important since the study strives to understand the biographic patterns of individuals within academic institutions.

Institutions function as organisations; therefore, it is vital to understand the criteria and processes that can be used to select academics fairly. Based on the premise that social identities intersect to result in advantages or oppressions, the intersectionality theory will be used by the researcher to answer the research questions. It will also be used to ascertain how the countries demographic patterns in academics has improved or remained the same since the introduction of democracy.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1. Introduction

The aim of this chapter is to provide an overview of the research method utilized during the course of the study. The discussion will be structured around the research epistemology, research design and research questions. The methods used for sampling and data collection will be assessed. The chapter will conclude with an explanation of how the study was ethical and maintained reliability and validity.

4.2. Distinction between research methods and methodology

Surbhi (2016) states that research methodology and research methods have different purposes in a study. Walliman (2011) explains that research methods is a collective term that refers to the tools, procedures and techniques that are used to gather and analyse data. In essence, research methods assist the researcher in obtaining information to ultimately solve the research problem. Walliman (2011) further explains that research methodology can be best defined as the science behind the methods used. The methodology provides a logical explanation for the steps and processes used by the researcher. The methodology portion of the study serves to elaborate on how the results were obtained. It further encompasses the epistemological approaches used to guide the research.

Figure 4.1 adapted from Mafuwane (2011) uses the layers of an onion to help illustrate exactly where in the research process the methodology and methods lie. The outermost layer of figure 4.1 represents the research methodology. It encompasses the research epistemology that one would choose for their study. The four inner layers represent the approaches, strategies, and methods of data sourcing used by the researcher. Collectively these layers equate to the research methods employed during any research study.

The following parts of this chapter will discuss in detail the methods and methodology used for the duration of this research study.
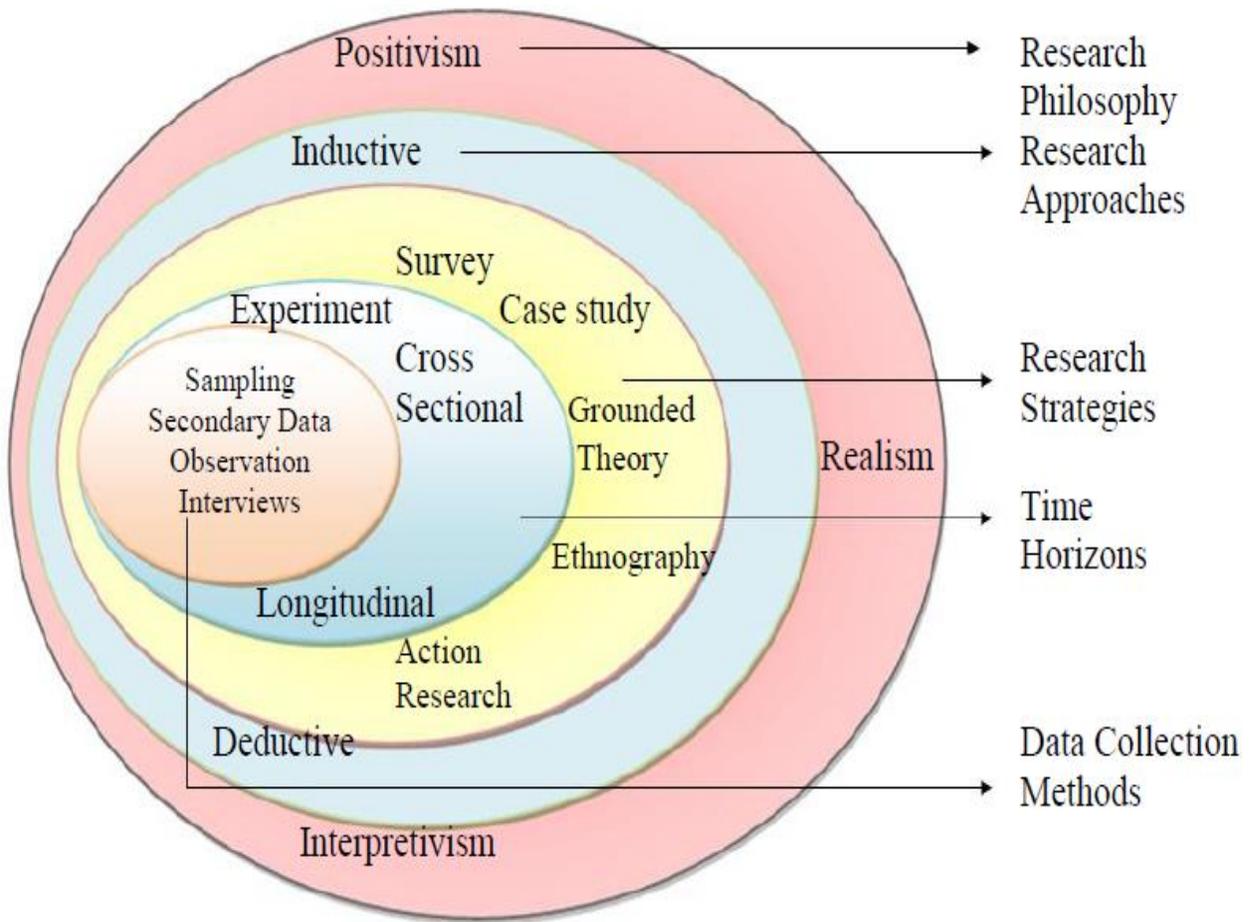
Figure 4.1: The research process onion.

Source: (Mafuwane, 2011, p.91).

4.3. Types of Research methods

In this section all three types of research methods will be discussed, however, the type applied to this study was mixed methods.

As explained by Cresswell (2014) there are three main types of research methods; quantitative, qualitative and mixed methods. Table 4.1 illustrates the main differences between each research type.

Table 4.1: Difference between the three types of research methods.

Quantitative Methods	Mixed Methods	Qualitative Methods
Pre-determined	Both predetermined and emerging methods	Emerging methods
Instrument based questions	Both open- and closed-ended questions	Open-ended questions
Performance data, attitude data, observational data, and census data	Multiple forms of data drawing on all possibilities	Interview data, observation data, document data, and audiovisual data
Statistical analysis	Statistical and text analysis	Text and image analysis
Statistical interpretation	Across databases interpretation	Themes, patterns interpretation

Source: (Cresswell, 2014, p.45).

4.3.1. Quantitative methods

Kumar (2011) defines quantitative research as research that seeks to explain a phenomenon. This can be done by collecting data that is numerical and analysing it by using statistically based methods. This type of research is typically concentrated on assessing and quantifying social realities. The research questions associated with quantitative research are developed in order to search for and establish quantities of an occurrence. Researchers that employ quantitative methods have a realistic view of the world and believe that phenomena's can be determined objectively through rigid processes. Similarly, Cresswell (2014) explains that the purpose of a quantitative study is for the researcher to be able to project their findings onto the greater population. Statistical data collected is interpreted and analysed to determine the probability that results can be imitated within the entire population.

4.3.2. Qualitative methods

Hansen (2006) explains that qualitative research attempts to provide explanations for a social occurrence. It focuses on determining how it is possible for individuals to have different ways of perceiving reality. Qualitative research examines behaviour without manipulating any of the variables. The aim is to develop new concepts and theories. Cresswell (2014) further states that qualitative research is characterised by the presence of contextual data. Usually collected through interviews, surveys, focus groups and document analysis.

4.3.3. Mixed methods

Cresswell and Clark (2011) explain that mixed methods research contains means of inquiry as well as philosophical assumptions. This means that as a research method it contains a mixture of quantitative and qualitative data in a single study. The premise behind mixed methods research is that the combined use of quantitative and qualitative approaches provides an enhanced understanding of the research problem. That would not be achieved by using either method in isolation. Creswell, Fetters and Ivankova (2004) argue that a mixed method study is more complicated than simply gathering quantitative and qualitative data. Mixed method research allows for data to be related and integrated at some point during the research process. Resulting in a more thorough and complete analysis (Cresswell *et al.*, 2004). In pursuit of a similar argument as Cresswell *et al*. (2004), Johnson and Onwuegbuzi (2004) state that mixed methods research allows for the detection of patterns. This is done through the process of induction and the testing of theories by using deduction. Thus, allowing a mixed methods study to yield results far more precise than those deduced solely via quantitative or qualitative methods.

The type of research that has been used for this study is mixed methods research. As one can deduce from the above explanation and the illustration in table 4.1, mixed methods focuses on the collection of numerical data as well as theoretical data. In this study, the researcher had to gather bibliographic data of authors in numerical values. Therefore, answering a portion of the research questions by providing quantities. This in essence as per the explanation provided Kumar (2011) forms part of the quantitative portion of the study. The statistical data collected from this study was further used to make a generalisation of all research production in South Africa.

The researcher then analysed the actual content of each article from the respective journals. The content analysis allowed the researcher to identify keywords and eventually themes were developed with the use of thematic analysis. Additionally, the content of the articles was analysed to gather evidence on how frequently the intersectionality theory was used in management studies. This supports the argument made

by Cresswell *et al*. (2004) because inferential statistics were used in conjunction with qualitative content analysis to arrive at specific conclusions.

In order to produce results the researcher used inferential statistics, thematic analysis and content analysis. Due to the combination of statistical and thematic analysis techniques, the study followed a mixed methods research approach.

4.4. Research questions

The central research question that this dissertation attempts to answer is:

What are the bibliometric and knowledge production trends in the SAJHRM and SAJIP from 2006 to 2016?

4.4.1. Sub-questions

1. Which authors have published the most articles in the SAJIP and SAJHRM from 2006 to 2016?
2. Which countries do authors from the SAJHRM and SAJIP originate?
3. Which Universities do authors from the SAJHRM and SAJIP originate?
4. What are the demographic profiles of authors publishing in the SAJHRM and SAJIP?
5. Which software package is most frequently used to analyse data?
6. What are the most widely used research methodologies?
7. What are the main themes explored in the SAJHRM and SAJIP?
8. Which approaches of intersectionality are more evident amongst articles?

4.5. Research Paradigms

The term paradigm derived from the Greek word *paradeigma* which translates to the English word "*pattern*". The concept of paradigms was first used by the philosopher, Thomas Samuel Khun in 1962. It was used to signify a conceptual framework that provided a group of scientists with a model to evaluate problems and discover solutions (Thomas, 2010).

Scotland (2012) explains that research paradigms consist of the ontology, epistemology, methods and methodology used by a researcher. Each component used is interrelated and influential on the next. Each paradigm is based on its own epistemological and ontological assumptions. According to Scotland (2012) assumptions are simply the philosophical foundations of a paradigm and cannot be empirically disproven or proven.

Chisengantambu (2015) explains that ontology deals with the construction of, understanding and meaning of a shared social phenomenon. Its main concern is to essentially develop an understanding of the multiple entities that exist. Blaikie (2000) describes ontology as assumptions and claims about social realities and how they interact with each other. Gray (2008) states that epistemology differs from ontology. In the sense that epistemology takes a philosophical stance on trying to understand what is real and relevant about a certain phenomenon. According to Scotland (2012) both epistemology and ontology contain aspects that are concerned with a person's 'worldview'.

For the purpose of this study, the researcher has adopted an epistemological approach. Further discussions will be based on the variations of the epistemological sectors that exist and the particular type that has been relevant throughout the research process.

4.5.1 Epistemology of research

According to Wenning (2009), epistemology is the reasoning behind why an individual knows what they say they know. Epistemology stems from the term '*episteme"* which means the study of. Therefore, it can be concluded that epistemology refers to the study of information or knowledge. Wenning (2009) states that there are 3 questions that epistemology seeks to answer these are:

1- What is the meaning of knowledge and what does it mean to know something?
2- What source provides knowledge and how reliable is it?
3- What are the limitations of knowledge?

Cohen (2007) states that epistemology is focused on explaining how knowledge is generated and communicated. Cohen (2007) goes on to explain that every paradigm of research is based on a set of unique epistemological assumptions and views. Scotland (2012) explains that epistemology also provides philosophical foundations for deciding what types of knowledge are applicable. As well as how individuals can maintain the legitimacy and adequacy of knowledge.

There are three research epistemologies that will be discussed further in this section they are interpretivism, positivism and pragmatism.

4.5.1.1 Interpretivism and Positivism

Elster (2007) explains that interpretivism is an approach that places emphasis on individual's characters and contributions to the cultural and social aspects of life. It signifies that research methods will adopt the information that people have about social constructs.

Interpretivists search for the meaning that sparks people's behaviour within society. According to Vosloo (2014) interpretivism functions on three key ideologies. Firstly, it is believed that people construct and provide the world with meaning. Secondly, the researcher is one part of what is being observed and lastly, interpretive research is determined by interest. Interpretivists suggest that there is no such thing such as an incorrect or correct theory. Theories should be judged on how interesting the researchers feel that they are.

According to Steinmetz (2005) positivism can mean three things. Firstly, it can mean assurance of social development. Secondly, it could be a reference to a traditional philosophy and lastly, positivism could refer to scientific practices of research. Steinmetz (2005) states that the last meaning is the most important and relevant.

Riley (2007) further explains that positivists have a strong belief that reality is stable and can be observed objectively. It does not require interference with the phenomenon being studied. The phenomenon should be isolated and observed repeatedly. Neuman (2003) states that positivism views social science as a systematic method for merging empirical observations and inferential logic. In an attempt to ascertain a set of probabilistic laws and to predict patterns of human actions and activity.

4.5.1.2. Pragmatism

Raylander (2012) explains that pragmatism originated in America during the late 1900's, making it a relatively new epistemology. The traditional descriptions of pragmatism teach researchers the importance of considering the manner in which theories can be linked to practice. Similarly, Hannes and Lockwood (2011) state that the basis of pragmatism bis that the truth of any idea is determined by some criteria of how useful it is in practice. In other words, the worth of an idea is located in the practical repercussions of accepting it.

Biesta (2010) explains that pragmatism strives to eliminate the hierarchies that exist between constructivism and positivism. This is done by addressing the relations between deduction and induction. Pragmatism develops theories based on methods of observation and thereafter assesses those theories via practical application.

Morgan (2007) states that pragmatists believe that philosophies can be both generalised and context specific. Similarly, a pragmatic researcher can maintain the subjectivity of their reflections as well as objectivity when collecting and analysing data.

Creswell (2009) explains that the pragmatic approach caters for the use of both quantitative and qualitative data collection methods. It further allows for an inquiry into composite social phenomena. By using a

pragmatic approach to research, one would be able to conduct a mixed method study from a subjective and objective point of view.

Ihuah and Eaton (2013) state that a pragmatic approach allows a researcher to study areas of interest. Through the embracing of various appropriate methods and applying their results in a positive manner. Additionally, Creswell (2009) explains that characteristically pragmatism is a multi-purpose approach. It addresses questions that do not resonate entirely with the principles of qualitative or quantitative research approaches. Therefore, pragmatism identifies best with a mixed method study.

For this research, a pragmatic epistemology was followed. The researcher decided that this epistemology resonated best with the type of study being conducted. The study takes on a mixed methods approach and therefore does not conform to the ideals of positivism or interpretivism.

4.6. Methods of Analysis

Burns and Grove (2003) state that research design can be defined as the blueprint for research studies. As its aim is to have supreme control over various factors that could affect the validity of the final outcome. De Vaus (2001) explains that research design is a structure that is needed before data collection and analysis can begin. The Main purpose of the research design phase is to provide answers to the research questions in an explicitly clear manner (De Vaus, 2001).

De Vaus (2001) states that there are different types of research designs. Each design has a corresponding research method that should be used. Research designs range from experimental research, which studies the consequences of a proposed action. To case studies that focus on the effects and implications of certain scenarios.

For this research study, the researcher adopted content analysis and bibliometrics as the research design. The reason for this is that the research involved analysing the content of journal articles that were published in the SAJHRM and SAJIP. These designs are the most suitable for this study because the researcher will conduct an in-depth study of the content of the articles. The researcher will extract information regarding the bibliographic elements of each author. Statistics on the methods used to conduct the research studies will be analysed and themes will also be identified.

4.6.1. Content Analysis
Krippendorff (2004) explains that content analysis is a research technique that can be used to draw valid and replicable inferences from a pool of texts. These inferences are then compared to the contexts of their use. The concept of inferences is particularly important to content analysis studies. The researcher uses

regulations of inference to analyse the text and answer the research questions. It is imperative to note that the domains of context and text are logically autonomous. The researcher can draw conclusions from one domain or the other. Krippendorff (2004) furthers states that the analytical constructs of content analysis can be derived from the knowledge or experiences of experts, existing practices as well as previous research.

Devi (2009) supports Krippendorff (2004) by stating that content analysis is a tool in research that can be utilised to determine the incidence of certain concepts in a set of texts. Researchers are able to quantify and study the presence and relationships of such words. Then draw inferences about the message, the culture and even the writers within the body of texts. This reinforces the importance that Krippendorff (2004) places on inferences.

White and Marsh (2006) explain that content analysis is a flexible method of research. It has been used in a variety of studies with an assortment of analytical techniques. Content analysis can be used suitably for studies that are quantitative, qualitative and mixed in nature (White & Marsh, 2006).

4.6.1.1. Qualitative content analysis

Devi (2009) explains that qualitative content analysis includes any type of study where content Is classified and categorised. With the increase of available computing infrastructure and facilities, computer-based analysis is growing. Hashemnezhad (2015) states that qualitative content analysis is being used more frequently in studies. Hashemnezhad (2015) describes the qualitative content analysis process as a research method that can provide subjective clarification of the content of text information. This is done using a systematic process of coding and identifying patterns. Hsieh and Shannon (2005) define qualitative content analysis as being deductive. With the intended purpose of testing hypotheses or addressing research questions.

According to Devi (2009) the first study based on qualitative content analysis included the first newspapers in the 19th century. The analysis was done by calculating the number of lines and space given to an article, this was carried out manually. In more recent years the rise in technology allows Newspaper articles, journals, political manifestoes and medical records to be readily available. Thus, these texts are subject to intense systematic analysis of contextual data.

Krippendorf (2004) states that to make effective inferences in qualitative content analysis the body of text being used in the study should be coded using a uniformed classification technique.

Hsieh and Shannon (2005) have identified three approaches that can be used when conducting a qualitative content analysis. the first approach is a conventional analysis, this involves the development of coding categories that are derived from the pool of raw data. The second approach is a direct analysis, this is used

when the coding begins with a specific theory or relevant findings from research. The last approach is a summative analysis, which includes the counting of words and spreads the analysis to incorporate latent themes and meanings.

4.6.1.2. Quantitative Content Analysis

Bumetea (2013) states that in contrast to qualitative content analysis. Quantitative content analysis is a replicable investigation. Based on communication symbols which have been allocated numeric values according to the analysis of relationships. In quantitative content analysis, statistical tools and methods are used to describe communications. The methods of analysis used in quantitative content analysis are visual as well as written and can encompass multiple forms of graphics. Which can be defined as any visual illustration of data (Krippendorf, 2004). However, Rose, Spinks and Canhoto (2014) warn that the visual representations used can pose distinct problems. This due to the ambiguities that are not evidently relayed within the message. Rose *et al.* (2014) explain that ambiguity can be avoided by looking at each aspect of texts, visuals and graphics as a whole. Understanding that each needs to convey a unanimous message. The combination of image and text needs to provide superior clarity than each would provide independently.

According to Hsieh and Shannon (2005), the main requirement for quantitative content analysis is that data should be selected using probabilistic approaches or random sampling. These ensure that statistical inferences are valid. Hsieh and Shannon (2005) further state that quantitative content analysis is mainly used in studies dealing with mass communications as a method to count word-based elements.

The products of the two types of content analysis are fairly different. The quantitative type produces numerical values that can be manipulated through statistical methods, the qualitative type produces typologies or descriptions of the social world.

In this study the researcher used both qualitative and quantitative content analysis. It was necessary to use the two types in conjunction with each other. The data being extracted from each article was a mixture of statistics and theory.

For the quantitative content analysis, the researcher extracted data from each article based on the various types of research methods used. The researcher then used inferential statistics to make inferences about the research patterns of authors publishing in both journals. The identified patterns are graphically presented in chapter five.

The qualitative content analysis of both journals involved a vigorous process of thematic analysis. The researcher studied each article and identified keywords. These words summarised the main aspects of the topic of the article. Each journal produced multiple keywords. These keywords were then analysed and grouped together. The groups of words were further studied which allowed the researcher to arrive at specific themes that best described the content being published in these journals. Basically, the researcher has used two types of qualitative content analysis identified by Hsieh and Shannon (2005). The conventional and summative approach. The researcher coded categories from an entire data set as well as counted recurring keywords to develop themes and meanings.

4.6.2. Bibliometrics and scientometrics

Taylor (2013) states that bibliometrics in the 21st century can be described as a mathematic or statistical method. Usually used to evaluate scientific publications by using quantitative research methods. The definition given by Taylor (2013) has been adapted from the first recognised definition of bibliometrics provided by Pritchard (1969). Pritchard (1969) states that bibliometrics is; "the application of mathematical and statistical methods to books and other media of communication." Concurrently Nalimov and Mulchenko (1969) defined scientometrics as "the application of those quantitative methods which are dealing with the analysis of science as viewed as an information process". Since these definitions were released simultaneously and are fairly similar scholars began using the two terms synonymously. However, for the purpose of this research study bibliometrics will be retained as the favoured term.

According to Ellegaard and Wallin (2015), bibliometrics has been used to provide a quantitative examination of written publications. Ellegaard and Wallin (2015) further state that initially bibliometrics consisted mostly of bibliographic impressions of highly cited scientific publications. Usually consisting of multiple sub-divisions based on lists of authors information and their subject or national bibliographies. Lin (2012) reinforces this by stating that the focus of bibliometrics is often based on performance and development patterns of authors. Being conducted over certain time periods as well as concentrating on geographic and institutional information.

Wallin (2005) explains that in effort to extract and control data, bibliometric methods centered around citation or content analysis is used. These methods have greatly benefitted from technological data handling. Resulting in an increase in the number of bibliometric studies being published. The computerisation of data is imperative to bibliometrics because a large volume of data is required for the analysis to be statistically reliable and valid.

Barth, Haustein and Scheidt (2014) state that citation analysis is one of the popular methods applied to bibliometric studies. Particularly when the research involves individual author or university rankings. One

of the main reasons for conducting this type of study is to be able to overview the fields of literature. Traditionally a literature review would provide this information. However, a simple article review will only summarize selected content. Contrastingly, bibliometric analysis focuses on an array of statistically related data (Haustein&Scheidt, 2014).

4.6.2.1. Uses of bibliometrics

Measuring scientific collaboration

Bibliometrics offers extremely valuable insights into the analysis of scientific collaborative activity. This is measured through analysing publications and determining the organisational affiliation of every author. Measuring scientific collaboration allows for comparisons to be made between national and global cooperation's (Moed, 2007).

Assessing interdisciplinary research

Within the research society, interdisciplinary research is regarded as a weak point for the peer review process. Moed (2007) explains that there are three basic approaches for examining interdisciplinary research by using bibliometrics. The first approach is called raw publication analysis. For this approach to assess the impact of a particular research, a profile needs to be built which includes the contribution of a specific author or institution. Thereafter a measure of interdisciplinary research can result from the circulation of the publication across academic fields. Second is an approach that consists of assessing the different disciplines and fields that an author draws data from to produce articles for a journal. Lastly, a more intense approach includes analysing all the fields that journal articles published by a single author or group fall under. However, research done in the same year as Moed (2007) by Adams (2007) states that there is no need to have separate bibliometric approaches to measure interdisciplinary research. Patterns that can be observed are similar across all fields of research.

Holden and Weissman (2004) explain the most general uses of bibliometrics are identifying strengths and weaknesses of an institution for future research. Bibliometrics can be useful for identifying high-performing research institutions and identifying authors who publish a large amount of research. Bibliometrics can also be of great use to research students by helping them to demonstrate their research value to an institution or for applying for grants (Holden & Weissman, 2004).

4.6.2.2. Bibliometric indicators and measures

Ismail, Nason, Marjanovic and Grant (2009) explains that bibliometrics has evolved to incorporate a wide range of indicators and measures. The most commonly used indicators and measures used will be discussed below.

Publication volume measures

This is the simplest indicator of biometrics. It measures the raw output of the number of published research papers produced by an institution, individual or group. Ismail *et al.* (2009) state that this measure has many limitations. Firstly, the number of published outputs by a single author or group does not have an effect on the impact of their research. Evidence Ltd (2007) provides an interesting example to support the statement made by Ismail *et al.* (2009). Evidence Ltd (2007) explains that in the United Kingdom (UK) there has been a decrease in the number of total publications contributed to worldwide academics. However, that does not prove any negative effect on the quality and impact of all publications produced within the UK. Secondly, the measurement of output has analytical implications because capacity is so multidimensional it is hard to control. An institution that is relatively large will have an increased capacity for the production of broader and more diversified outputs.

Citation analyses

Citation analysis is unquestionably an area where a broad variety of measures have been established (Ismail *et al.*,2009). Verbeek (2002) explains that the structure of citation analysis in terms of bibliometric studies is supported by certain assumptions. These assumptions are as follows.

Citing a specific document indicates that the document has been used. Citing a document implies that the document is of superior quality and significance. Only the best pieces of literature are cited and lastly citing a piece of literature means that it is directly related to the piece of work it was cited in. However, Ismail *et al.* (2009) state that citation analysis has the tendency to be skewed in its measurement.

Distribution-based approaches

Ismail *et al.* (2009) explain that utilising distribution as a bibliometric measure has multiple analytic advantages. Such as the capacity to produce the exact portion of total cited papers. The ability to identify benchmarks and further provide the precise portion of papers that fall short or above the benchmark in accordance with average performance. Distribution approaches also provide a percentage of literature that have large citation levels, it allows for comparisons to be made between medians as opposed to the mean. Ismail *et al.* (2009) further explain that distribution approaches have gained increased preference since it has been incorporated into the Excellence in Research for Australia initiative.

It is acknowledged that there are multiple uses for bibliometrics. However, for this research bibliometrics will be used to report on the demographic profiles of authors. This will enable the researcher to track

patterns of change across the years based on the demographics of individuals. Tracking said patterns will assist in ascertaining how the demographic profiles of authors have changed or remained the same since the commencement of these journals. The generalisation of these results will be used to decipher whether the academic environment in South Africa reflects the epitomes of a democratic country.

4.7. The population

For research purposes, the term "population" does not refer to the population of a country. It refers to objects, subjects, phenomena's, cases, events, and activities that researchers want to conduct study in order to acquire new knowledge. Asiamah, Mensah and Abayie (2017) explain that in research the population generally means a hefty collection of objects or individuals that the study will focus on. The population can also be defined as a distinct group of individuals known to possess characteristics that are alike. However, owing to the enormity of populations researchers cannot observe or analyse every individual. Therefore, they adopt and rely on various sampling methods. Brynard and Hanekom (2006) explain that there are two types of population in research. The first type is called a target population this is the entire collection of objects or individuals that are of interest to the researchers. The second type is a subsection of target populations and is known as the accessible population. Referring to a population to which the researchers can apply their outcomes.

For this research study, the researcher used a target population that consists of all the articles published in the SAJHRM and SAJIP since its inception.

4.8. Sampling

Sampling is defined by Brynard and Hanekom (2006) as the process of choosing an appropriate representation of an entire population. This representation is used to make observations or to determine certain characteristics of the population. The main purpose is to draw conclusions about the population from a sample. It is suggested that inferential statistics be used to be able to conclude on the characteristics of the population by only observing a sample. A sample is preferred over a complete record because it costs less, and it is more practical to observe a portion rather than a whole. Sekaran and Bougie (2015) define a sample as a subset of the population which is comprised of some members selected from it. By studying

the sample, the researcher should be able to draw conclusions that are generalisable to the population of interest (Sekaran and Bougie, 2015).

4.8.1. The sampling frame

As explained above the sample is a subset of the population that is studied to draw conclusions about the whole. Ishak and Abu Bakar (2014) explain that a sample frame is a source from which the sample is chosen. The purpose of sampling frames is to provide a way for researchers to choose specific individuals to be a part of the sample. For example, the payroll system of an organisation would be the ideal sample frame if any of its employees were to be a part of the population for a research project.

Turner (2003) states that the best sampling frames have the characteristics of being:

Current: A frame should ideally be up-to-date to fulfil its purpose. A sampling frame that is obsolete will contain inaccuracies such as being incomplete.
Accurate: It is imperative for sampling frames to be precise. This ensures that each element of the population is only observed once.
Complete: The most useful sample frame would be one that is complete in terms of the population. The amount of coverage that a frame has is essential for it to be considered as suitable.

In this research study, the sample frame was drawn from the SAJHRM and SAJIP website. The sample frame contains all the essential characteristics mentioned by Turner (2003). It was current because journal articles get published every month. It was accurate because an article is only published once in the journal and the same article cannot be published. It was complete because it contained every article published between the years 2006 to 2016.

4.8.2. Sampling Techniques

Sekeran and Bougie (2015) explain that there are two main sampling techniques, probability and non-probability sampling. In probability sampling, a researcher is able to identify or estimate the likelihood that an element has for being a part of the sample. In non-probability sampling, the researchers cannot provide an estimate of the probability that an element has to be chosen. When researchers are concerned with generalising their findings probability sampling will be used. In many instances, probability sampling will be referred to as random sampling. The term random implies that every element has an equal or known chance of being chosen.

For this research, the researcher used probability sampling because they knew precisely which elements; in this case, articles will be chosen to be a part of the sampling frame. Probability sampling was also chosen because the researcher intended to generalise the results (Sekeran and Bougie, 2015).

4.8.2.1. Type of probability sampling used

Sekeran and Bougie (2015) explain that there is an assortment of probability sampling techniques that one could use. These types range from Simple random sampling where every element within the available population has the same chance of being a part of the sample. There is stratified random sampling which is used when a researcher wants to randomly sample a population. Meaning that they generally want a representative sample. Therefore, a sample from each stratum or layer is chosen (Sekeran & Bougie, 2015). And lastly, there's cluster sampling. Sekeran and Bougie (2015) explain that cluster sampling occurs when samples are grouped in chunks of elements rather than individually. In this type of sampling, the whole population is separated into clusters. Thereafter a random sample is chosen from the clusters. Cluster sampling differs from stratified sampling because the groups possess more heterogeneity rather than homogeneity.

For this study cluster sampling was used.

Fienberg (2003) explains that there are two reasons why cluster sampling is used. Firstly, in many cases a list of dependable elements for the population is unavailable and the cost of drawing up such a list is exuberant. However, researchers can easily draw up a list of clusters thus it makes sense to use clusters as a unit of sampling. This is usually used when sampling human populations because it is easier to make a list of all the clusters in the population rather than individuals. Secondly, in circumstances when lists of individual elements are available, the cost of locating each element is high. Therefore, using cluster sampling reduces cost because the information gathered from one cluster group can be generalised.

Kruger and Welman (2001) support what has been explained by Fienberg (2003) by stating that that for research done on a large scale it is virtually impossible to obtain or compose a list of every element within the population. However, when cluster sampling is used heterogeneous cluster groups are used as the sample thus making the entire research procedure easier.

Cluster sampling suited this study best because there were thousands of articles published in the SAJHRM and SAJIP since its inception. Listing each article from every year would be an insurmountable task. The researcher chose a cluster of years and only analysed the data provided by articles published during that cluster period.

4.8.3. Cluster sampling in bibliometrics

Bornmann and Mutz (2013) explain that in bibliometrics cluster sampling forms a 2-phase design. First, one cluster is casually chosen from a group of clusters. Second, all bibliometric information is collected for each cluster. It is important that all clusters are not significantly different from each other, the metrics in every cluster has to be heterogenic.

Bornmann and Mutz (2013) state that cluster sampling is extremely useful if every cluster is a representation of the entire population. When there is bibliometric data available for the entire establishment, it is possible to test if a certain cluster is different from the larger population.

Bornmann and Mutz (2013) explain that when using cluster sampling in bibliometrics the years of publication are used. Using the years of publication as cluster methods is suitable because it allows for subsets to be easily created without any bias. If the authors were used instead of the publication years there would be many problems. Firstly, homonyms will make it extremely difficult to compile the articles unambiguously. Secondly, the publishing activities of scientists vary. Therefore, using the author's name will result in the population not being adequately represented. By using the years of publication, it can be assumed that each author's performance differs slightly between the years and significantly within each year.

In this research study, the cluster sampling method was used. Consisting of a cluster obtained from articles published between the years 2006 to 2016 in the SAJHRM and SAJIP. The researcher chose to cluster the articles according to publication years. It was easier to group in that manner as explained above. Cluster sampling was appropriate for the type of bibliometric study being done because the researcher followed both phases explained by Bornmann and Mutz (2013). First, the researcher grouped the articles published in 10 consecutive years whereas Bornmann and Mutz (2013) state that a minimum of three years should be used. After clustering the articles, the researcher extracted all of the bibliometric data such as gender, race, country of origin and institutional affiliations from each article. By using this type of probability sampling the researcher believes that the results will be more generalisable and informative.

4.9. Data Collection

Data collection refers to the process of collecting and assessing information in a systematic manner. Enabling the researcher to evaluate the results and provide answers to the research questions.

The researcher will be using an unobtrusive data collection method. Babbie (2010) explains that unobtrusive research is indirect and does not require the researcher to interfere with the research. An unobtrusive method

of collecting data reduces the possibility of the researcher posing any biases that would occur from intrusion.

Figure 4.2: Article collection

For this study, the researcher engaged in the mining of articles from the two journals for the years 2006 to 2016. The researcher then analysed each article and extracted information about the author and article details. Information included author's names, race, gender, country of origin, institutional affiliation as well as the research approach, research type and the software package used. This information was then entered into an excel spreadsheet.

Figure 2 shows the system in which articles were downloaded and saved. The researcher downloaded each article from the archives of the journal and saved each article in a uniform manner. As can be seen in figure 2, the authors' surname was used followed by a full stop, first initial, underscore and then year. Each year was saved in a different folder. By collecting and saving articles in this manner it makes it easy for the researcher to locate articles when needed.

4.9.1. Classifying types of intersectionality

As explained in chapter three, there are different types of intersectionality. Intercategorical commonly referred to as categorical intersectionality assesses the differences between multiple social identities. Anticategorical intersectionality believes that humans function independently of any social groupings. Intracategorical intersectionality takes a specific social group (only one group at a time) and analyses the ways in which individuals from that group differ.

Table 4.2 shows the criteria used to classify which type of intersectionality the articles fall under. An article will be classified under the category that it has at least two criterions in common with.

4.9.2. Development of themes

Each article was analysed and keywords were extracted onto an excel spreadsheet as shown in figure 4.2. The keywords were identified by reading the articles and detecting words that best described the main topics being discussed. This was done for all articles in the SAJHRM and SAJIP from 2006 to 2016. Eventually, all the keywords that shared similar characteristics were grouped together under one term to form themes. This process is discussed further under section 4.10.

Table 4.2: Criteria for intersectional groupings

Categorical Intersectionality	Anticategorical Intersectionality	Intracategorical Intersectionality
Two or more social identities being studied simultaneously.	There is no mention of social identities.	Only one social identity being studied.
Reporting of similarities or differences between each social identity.	Social phenomena's are discussed independently of social groups.	Reporting of social phenomena's pertaining to one social identity.
Inequalities between social identities should be apparent.		Discussion about how individuals differ from that social identity only.

	A	B	C
1	KEY WORDS SAJIP		
2	2006	2007	2008
3	job demand	Bullying behaviours	job satisfaction
4	team	Union	performance
5	social roles	Job stress	stress,
6	conflict	psychology	personality
7	spiritualness	psychology	individualism
8	validation	resistance to change	emotional intelligence
9	self-efficacy	Burnout	leadership
10	leadership	Psychological empowerment	workplace culture
11	self-efficacy	Job demands	restructuring,
12	validation	job satisfaction	teamwork
13	learning	Sexual harrassment	burnout
14	personality	reliability	emotional intelligence

Figure 4.3: Keywords from articles

4.10. Data analysis

One of the final, most interesting yet time-consuming stages of a research project is data analysis. Sekaran and Bougie (2015) define data analysis as a systematic process in which information is collected statistically and then analysed to determine whether the hypotheses are supported.

For this research, the data analysis techniques used in this study was descriptive statistics as well as thematic analysis.

4.10.1. Descriptive statistics:

Braun and Clarke (2006) explain that this type of analysis forms the basis of quantitative research. It is mainly used to provide a description of the features and characteristics of a research study. Descriptive statistics provides a summary of the research. The most popular forms of descriptive statistics are frequency, mean, median and mode. Frequency refers to the number of observations that fall under a specific group. It is important to calculate the percentage of the frequency. This is done by dividing the frequency of the class by the total number of observations and then multiplying the result by 100. The median is the value or variable in a set of data that divides values that have been observed in half. Mean refers to the average value

of all data collected. The mean is calculated by adding all the values in a data set and dividing it by the total sum of values.

Descriptive statistics was used in this research. Once the researcher analysed all the relevant data extracted from the journal the findings were tabulated. The tabulation was done by calculating the frequency and percentage frequency for every unit of data collected. The researcher further used descriptive statistics to convey their observations. The researcher provided an in-depth description of their finding and how those findings assisted in answering the research questions.

4.10.2. Thematic analysis:

Braun and Clarke (2006) explain that thematic analysis was historically used in qualitative research. It involves sifting through data and information to identify any repeated patterns. A theme can be defined as a cluster of categories that are linked and seek to convey the same meaning. This technique possesses a great amount of exploratory supremacy. It is usually guided and improved by researchers who have no prior knowledge of the particular subject matter, therefore, they are not influenced by any biases or preconceptions, thus the researcher is not required to be an expert.

The researcher used thematic analysis because it was necessary to examine all of the information and literature within the articles. This was done to identify prevalent themes being published within articles of the SAJHRM and SAJIP between 2006 and 2016.

4.10.2.1. Steps in thematic analysis

According to Braun and Clarke (2006), there are 6 steps a researcher should follow when conducting a thematic analysis. Each step is expanded on below and an explanation of how these steps were adopted by the researcher to thematically analyse the SAJHRM and SAJIP is provided.

Step 1: Get familiar with the data

When engaging in an analysis it is imperative for the researcher to immerse themselves into the content of the data. Immersion typically involves repeatedly reading the data in an active manner, searching for patterns and meanings. When a researcher reads their data set multiple times before coding ideas are much more vividly. Ibrahim (2012) states that when using a large sample the researcher might be tempted to skip this step as it may be time-consuming. However, this is strongly advised against as step 1 provides the foundation for the rest of the thematic process.

For this study, the researcher read through the article once before saving, and an additional time before making notes of keywords

Step 2: Generating initial codes

Step 2 starts when the researcher has generated a preliminary list of thoughts that they find interesting about the data. These thoughts are then processed into initial codes. Tuckett (2005) explains that codes categorise features of data that spark the interest of the analyst. These represent the most fundamental segment of raw data that can be assessed in a consequential way concerning the phenomenon.

Ibrahim (2012) states that coding can be done manually or with the use of software programmes. When coding manually the researcher can write notes based on the texts being studied. One can also identify the initial codes then match them to extracts from the data set that demonstrate characteristics of the specific code. The key to successfully performing step 2 is to code for the maximum possible themes and to keep in mind that one extract can be coded multiple times.

In order to generate initial codes, the researcher used keywords that were identified manually from each article published in both journals. The keywords were then grouped according to categories of similarity. Basically, for this study step 2 was further divided into two subsections. The researcher found keywords that best described the contents of the articles and then filtered the keywords to form codes.

Step 3: probing for themes

Step 3 begins when all data has been collated. This step will refocus the analysis and involves organising codes into potential themes. Ibrahim (2012) states that it may be useful to use graphical presentations to help allocate codes to themes. Some codes may form core themes, others might form secondary themes and some might be discarded altogether. This step ends with an assortment of candidate themes.

In the study of the SAJHRM and SAJIP the researcher developed themes based on the codes, the initial themes were in sentence form to cover multiple keywords.

Step 4: Reviewing themes

Themes need to be reviewed and refined. Data within the themes should be coherent and meaningful while individual themes should be distinct and identifiable. Phase 4 encompasses 2 levels; the first level includes reviewing the coded extracts. This involves reading each code that made up a certain theme and ensuring that he codes correlate to form a coherent pattern. If the themes form a logical pattern, the researcher can proceed to level two. If not, the researcher will have to consider whether the theme is problematic or if codes within the themes do not fit. In level two the researcher will take into consideration the validity of each theme relative to the data set.

This step can be similar to editing written work. One could endlessly edit paragraphs and sentences, but after a few editing sessions, it becomes unnecessary refinement. Similarly, after editing the themes a few times one should not make any changes that could be considered redundant.

After the researcher developed definite codes that accurately described the SAJHRM and SAJIP, the researcher had a fairly good idea about how each theme complemented the journals and how the overall story about the journals manifested through the themes.

Step 5: Naming and defining themes

For step 5 it is required that the researcher refines each theme. This means that there should precise identification and description of the fundamental nature of what each theme encompasses. It is imperative that a theme is not too complex or diverse, themes should be precise. When defining a theme the researcher should write a detailed analysis for each individual theme. Then further explain how the themes relate to each other. During this refinement phase the researcher should identify any sub-themes that exist, sub these are useful to show a hierarchy of meaning within the data. When stage 5 is complete the content and scope of each theme should be described specifically in a few sentences.

Step 6: generating the report

Braun and Clarke (2006) explain that step 6 begins when there is a complete set of themes. The objective of step 6 involves generating the final write up analysis for the report. Whether the analysis is for research assignments, publication or dissertation purposes it has the important role of relaying the intrinsic story of one's data. It is usually done in a manner that convinces the readers of the validity and merit of the analysis.

At the end of the thematic analysis process the researcher had two sets of themes for both journals. These themes have been entered onto a diagram which is presented in chapter 5. Each theme from a journal is discussed in detail and related to the next journal. By making comparisons between the themes of both journals, one can conclude whether the research being published in each journal is different or similar.

4.11. Ethical Considerations

Bryman (2008) explains that every aspect of research can result in ethical issues. Therefore, it is imperative for researchers to be ethically compliant.

Possessing an ethical demeanour when conducting research means that the fundamental principles of ethics are applied. Ethics is comprised of much more than just theories and philosophies. There are ethical

components in every facet of life. When research is being conducted an ethical evaluation needs to be done. Often researchers misunderstand ethics to be hampering to the progress of research. It is accurate that ethics aims to create boundaries for what can and cannot be possible during research. However, it does not seek to undermine the freedom of research (Bryman, 2008).

Karatzas (2013) states that research that involves humans can aid the advancement of human well-being and knowledge. Such research is conducted for many reasons such as to eradicate suffering, dispel ignorance or evaluate the behaviour of humans. This type of research is driven by the need to obtain a wider understanding and broaden one's knowledge. Which may be beneficial to specific groups of people and society at large. With that being said, research involving people may have some sort of ethical vulnerabilities. Therefore, it is a requirement that ethical clearance is obtained before embarking on any form of investigation. Ethical approval is necessary in order to safeguard the rights of all participants. It also lessens the risk of any mental or physical danger caused by research proceedings to the participants. It protects the researcher and enforces their right to conduct legitimate studies. It also protects the university or organisations reputation. When ethical approval has been obtained the probability of any claims of negligence against the organisation or researcher is minimised (Dantzker & Hunter, 2012).

In this specific study, there were no particular ethical issues faced by the researcher. The researcher did not interact with humans or any other vulnerable groups. All the articles within the SAJHRM and SAJIP are a part of a free online publication that is accessible to all members of the public. Furthermore, the researcher was granted ethical approval (Appendix E) from the University of KwaZulu-Natal. All information discovered from the research about the authors were stored privately and kept confidential

4.12. Reliability, Validity and Trustworthiness

Golafshani (2003) explains that reliability is dependent on the level of consistency that a measurement possesses. It can also refer to the extent that an instrument produces the same results every time it is utilised under identical conditions with similar subjects. Measures are considered to be reliable if an individual undertakes the same test twice and produces a similar score each time. Golafshani (2003) further states that it is vital to understand that reliability is estimated and not measured.

Borsboom, Mellenbergh and van Heerden (2004) explain that validity refers to a concept being precisely measured. For example, a study is being conducted to better understand depression. However; the researchers distribute a questionnaire that analyses anxiety, in that case, the research would be invalid.

Connelly (2016) states that trustworthiness is only applicable to qualitative studies as no instruments with established metrics are used. It addresses the credibility, transferability, confirmability, and dependability of research.

For this study, the researcher maintained reliability and validity by entering raw data collected from the articles onto an excel spreadsheet. Thereafter the spreadsheet was analysed by the supervisor and checked once again by the researcher to ensure that all data is accurate. Reliability was maintained by coding data consistently and further checking the data of pivot tables continuously. This was done to ensure that the same results were achieved during each check. Ensuring that all facts and figures provided were true and accurate. Validity was warranted by collecting data that was relevant and directly related to the research questions. Furthermore, the mining of data was only extracted from the two journals of interest. No additional articles outside of the years being studied or articles from other journals except the SAJHRM and the SAJIP was used in this study.

Trustworthiness can be ensured by the researcher. If the study was conduct on any South African open access journal for the same time period the results will reflect aspects of transferability. This study was conducted under the same context as that done by Coetzee and van Zyl (2014) and the results reflected similar patterns. Furthermore, the research was not affected by any researcher bias, all information used was taken from vigorous investigation and content analysis of articles.

4.13. Limitations to the study

Topics that were important to this study had limited literature available. The areas that were inadequately researched were mainly bibliometric analysis of South African journals. Additionally, it was observed that organisational intersectionality in South Africa has not been explored in-depth. This forced the study to rely heavily on international literature. With very minimum reference to intersectionality in South Africa.

Some of the articles extracted from the SAJHRM and SAJIP did not contain allw the relevant bibliographic information about the authors. In some instances, the researcher was able to make an educated guess from the information that was provided. However, all avenues have been explored and every attempt has been made to accurately classify the authors.

Due to constraints such as time, funding and the scope of this study the research focused only on management studies. There were only two journals studied, the SAJHRM and SAJIP over a 10-year period. Using journals from a variety of disciplines over a longer period could widen the scope of the study. This will reveal patterns that may have not been evident in management studies.

4.14. Conclusion

This chapter has provided an in-depth insight into what constitutes to research methods and methodology. From reading the above chapter one can determine that the researcher has used a mixed method approach. This was the most appropriate approach as the researcher extracted thematic and statistical data from the articles. The researcher opted to use pragmatism as an epistemology as this philosophy best suited the mixed method study. Each article was downloaded in a systematic manner, data was extracted from the articles methodologically and sorted logically. All data was entered on a spreadsheet, thus making it easier for the supervisor and researcher to check the correctness of information. The research had no ethical conflicts and through multiple sessions of inspection the research process was rendered reliable. For the reasons mentioned above, the researcher is confident that the results generated using this method of research can be generalised.

CHAPTER FIVE

DATA ANALYSIS: DATA PRESENTATION

5.1. Introduction

The following chapter will focus on data presentation and will consist of a series of tables and figures illustrating the findings of the research. The aim of this chapter is to provide a display that allows the reader to get an accurate depiction of the data without any confusion.

Data analysis is conducted to acquire information that is both usable and useful. The analysis may describe and summarise the data, identify relationships between variables, compare variables and forecast outcomes.

Data presentation allows processed data to be presented via the use of visual techniques such as tables and diagrams. According to Jain (2013), the visual representation of data makes it easier to draw conclusions and discover trends in order to make comparisons.

Table 5.1: General Overview of publications in SAJHRM (2006-2016)

Year	Articles Published	Number of Issues	Most Utilised Research Approach	Most Utilised Research Type	Institution Mostly represented	Gender Publishing most frequently	Race Publishing most frequently
2006	23	3	Quantitative	Questionnaire	University of Johannesburg	Male	White
2007	18	3	Qualitative	Interview	University of Johannesburg	Male	White
2008	12	3	Quantitative	Questionnaire	University of Johannesburg	Male	White
2009	21	1	Qualitative	Interview	University of Johannesburg	Female	White
2010	24	1	Quantitative	Questionnaire	University of Johannesburg	Male	White
2011	21	1	Quantitative	Interviews	University of Johannesburg	Male	White
2012	26	3	Quantitative	Questionnaire	University of Cape Town	Male	White
2013	27	1	Quantitative	Questionnaire	University of Johannesburg	Male	White
2014	23	1	Quantitative	Questionnaire	University of South Africa	Male	White
2015	27	1	Quantitative	Questionnaire	North-West University	Female	White
2016	21	1	Quantitative	Survey	North-West University	Male	White
Total	243	19	-	-	-	-	-

Table 5.2: General Overview of publications in the SAJIP (2006-2016)

Year	Articles Published	Number of Issues	Most Utilised Research Approach	Most Utilised Research Type	Institution Mostly represented	Gender Publishing the most frequently	Race Publishing most frequently
2006	42	4	Quantitative	Questionnaire	University of Johannesburg	Male	White
2007	32	3	Quantitative	Questionnaire	University of Johannesburg	Male	White
2008	27	3	Quantitative	Questionnaire	North-West University	Male	White
2009	23	1	Quantitative	Survey	North-West University	Female	White
2010	37	2	Quantitative	Questionnaire	North-West University	Female	White
2011	27	2	Quantitative	Questionnaire	University of Johannesburg	Male	White
2012	31	1	Quantitative	Questionnaire	University of South Africa	Female	White
2013	41	2	Quantitative	Questionnaire	North-West University	Male	White
2014	28	2	Quantitative	Survey	North-West University	Female	White
2015	23	1	Quantitative	Questionnaire	North-West University	Female	White
2016	31	1	Quantitative	Questionnaire	North-West University	Female	White
Total	342	22	-	-	-	-	-

Table 5.1and table 5.2 provides a general overview of publications within the SAJHRM and SAJIP. Aspects shown are the number of articles and issues published per annum, most utilised research approach and type. Most common software packages, institutions best represented in the research as well as the gender and race of authors publishing most frequently.
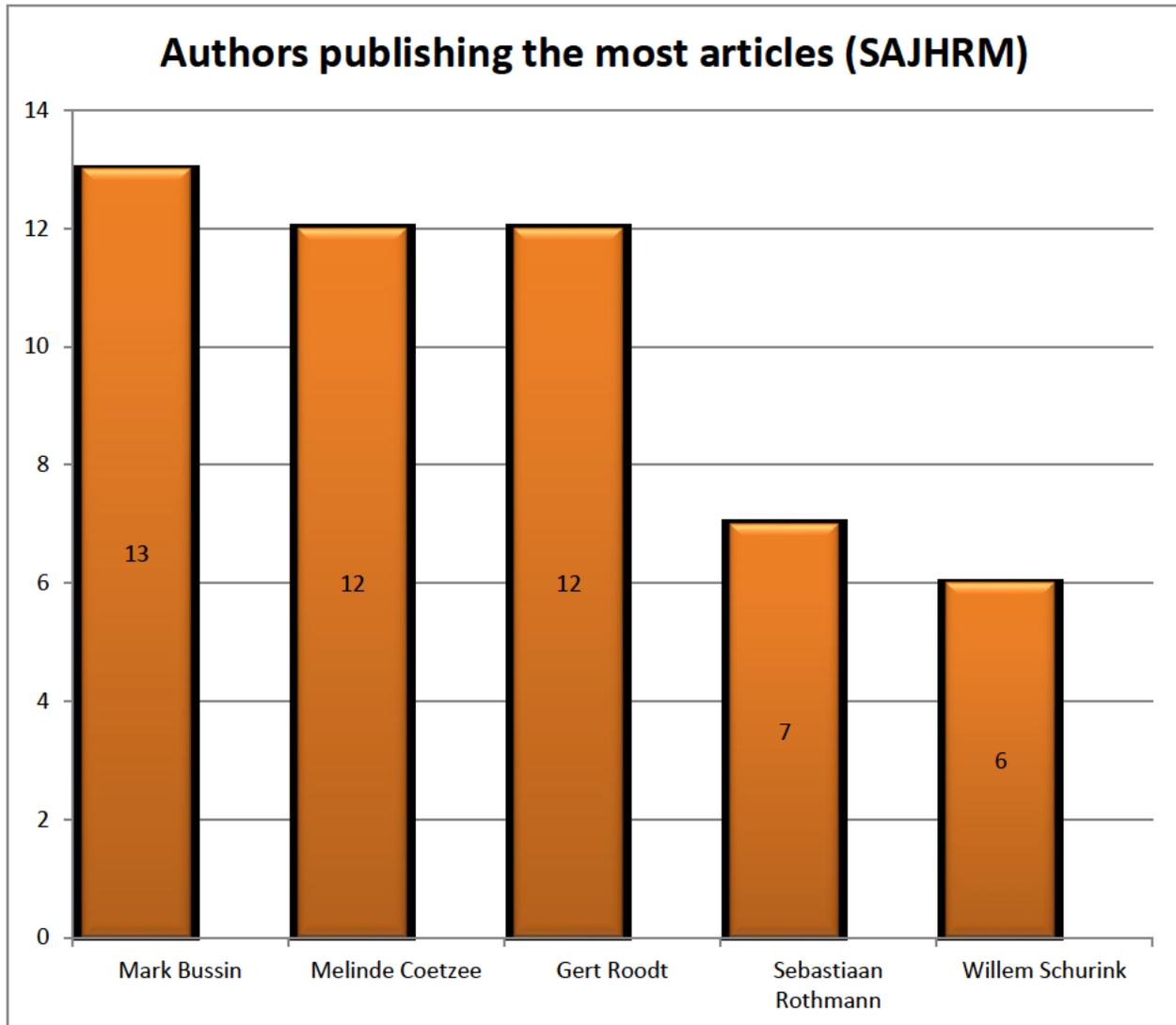
Figure 5.1: Authors publishing the most articles in the SAJHRM

Figure 5.1 shows the authors who have published the most articles in the SAJHRM between 2006 and 2016. Mark Bussin was the most published author (f =13, 5.35%). The second most published authors were Melinde Coetzee and Gert Roodt who both published (f=12, 4.94%). Followed by Sebastiaan Rothman and Willem Schurink who published (f=7, 2.88%) and (f=6, 2.47%) articles respectively. Collectively these 5 authors published 50 articles which contribute to 20.58% of the 243 total articles published over the 10-year period.

Authors publishing the most aricles (SAJIP)

(Bar chart showing authors and number of articles published)
- Frans Cilliers: 13
- Sebastiaan Rothmann: 11
- Johann Schepers: 10
- Melinde Coetzee: 8
- Leon de Beer: 6
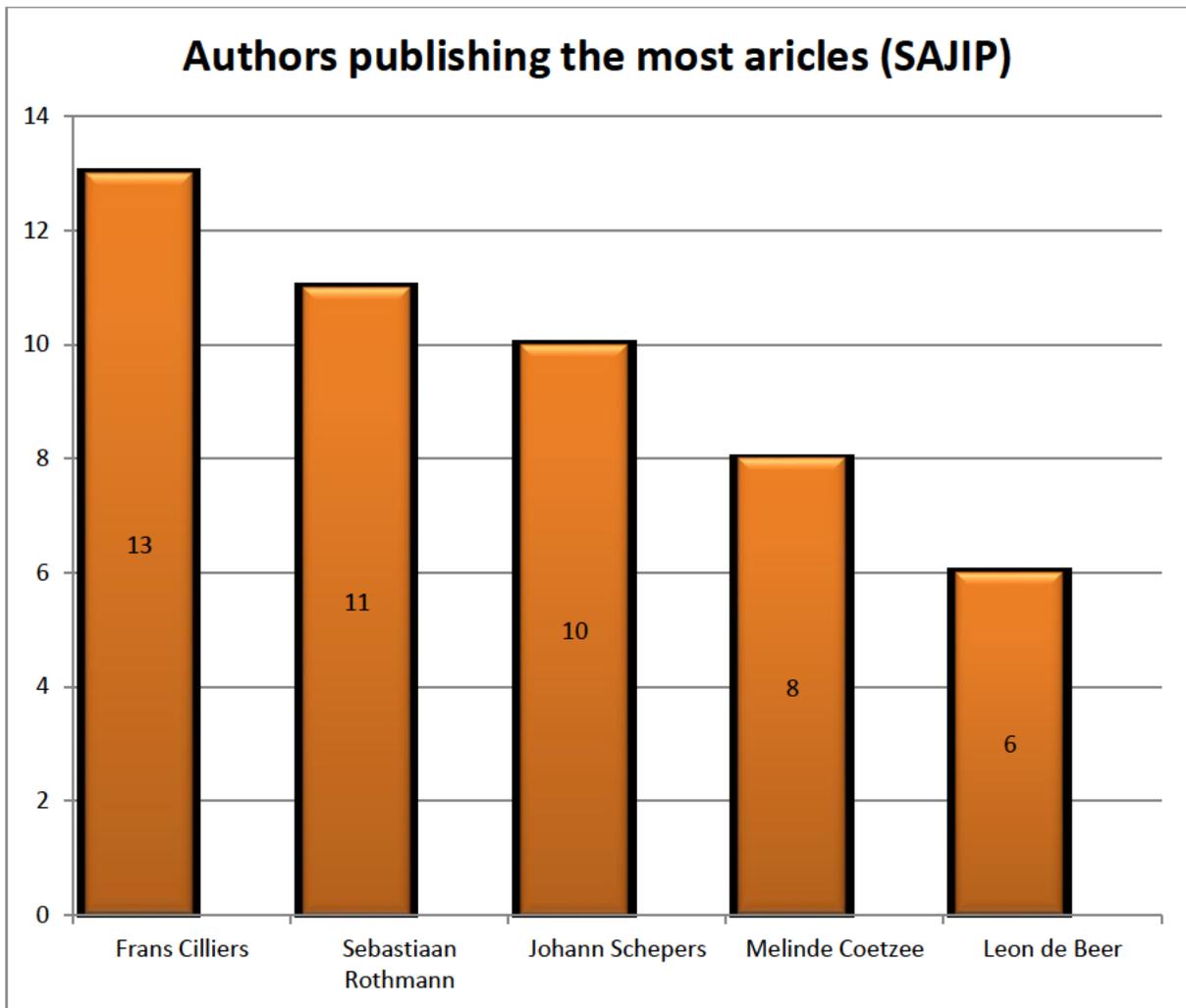
Figure 5.2: Authors publishing the most articles in the SAJIP

Figure 5.2 illustrates the authors who have been publishing articles frequently between 2006 and 2016 in the SAJIP. Frans Cilliers published the most articles (f=13, 5.80%). Sebastiaan Rothmann was second with (f=11, 3.22 %) articles. Johann Schepers was the third most frequent publisher (f=10, 2.92%), followed by Melinde Coetzee (f=8, 2.34%) and Leon DeBeer (f=6, 1.76%). Collectively these 5 authors published 48 articles which contribute to 14.04% of the 342 total articles published over the 10-year period.

Table 5. 3: Position of authors publishing in the SAJHRM (n = 431).

Student/Lecturer	f	f (%)
Lecturer	242	56
Student	189	44
Total	431	100

Table 5.3 indicates how many authors were lecturers and students. The most frequently published authors in the SAJHRM fell under the category of lecturer (f = 242) which accounted for 56% of all authors. Students were associated with (f = 189) articles making up 44% of the total 431 publishing authors.

Table 5.4: Position of authors publishing in the SAJIP (n = 497)

Student/Lecturer	f	f (%)
Lecturer	332	67
Student	165	33
Total	497	100

Table 5.3 shows the position of authors publishing in the SAJIP. Lecturers from each university publish the most articles (f= 332) which is 67% of all 497 articles featured in the SAJIP. While students contribute to a mere 33% (f=165).

Gender of Authors (SAJHRM)
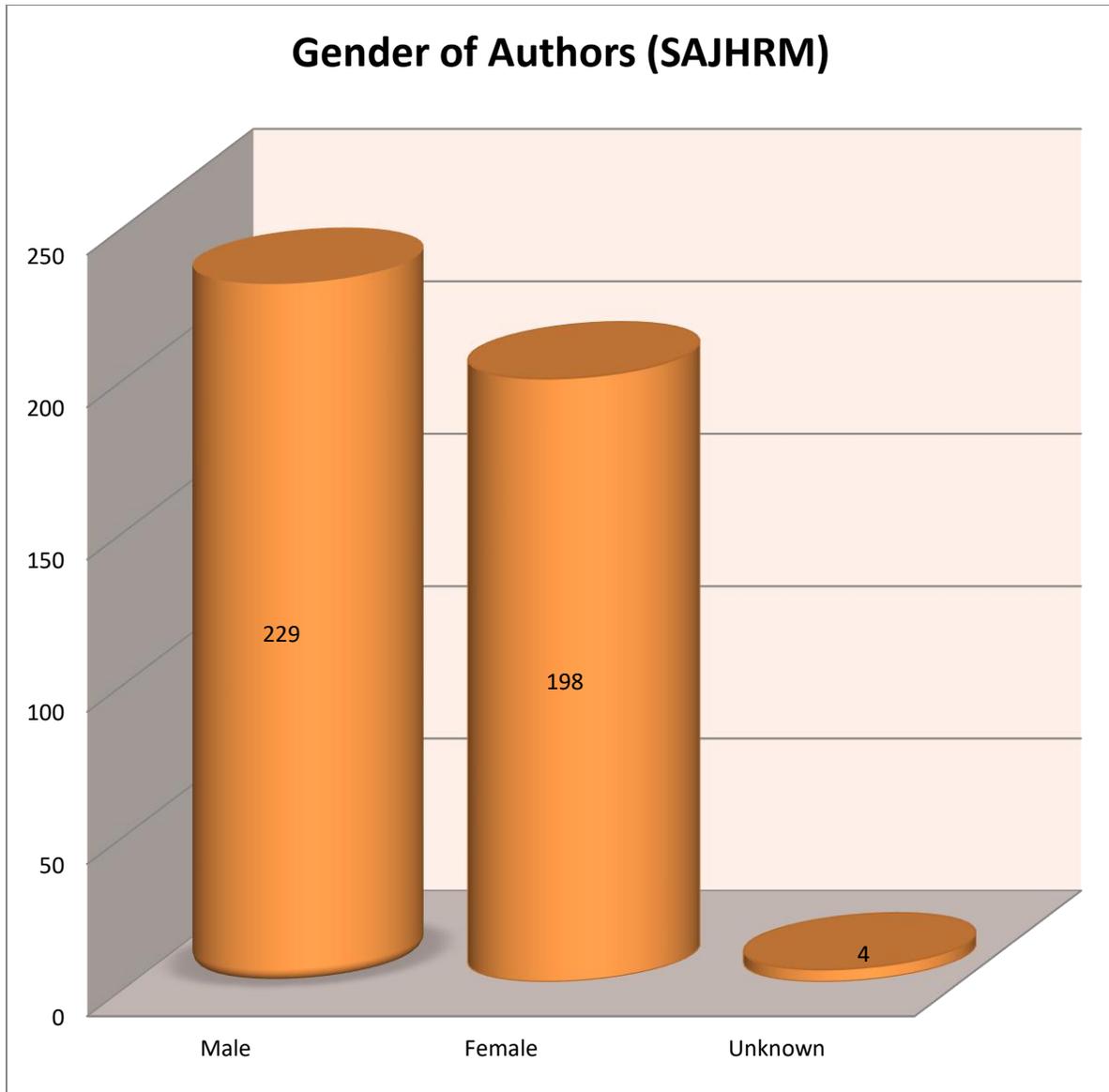
Figure 5.3: Gender of Authors publishing in the SAJHRM (n=431)

Figure 5.3 indicates the gender of the authors who have published articles in the SAJHRM in 2006-2016. The male gender contributed the most (f =229, 53.13%). Females who authored and co-authored articles published in the SAJHRM during this period amounted to 198 (f %=45.94) the gender of 4 authors remained unknown.
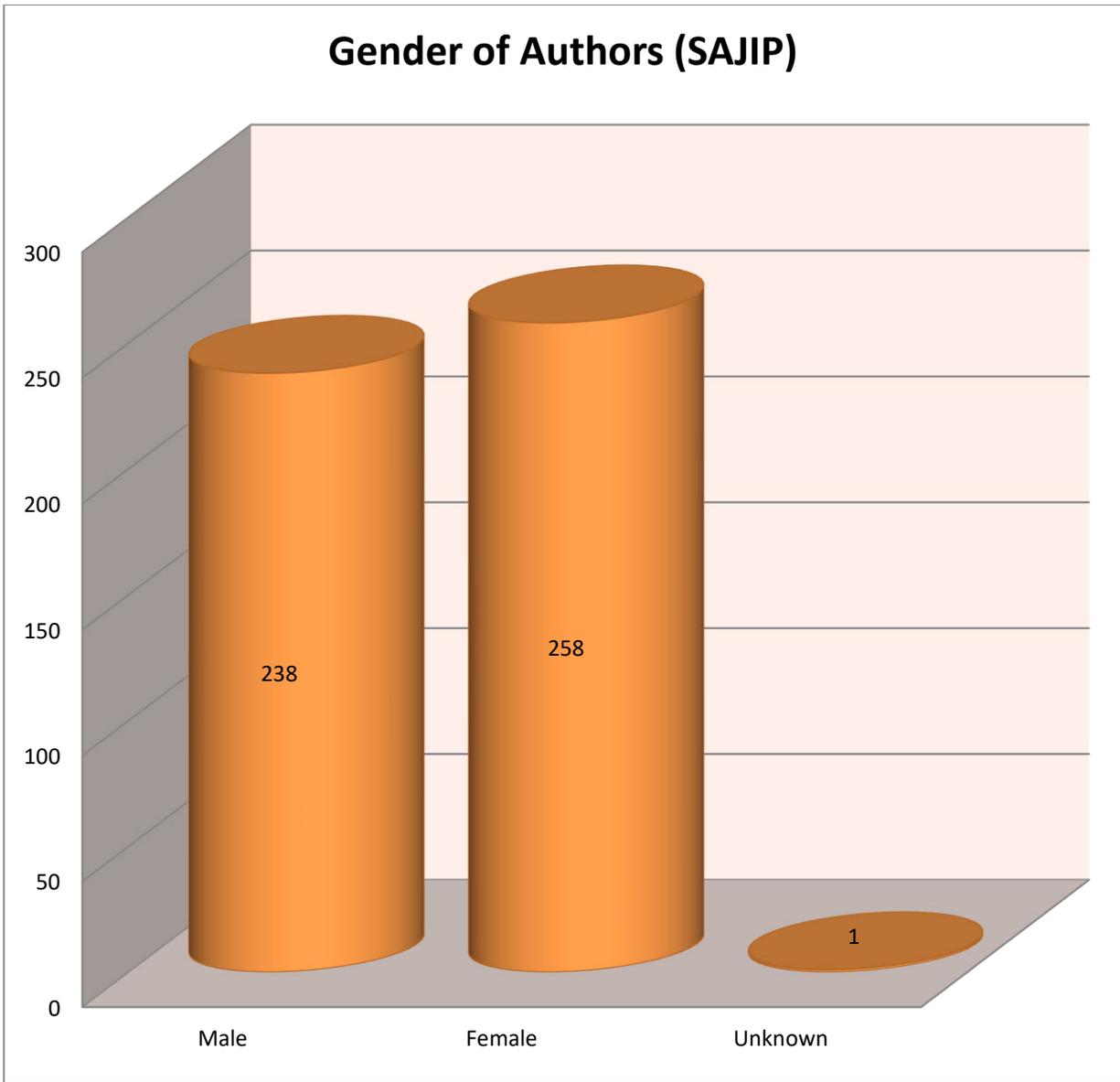
Figure 5.4: Gender of Authors publishing in the SAJIP (n=497)

Figure 5.4depicts the gender of authors publishing in the SAJIP. Females contributed the most articles (*f*=238, 51.91%), males produced 258 (*f*%= 47.89) articles and the gender of one author was unknown.

Table 5.5: Race of Authors publishing in the SAJHRM (n=431)

Race	f	f (%)
White	318	74
Black	71	16
Indian	26	6
Coloured	11	3
Unknown	5	1
Total	431	100

Table 5.5 shows the race of authors publishing in the SAJHRM. Whites produced the most articles (f= 318, 74%). Blacks contributed 71 (f%=16) articles followed by Indians (f=26, 6%). Coloureds produced 11 articles and the race of 5 (f%=1) authors were unknown.

Table 5.6 shows the race of authors publishing in the SAJIP. Whites published the highest number of articles (f=419, 84%). Blacks contributed 38 (f%=8) articles followed by Indians (f=32, 6%), and Coloureds (f=8, 2%).

Table 5.6: Race of Authors Publishing in the SAJIP (n = 497)

Race	f	f (%)
White	419	84
Black	38	8
Indian	32	6
Coloured	8	2
Total	497	100

Table 5.7: Country of origin of authors publishing in the SAJHRM (n = 431)

Country of Origin	f	f (%)
South Africa	380	88.20
Unknown	18	4.17
Iran	4	0.93
Zimbabwe	4	0.93
Botswana	3	0.70
Nigeria	3	0.70
Germany	2	0.46
Kenya	2	0.46
Namibia	2	0.46
Pakistan	2	0.46
Brazil	1	0.23
Canada	1	0.23
Dubai	1	0.23
Finland	1	0.23
Singapore	1	0.23
Philippines	1	0.23
UK	1	0.23
India	1	0.23
Australia	1	0.23
New Zealand	1	0.23
Sweden	1	0.23
Total	**431**	**100**

Table 5.7 illustrates the country of origin of all authors. Individuals who were born in South African contributed the most to the SAJHRM (f=380, 88.20%) and the origin of 18 (f%=4.17) was unknown. There were 4 (f%=0.93) authors from Iran and Zimbabwe. 3 (f%=0.70) authors were found to have originated from Botswana and Nigeria. Germany, Kenya, Namibia and Pakistan were represented by 2 (f%= 0.46) authors each. Brazil, Canada, Dubai, Finland, Singapore, Philippines, Uk, India, Australia, New Zealand and Sweden each had 1 (f%= 0.23) author publish in the SAJHRM in 2006-2016.

Table 5.8: Country of origin of authors publishing in the SAJIP (n = 497)

Country of Origin	f	f (%)
South Africa	450	90.54
Netherlands	10	2.01
Australia	7	1.41
Belgium	7	1.41
USA	6	1.21
Ghana	4	0.80
United Kingdom	3	0.60
Nigeria	3	0.60
Zimbabwe	2	0.40
Canada	1	0.20
Italy	1	0.20
Sweden	1	0.20
Switzerland	1	0.20
Uganda	1	0.20
Total	497	100

Table 5.8 illustrates the country of origin of all authors publishing in the SAJIP. South African nationals by birth contributed the most to the SAJIP (f=450, 90.54%). 10 (f %= 2.01) authors originated from the Netherlands. There were 7 (f %=1.41%) authors from Australia and Belgium, 6 (f %=1.21%) authors were found to originate from the USA. The UK and Nigeria were represented by 3 (f %= 0.60) authors each, 2 (f %= 0.40) authors originated from Zimbabwe. Canada, Italy, Sweden, Switzerland and Uganda were represented by 1 (f %= 0.20) author each.

Table 5.9 shows the universities that published the most frequently based on the number of authors from the respective universities that contributed to articles within the SAJHRM between 2006 to 2016. The University of Johannesburg published the most articles (f =132, 30.63%) followed by the University of the North West (f =79, 18.33%) and the University of South Africa (f =47, 10.90%). The University of Pretoria published (f =35, 8.12%) articles. The Nelson Mandela Metropolitan University published 25 (f %=5.80) articles and the University of Cape Town published 24 (f %=5.57). The University of KZN produced 17 (f %=3.94) articles, Tshwane University of Technology and the University of the Free-State published (f =9, 2.08%) and (f =8, 1.86%) articles respectively. The Vaal University of Technology, University of Stellenbosch and University of Fort-Hare contributed 5 (f %=1.16) articles each. The University of Witwatersrand and Rhodes each published 4 (f %=0.93) articles while the University of Port-Elizabeth published 3 (f %=0.70) articles.

Table 5.10 illustrates the universities that published the most frequently within the SAJIP between 2006 to 2016. The University of Johannesburg (f =128, 25.75%) and the University of the North West (f =102, 20.52%) published the most articles. The University of South Africa produced (f =74, 14.82%) articles, the University of Stellenbosch was affiliated with 38 (f %=7.65) articles. The Nelson Mandela Metropolitan University and the University of Pretoria published (f =25, 5.03%) and (f =20, 4.02%) articles respectively. The University of the Free-State produced 14 (f %=2.82) articles, the University of Cape Town and UKN published 11 (f %=2.21) articles each. The University of Witwatersrand accounted for 8 (f %=1.61) articles and the Tshwane University of Technology published 5 (f %=1.01) articles. The University of Venda and Mangosuthu University of Technology each published 1 (f %=0.20) article. The institutional affiliation of 50 (f %=10.06) authors publishing in the SAJIP was with foreign universities.

Table 5.9: Top 10 institutions in terms of author affiliation in the SAJHRM (n=431)

Institutional Affiliation	Associated Authors (f)	f (%)
University of Johannesburg	132	30.63
University of the North-West	79	18.33
University of South Africa	47	10.90
University of Pretoria	35	8.12
Nelson Mandela Metropolitan University	25	5.80
University of Cape Town	24	5.57
University of Kwa-Zulu Natal	17	3.94
Tshwane University of Technology	9	2.08
University of the Free State	8	1.86
Vaal University of Technology	5	1.16
University of Stellenbosch	5	1.16
University of Fort Hare	5	1.16
University of Witwatersrand	4	0.93
Rhodes	4	0.93
University of Port Elizabeth	3	0.70
Foreign Universities	29	6.73
Total	*431*	*100*

Table 5.10: Top 10 institutions in terms of author affiliation in the SAJIP (n=497)

Institutional Affiliation	Associated Authors (f)	f (%)
University of Johannesburg	128	25.75
University of the North-West	102	20.52
University of South Africa	74	14.89
University of Stellenbosch	38	7.65
Nelson Mandela Metropolitan University	25	5.03
University of Pretoria	20	4.02
University of the Free State	14	2.82
University of Cape Town	11	2.21
University of KwaZulu Natal	11	2.21
University of Witwatersrand	8	1.61
Tshwane University of Technology	5	1.01
University of Fort Hare	4	0.80
University of Limpopo	3	0.60
Vaal University of Technology	2	0.40
University of Venda	1	0.20
Mangosuthu University of Technology	1	0.20
Foreign Institutions	50	10.06
Total	497	100
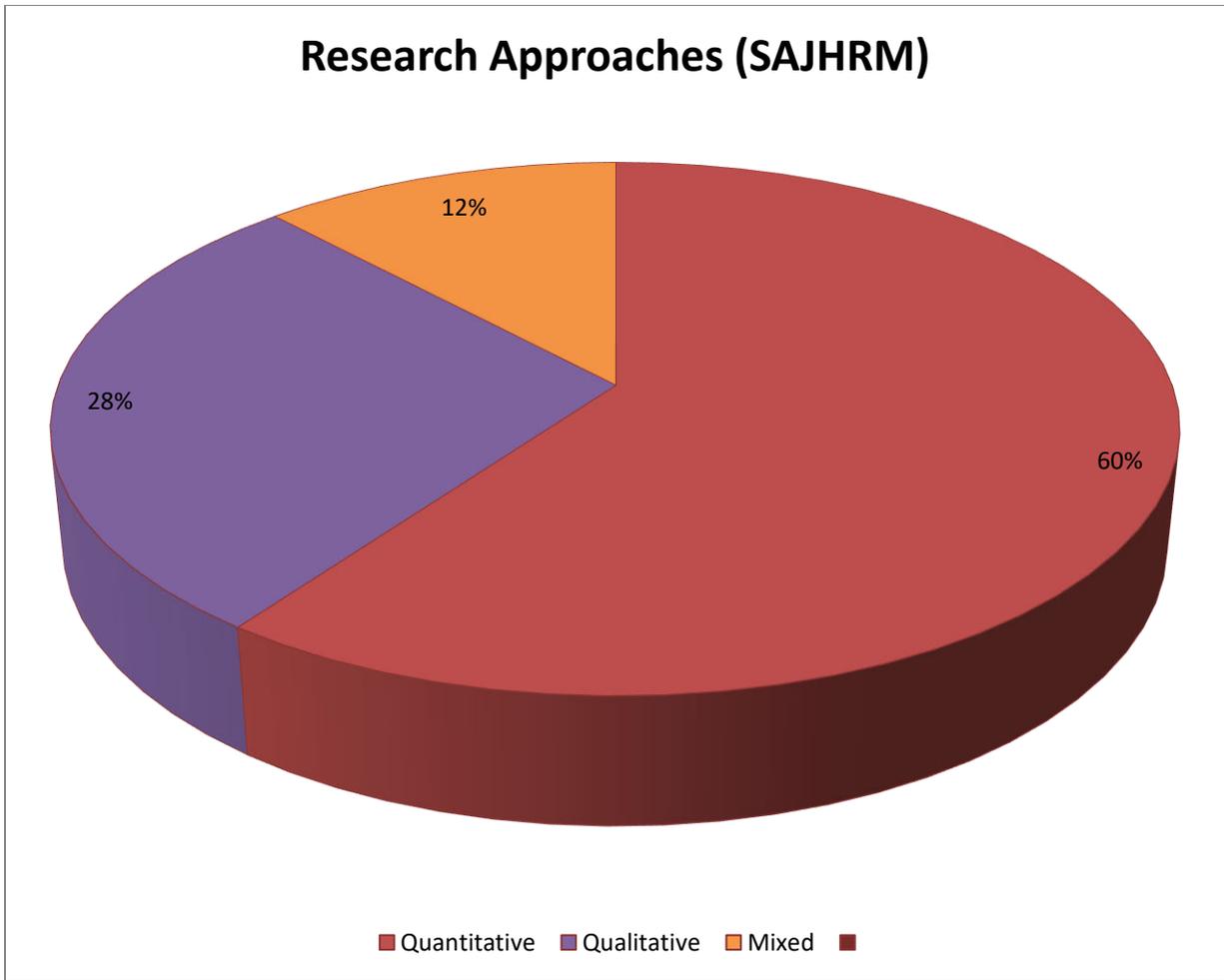
Figure 5.5: Research approaches used in the SAJHRM (n=243)

Figure 5.5 shows the research approaches used to publish articles within the SAJHRM in 2006-2016. The quantitative research approach was the most popular as it was used in 146 (f%=60) of articles. Qualitative research was used in 68 (f%=28) articles and 29(f%=12) articles used a mixed method approach.
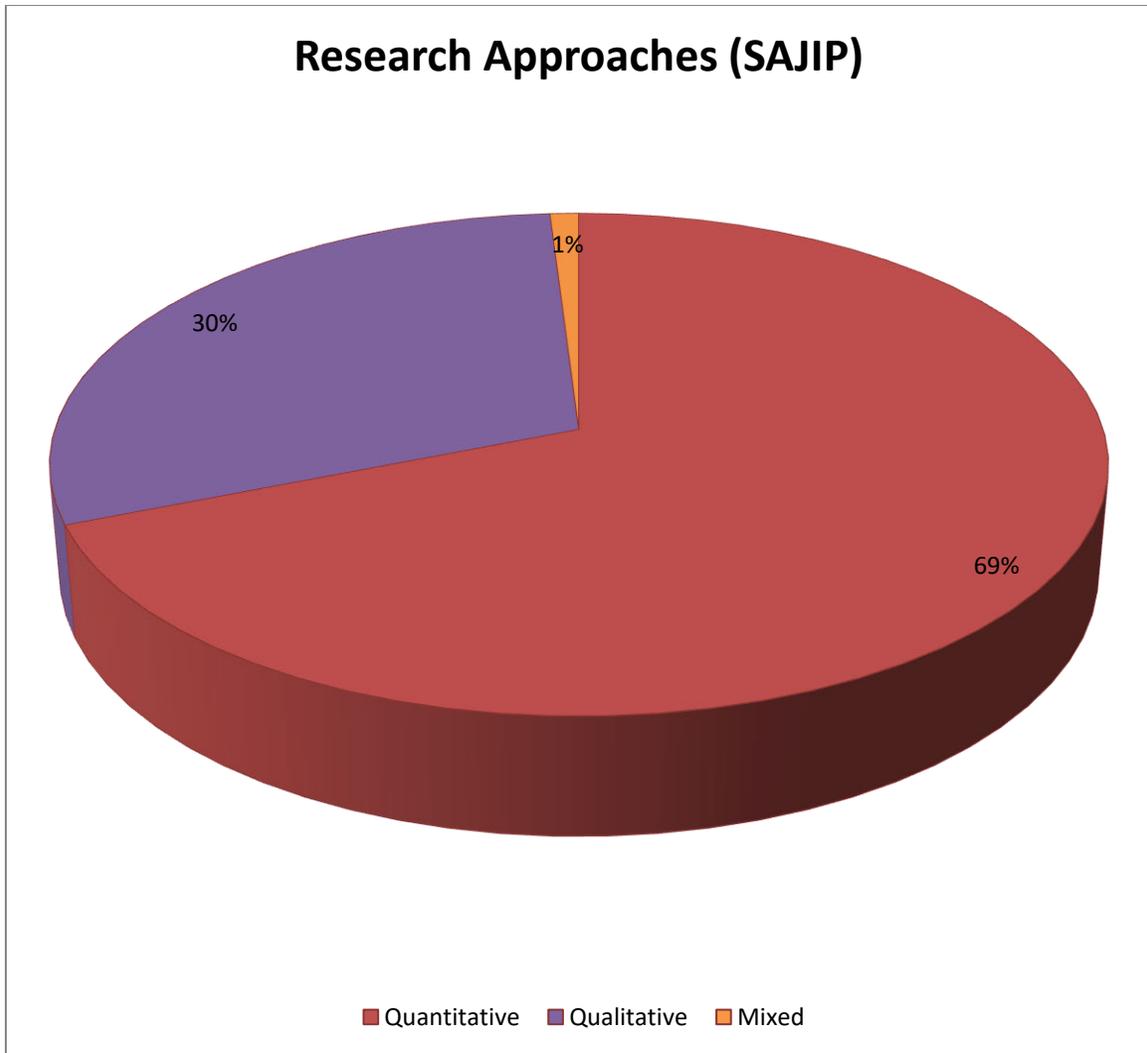
Figure 5.6: Research approaches used in the SAJIP (n=342)

Figure 5.6 shows the research approaches used to publish articles within the SAJIP from 2006 to 2016. Quantitative research methods were the most popular as it was present in 235 (f%=69) of articles. Evidence of qualitative research appeared in 102 (f%=30) articles and 5 (f%=1%) articles used a mixed method approach.

Types of Research (SAJHRM)
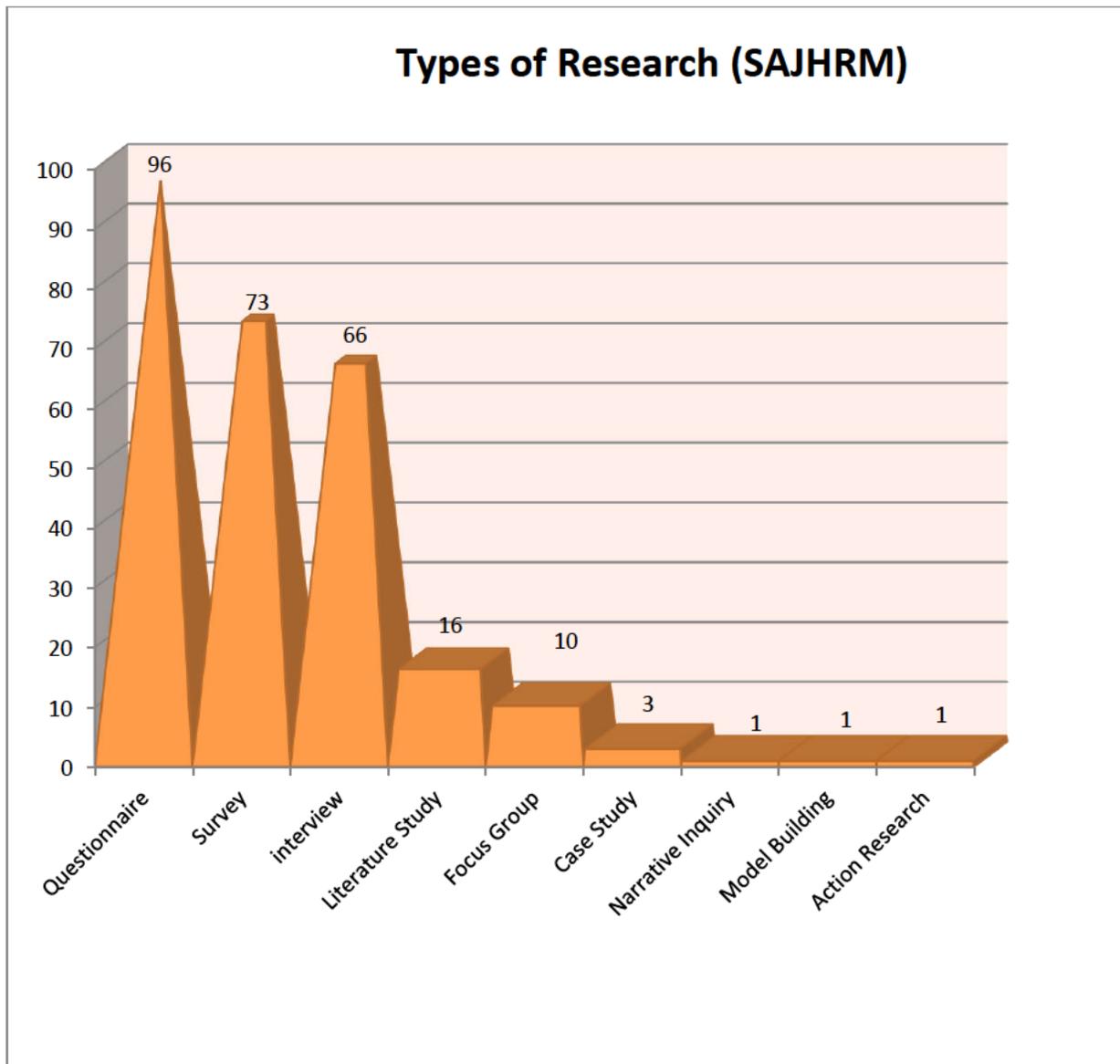
Figure 5.7: Research types used n SAJHRM (n=267)

Figure 5.7 illustrates the different types of research that were used to publish articles in the SAJHRM from 2006-2016. Questionnaires were used in 96 (f %=35.95) research articles making it the most utilised research type. Surveys were used in 73 (f %=27.34) articles, interviews were used 66 (f %=24.72) times and literature studies were adopted in 16 (f %=5.99) articles. Focus groups were used in 10 (f %=3.75) articles and case studies were used in 3 (f %=1.12) articles. Narrative enquiry, model building and action research were all used once.
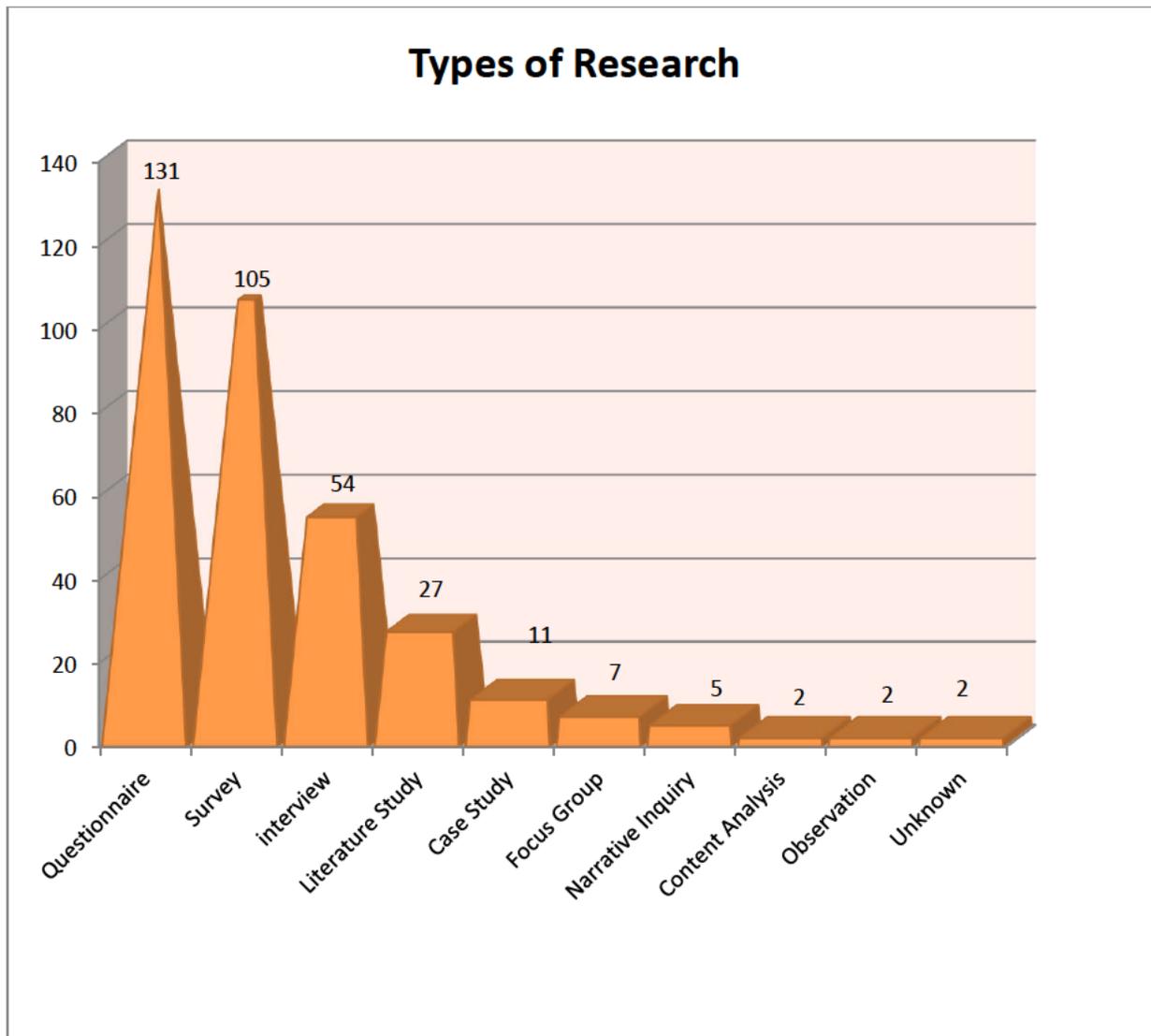
Figure 5.8: Research types used in the SAJIP (n=346)

Figure 5.8 shows the various types of research that were used to publish articles in the SAJIP. Questionnaires were used 131 (f%=37.86) times. Surveys were used in 105 (f%=30.35) articles, interviews were utilised 54 (f%=15.61) times and literature studies were adopted in 27 (f%=7.80) articles. Case studies were used in 11 (f%=3.18) and focus groups were used in 7 (f%=2.02) articles. Narrative enquiry was amongst the least popular types of research (f=5, 1.45%), content analysis and observation research were both used twice each.

Table 5.11: Software Packages used in the SAJHRM (n=248)

Software Package	f	f (%)
SPSS	123	49.60
Unknown	66	26.61
None	17	6.85
Excel	9	3.63
SAS	8	3.23
Statistica	5	2.02
Atlas	5	2.02
Nvivo	3	1.21
Lisrel	3	1.21
Mplus	3	1.21
Microsoft Word	1	0.40
PASW Statistic	1	0.40
Statsoft	1	0.40
SmartPlus	1	0.40
MPlus	1	0.40
Amos	1	0.40
Total	248	100

Table 5.11 indicates that the majority of the research articles published during the time period used the SPSS statistical analysis software program (f =123; 49.60%). 66 research articles were published using software packages that were not disclosed (unknown), and 17 (f%=6.85) research articles were analysed manually. Excel and SAS were the second most popular software programs with (f =9; 3.63%) and (f= 8; 3.23%) articles correspondingly. Statistica and Atlas were both used in 5 (f%=2.02) articles. Nvivo, Lisrel

and Mplus were all used in 3 (f%=1.21) articles. MS Word, PASW Statistic, Statsoft, SmartPlus, Mplus and Amos were used in 1 (f%=0.40) articles each.

Table 5.12: Software Packages used in SAJIP (n=342)

Software Package	f	f (%)
SPSS	183	53.51
Unknown	48	14.04
Amos	32	9.36
Mplus	16	4.68
Lisrel	15	4.39
Winsteps	10	2.92
Excel	7	2.05
Statistica	6	1.75
SAS	5	1.46
Anova	3	0.88
SEM	3	0.88
Nvivo	2	0.58
Atlas	2	0.58
Np50	2	0.58
Bmp	2	0.58
Manually	1	0.29
Iteman	1	0.29
Sibtest	1	0.29
Ascal	1	0.29
Rasch	1	0.29
EQS	1	0.29
Total	*342*	*100*

Table 5.12 specifies that SPSS (f =183; 53.51%) was the most used software program to analyse data, 48 (14.04) articles did not disclose the methods or programs used to analyse data. Amos was used 32 (*f*

%=9.36) times and Mplus was used in 16 (*f*%=4.68) articles. Lisrel and Winsteps were used (f=15; 4.39%) and (f=10; 2.92%) times individually. Excel was used in 7 (*f*%=2.05) articles and statistica in 6 (*f*%=1.75), SAS was present in 5 (*f*%=1.46) articles. Anova and SEM were each used 3(*f*%=0.88) times. Nvivo, Atlas, NP50 and BMP were used 2 (0.58%) times each. Iteman, Sibtest, Ascal, Rasch and EQS were used in 1 (*f* %=0.29) article each.

Types of intersectionality Used SAJHRM
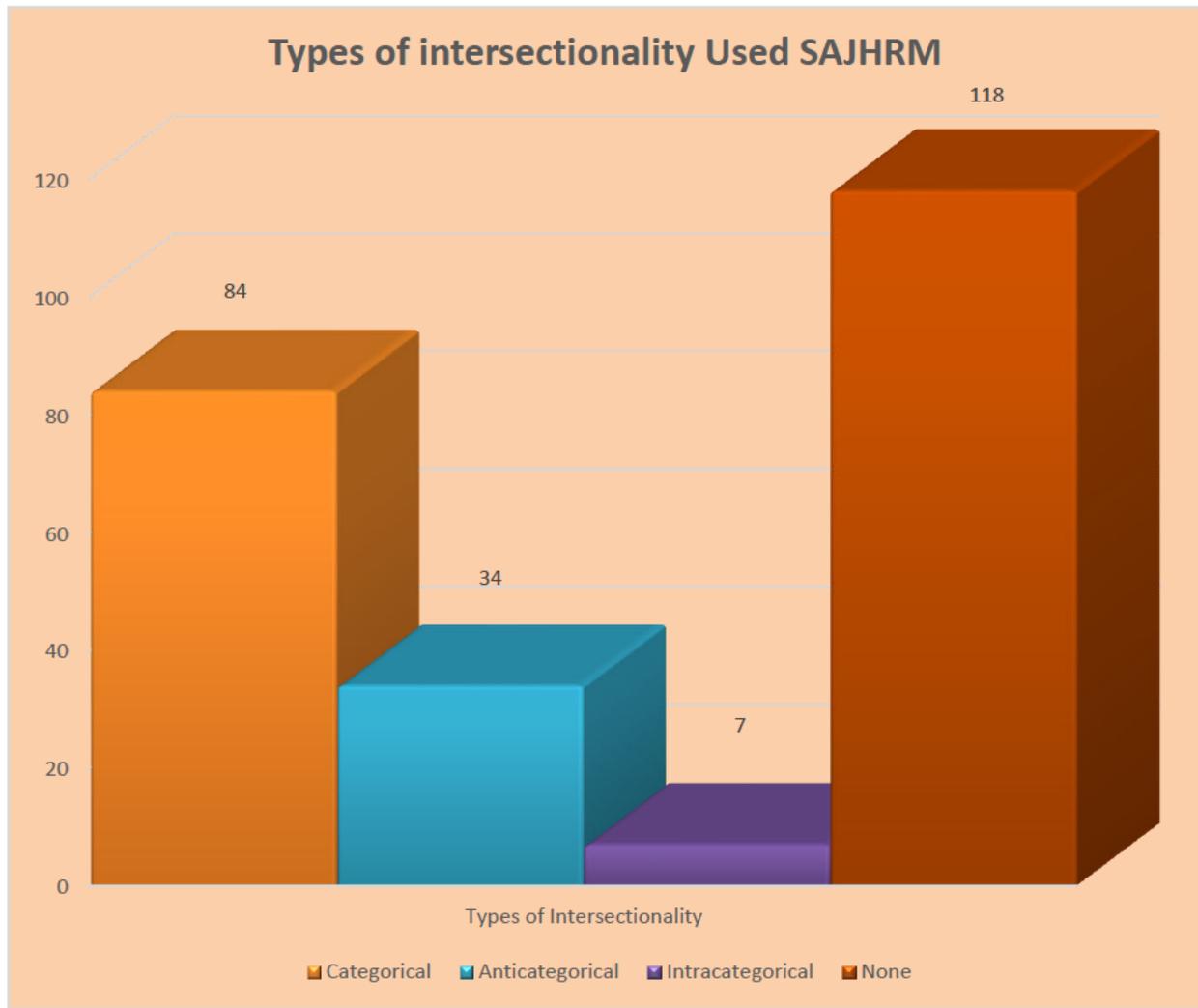
Figure 5.9: Types of intersectionality used in the SAJHRM (n= 243)

Figure 5.9 shows the types of intersectionality present in the SAJHRM. Categorical intersectionality was evident in 84 (*f*%=34.57) articles. Anticategorical intersectionality was applied to 34 (f%=13.99) research articles and intracategorical intersectionality was used the least (f =7; 2.88%). 118 (*f*%=48.56) articles did not use any form of intersectionality.
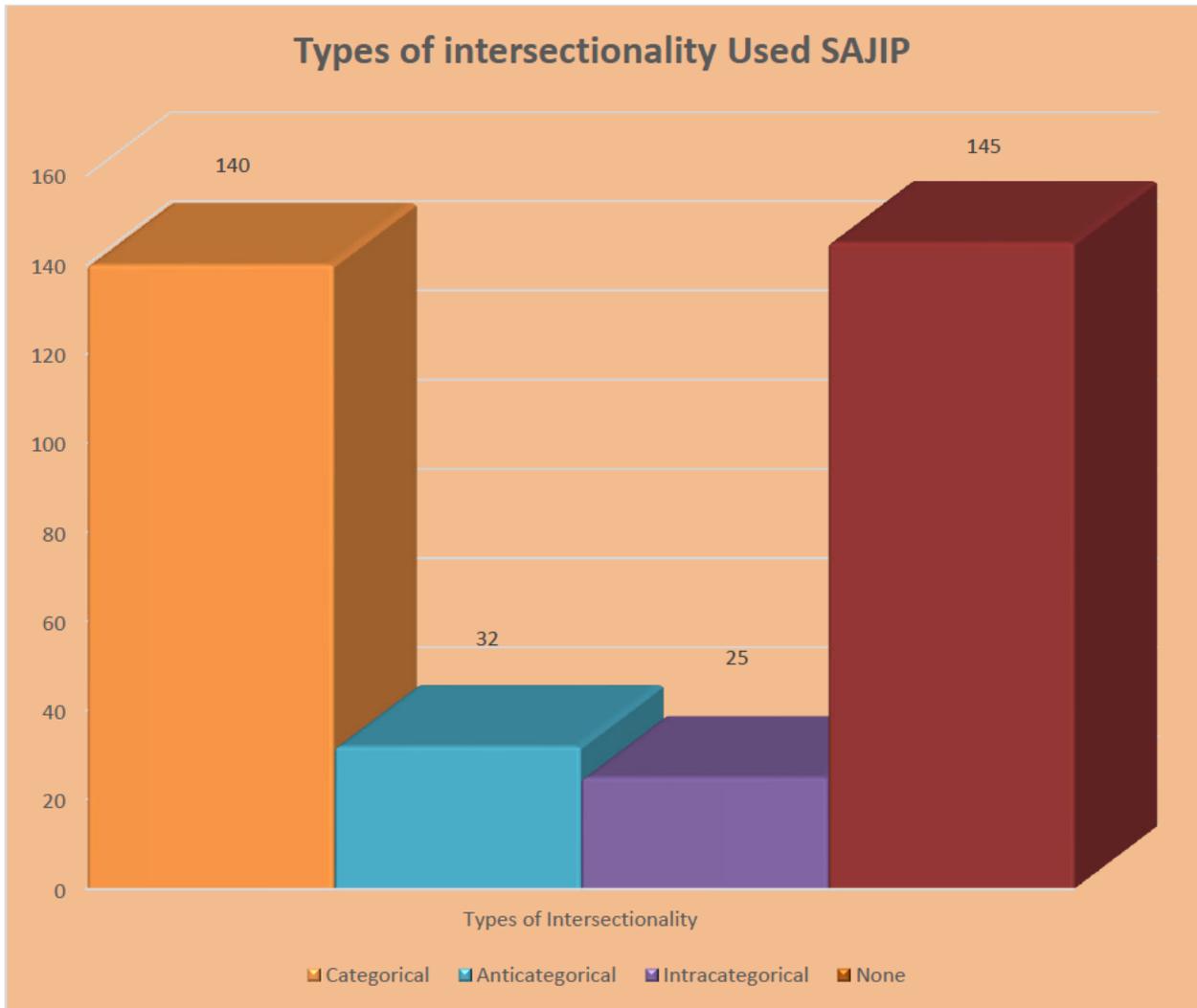
Figure 5.10: Types of intersectionality used in the SAJIP (n=342)

Figure 5.10 exhibits the types of intersectionality present in the SAJIP. Categorical intersectionality was evident in 140 (*f*%=40.94) articles. Anticategorical intersectionality was applied to 32 (f%=9.36) research articles and intracategorical intersectionality was used the least (f=25; 7.31%). 145 (*f*%=42.40) articles did not use any form of intersectionality.

Table 5.13: Common themes evident in the SAJHRM from 2006-2016.

COMMON THEMES IN THE SAJHRM (2006-2016)	
Theme 1	Emotional intelligence
Theme 2	Developing the skills of HR managers
Theme 3	Health and safety in the organisation
Theme 4	Work arrangements to accommodate dual couple families
Theme 5	Employee engagement
Theme 6	Brain drain in South Africa
Theme 7	Diversity in the workplace
Theme 8	Staff rewards and recognition
Theme 9	Development of human capital

Table 5.14: Common themes evident in the SAJIP from 2006-2016

COMMON THEMES IN THE SAJIP (2006-2016)	
Theme 1	Work/family enrichment
Theme 2	Employee wellbeing
Theme 3	Ergonomics
Theme 4	Training and development
Theme 5	Employee identity
Theme 6	Organisational diversity
Theme 7	Emotional intelligence
Theme 8	Work engagement
Theme 9	Experiences of females in the working environment
Theme 10	Leadership development

5.2. Conclusion

In this chapter, the researcher has presented multiple dimensions of analysed data in an organized manner with the aid of tables and figures. Each table and or figure systematically illustrates pieces of data that will eventually assist the researcher to provide answers to the research questions.

An overall analysis of the findings was presented in the first two tables, this aimed at giving a general overview of the data. The most published authors were illustrated, leading to the conclusion that mainly White authors publish articles in the SAJHRM and SAJIP. The genders and race of each author was tabled which led to the consensus that the most active groups are males of White descent. An analysis of the research methods used was shown, quantitative data methods using questionnaires was most popular. Research themes from both journals were identified, and the types of intersectionality used were tabled. The general observation from each illustration is that much of the data shows similar patterns across both journals. This can be attributed to the close link between the fields of study.

The aim of chapter 5 was to provide a graphical depiction of the analysed data, chapter 6 will provide more depth and discussion to each illustration.

CHAPTER 6

DISCUSSION

6.1. Introduction

The aim of this chapter is to provide a discussion of the data collected and presented in chapter 5. The discussion will be based on the bibliographic details of authors publishing in the SAJHRM and the SAJIP. As well as the research patterns used by authors in terms of the type of methods used to write the articles and tools used to analyse the data. There will be a further analysis of the themes identified in both journals.

Drotar (2009) explains that the discussion section is classically structured around several main components presented in a logical sequence. It is generally comprised of an interpretation of the findings and an explanation to the reader based on what has been accomplished throughout the research process.

6.2. General overview

Table 5.1 and 5.2 provides a general overview of the research findings for the SAJHRM and SAJIP.

It has been observed that within the SAJHRM from 2006-2016 there are between 20 and 27 articles published per year with the exception of 2007 (18 articles) and 2008 (12 articles). Furthermore, there is an average of 1 issue published per year. Quantitative research methods were most prevalent during 2006-2016 while qualitative research was considerably underrepresented during the sampled period. Most of the authors were White males and the institution publishing a large portion of articles was the University of Johannesburg.

The general observation for the SAJIP yielded similar results to the SAJHRM in terms of the research methods used. The research method of choice for many authors over the study period was quantitative research with the aid of questionnaires to gather data. However, other findings from the SAJIP differed from those of the SAJHRM in many aspects. There were many more articles published per year in the SAJIP from 2006-2016. This ranged from 23-42 articles, most years also had more than 1 issue. Additionally, in contrast to the SAJHRM female authors were much more active in producing articles although the White racial group was dominant throughout the years. Lastly, authors affiliated with the University of Johannesburg and the North-West University published more frequently than any other institution in the country.

The general overview provides a brief understanding of the patterns that emerged from both journals, one can note that these journals have many similarities, but also differ in some respects. The succeeding sections of this chapter will discuss the findings in greater detail

6.3. Most published authors

Figure 5.1 and 5.2 show the authors who have published the most articles in the SAJHRM and SAJIP between 2006 and 2016.

In figure 5.1 it can be seen that Mark Bussin published the most articles (f =13), the second most published authors were Melinde Coetzee and Gert Roodt who both published 12 articles. Followed by Sebastiaan Rothman and Willem Schurink who published 7 and 6 articles respectively. Collectively these authors published a total of 50 articles which contribute to 20.58% of all articles sampled.

Figure 5.2 shows that Frans Cilliers was the most published author in the SAJIP with a total of 13 articles. Sebastiaan Rothmann was second with 11 articles. Johann Schepers was the third most frequent publisher (f =10), followed by Melinde Coetzee (f =8) and Leon DeBeer (f =6). Collectively these 5 authors published 48 articles which contribute to 14.04% of articles published from 2006-2016.

From the research conducted it has been observed that many of the same authors published articles in both the SAJHRM and the SAJIP. As can be seen in figure 5.1 and 5.2 Melinde Coetzee and Sebastiaan Rothmann were amongst the most frequent publishers for both journals. It was also identified during data collection that multiple other authors, even those whom only published 1 article per journal were present in the SAJHRM and SAJIP. Kirchhof and Lacerda (2012) provide some insight into this trend by explaining that often researchers/authors write articles that are closely related to their field of speciality or subspecialty. They, therefore, choose to publish these articles in journals that have a reader demand for a specific topic.

In this case, the journals are both based on the principles of social science and the topics covered in HRM are closely related to those of importance to industrial psychology. Therefore, it is understandable that authors publishing articles within these fields will have research interests that span across both journals.

6.4. Academic position of authors

Table 5.3 and 5.4 indicate the position of all the sampled authors. For this research, the term position refers to the academic rank of the authors. which was narrowed down to lecturer and student. Lecturer includes all individuals that hold an academic position at a higher education institution. Consisting of junior lecturers, senior lecturers, assistant professor, associate professors and professors. Students include individuals that did not hold an academic position at any educational institution but were pursuing a degree at the time of publication.

In both the SAJHRM and the SAJIP lecturers wrote and published many more articles than students. From 2006-2016, 56 % of total authorship in the SAJHRM were lecturers and in the SAJIP 67% of authors were lecturers.

There is a significant difference in the two journals between the number of authors' that are students compared to those that are lecturers. It was also noted that when authors collaborated, often academics worked together and did not include students or individuals from the business sector. In the rare instance when academics and students collaborated it was based on a supervisor-student arrangement. The results from this research was similar to the findings generated by Ligthelm and Koekemoer (2009). They conducted a study within South Africa that showed that out of every five authors' at least three were lecturers or professors. Ligthelm and Koekemoer (2009) established that 57.9% of authors were professors, 20% were senior lecturers and 11.1% were junior lecturers. The remainder 11% of authors consisted of students conducting research for postgraduate purposes as well as being joint authors.

There have been a few researchers that have attempted to provide insight and justification to this pattern. Mbali (2011) explains that one of the reasons for lecturers publishing more than students could be that the Department of Education awards universities money for the production of published research. Therefore, it seems to have been decided by the management of tertiary institutions in South Africa that boosting the productivity of research per employee (lecturers) is an easy way to generate funds.

While Mbali (2011) portrays the frequent publishing by lecturers as a forced and stressful key performance area (KPA). Rawat and Meena (2014) state that continuous publishing can in certain instances be beneficial to the career advancement of an academic. Rawat and Meena (2014) explain that publishing frequently is a powerful method that scholars can utilise to demonstrate their aptitude in academics to their peers. The publication of successful research draws attention to the academic and their respective institution. This results in increased funding for the institution as well as allows the individual to advance in their field.

However, Rawat and Meena (2014) additionally explain that universities and academic institutions commonly use the number of publications that an individual produces to credit and measure their level of competency. This is increasingly being used by administrators as a criterion for recruiting scholars. Those who publish irregularly may find that they are not eligible for academic positions. This supports Mbali (2011) statement that lecturers who do not publish articles are threatened with no promotions, loss of sabbaticals, performance reviews and in some cases early retirement. Basically, those who aren't publishing continuously are regarded as dead weight.

It seems that now more than ever the idiom "publish or perish" is becoming a harsh truth for many scholars.

It can be deduced that the reason why there are much more lecturers than students publishing in the SAJHRM and the SAJIP is because lecturers have publishing research as a set KPA that they need to achieve yearly. This seems to be a strict but appropriate requirement as it generates income for the institution as well as aids the progress of the academic.

6.5. Demographic information of authors

Gender is the attitude, feeling and behaviour that is associated with a person's sex, which could be male, female or intersex. An increasing number of studies conducted demonstrate that diversity with regards to the balance and perspectives of gender assist to improve the quality and relevance of scientific research (Gasa, 2007).

Santos, Palomares, Normando and Quintão (2010) explain that race is generally used to describe a cluster of individuals that share a certain phenotypical characteristic such as skin colour, in this study four races have been sought after, White, Black, Indian and Coloured.

In this research, across both journals it has been revealed that White males are at the forefront in terms of publishing articles. White authors accounted for 74% of articles in the SAJHRM and 84% in the SAJIP. These results are further astounding when one takes note that the main contributors in the SAJHRM were White males. This finding was mirrored in the SAJIP for many years until 2009 onwards when females increased their publishing presence in the journal.

The Authors who published the most articles in the SAJHRM and SAJIP were Mark Bussin and Frans Cilliers who both are White males. In fact, from figures 5.1 and 5.2 many of the authors producing multiple articles in the journals were White males. This is supportive to information gathered by previous researchers. Coetzee and Van Zyl (2014) state that the majority of research being published in South Africa

is done so by White males. One of the seemingly more positive observations from the research is that the second most publishing author in the SAJHRM was Melinde Coetzee who is a female. She has published only one article less than Mark Bussin. This serves to prove that females are making an increased representation within the SAJHRM.

The fact that between 2006 and 2016 more males have been publishing journal articles than females in the SAJHRM, with 229 being male and 198 being female. Proves that women in academia are still faced with battles in terms of receiving equal acknowledgement and power as males. However, as can be seen in table 5.2 it is evident that from 2009 more females published articles in the SAJIP. This shows the improvement of equality and women empowerment. Which further proves that a women's role in the future of South Africa has been given more recognition. Nevertheless, men have still been publishing more than women overall in the SAJHRM since its inception. This can be attributed to the history of the South African society as a whole.

One is surrounded by gender traditions and stereotypes from birth; therefore, it has been embedded in one's actions, beliefs and foundations. For example, the male species has always been known as the dominant gender with superior capabilities and dispositions than women (Connell, 2014).

Gasa (2007) explains that when looking into the history of South Africa. While struggling against apartheid on the battlefields of race, it was assumed that the struggle for racial freedom was more important than looking into the struggle for gender equality. Which was enforced by the stereotypes that were already in existence such as the man is the provider, more intelligent and is given positions of power and opportunities to education. Women were viewed as the ones to stay at home, feeding and taking care of the children, the house and doing most of the domestic work. In other words, males had the authority in society and females were viewed as subordinates to them. The notation of male superiority is still prevalent in modern South Africa. Many rural areas of both White and Black backgrounds have the belief that only males are entitled to education and academic success. Hence mostly males have the motivation and confidence to research and actually publish articles in the areas of both natural and social sciences (Gasa, 2007).

Bendels, Muller, Brueggmann and Groneberg (2018) study support the findings. Bendels *et al.* (2018) explain that women do not only publish fewer articles than men they are also less frequently cited than articles that have male key authors. Considering this, an article published by Lariviere, Gingras, Cronin and Sugimoto (2013) examined the gender disparities in research. The results were that females are responsible for less than 40% of authorships globally. They found that while female authorship significantly increased from 27% in 1994 to 37% in 2014 there seems to have been a plateau.

However, while the SAJHRM was consistent with the trend of males publishing many articles. In the SAJIP the pattern was reversed in the later years (2009 onwards). Women came to the forefront of article publication and their presence remained strong for the remainder of the study period. The increase of female authors illuminates the reality that more women are entering the fields of social science, researching and publishing articles compared to the past. Additionally, a study done by Ruggunan and Sooryamoorthy (2016) found that there was an increased percentage of women publishing articles from 2009 to 2013. They explain that this trend is a sign that gender proportions are shifting within the country. Ruggunan and Sooryamoorthy (2016) also explain that there is a further association between the year of publication and gender. This indicates that in the future the number of female scholars publishing their articles will increase exponentially. Ruggunan (2016) states that this could be a reflection of the feminisation of the South African academic labour market.

For this study gender was not the only factor with skewed results. Table 5.5 and 5.6 both show that the authors publishing articles in the SAJHRM and the SAJIP were dominantly of White descent. Out of 431 authors in the SAJHRM 318 were White and in the SAJIP out of 497 authors 419 were White. A large portion of the authors belong to the White race. The underrepresented races were Indian and Coloured. The race group with the second most contributors were Black, in the SAJHRM there were 71 Black authors and 38 in the SAJIP. This is similar to the results of the research done by Coetzee and Van Zyl (2014) which had a total of 80.86% White authors. The discovery that Whites dominate the research sector is further compounded by the finding that all authors who contributed the most articles in the SAJHRM and SAJIP are White.

According to research done by Ruggunan and Sooryamoorthy (2016), it seems as if there is a much more profound problem than simply having more White individuals publish articles. They have found that there is evidence that suggests there are racial links and affinities in journals. In the instance of co-authorship, White authors are more inclined to write and publish articles with other White individuals. This means that there are negative associations between Indian and White authors and Black and White authors. It is this adverse overtone that fortifies strong racial affinities in the publishing of research articles.

While the severe anomalies between the four race's publishing in the SAJHRM and SAJIP can be attributed to the harsh inequalities of the past and the predominant preferential treatment given to White individuals. Another rationale could be that individuals simply prefer to collaborate with other like individuals. For example, Coloureds would prefer to team up with other Coloureds. In this instance, it could have been that there was a large number of White individuals who wrote articles during the period studied. Those authors

joined forces with other White individuals which essentially led to the large variance between race's publishing research between 2006 and 2016.

However, when analysing the race of authors it can be beneficial to take into consideration their institutional affiliation. As illustrated in table 5.9 and 5.10, the University of Johannesburg, the University of the North-West and the University of South Africa have been the major contributors to the SAJHRM and SAJIP. Collectively there are 568 authors from these institutions that have published articles in both journals from 2006 to 2016. These institutions were formerly known as predominantly White universities. Even though they are now accessible to all races, these institutions seemingly still mirror the demographics of the apartheid era. This means that the majority of lecturers and students who attend such institutions are of White descent. Therefore, it may not seem right, but it makes sense that most of the authors contributing to articles published within the SAJHRM and SAJIP are White in terms of race.

The University of Johannesburg, the University of South Africa and the University of the North-West did not only have the most contributing authors. It was also observed that they published the most articles. This is conclusive with results found by Coetzee and Van Zyl (2014) which states that 30% of articles within the SAJIP were produced by The University of Johannesburg.

Ruggunan and Sooryamoorthy (2016) state that the results from their research also show a relationship between the race of an individual and the institution which they are associated with. It was found that White authors who published articles were mostly based at the University of Johannesburg. One reason for this could be that the journal (SAJHRM) was established at that institution. This is particularly interesting because the University of Johannesburg was formally known as the Rand Afrikaans University. Which in the past was dominated by White individuals and the same goes for the University of the North-West. This reiterates the above discussion. If individuals from these institutions are dominating the SAJHRM and the SAJIP then the expected outcome would be for one race (Whites) to have a higher publishing rate than any other.

Additionally, when inspecting the results on table 5.5 and 5.6 it is apparent that after White individuals' Blacks authors are the most represented. This speaks to the trend that as the years are going by more Blacks are publishing in the journals compared to Indians and Coloureds. This could be the product of racial transformation in South Africa, particularly at universities. Less White individuals are being employed as academics and those senior individuals who were employed at the universities prior to 1994 are now retiring and being replaced by their Black counterparts. Another explanation for the transformation of the racial publishing patterns could be that in the early years the higher education structure was divided based on racial characteristics. In the more current years, as a method of economic and racial redress many pieces of

legislation such as affirmative action have been put in place to promote transformation in public universities. Ruggunan and Sooryamoorthy (2016) state that because of these transformative measures, groups that were previously disadvantaged such as Blacks, Coloureds and Indians are being supported and encouraged to enter the world of academia.

Nonetheless, the change that has been taking place has not yielded significant transformations in terms of the proportion of White authors to Black authors in the field of social science. At this pace it will take many years for the previously disadvantaged racial groups to be equally represented in the academic field.

In this research, it was also found that there were multiple contributions from authors who came from many countries other than South Africa. This gives a clear indication of how diverse and geographically dispersed authors publishing in the SAJHRM and SAJIP are. Even though South African authors dominate, there is still much representation of other countries within Africa and the rest of the world. South Africa dominated the SAJHRM with 380 authors and 450 authors in the SAJIP. This actually means that in the years of 2006 to 2016 more than 89% of authors that contributed to the writing and publishing of articles in both journals originated from South Africa. It, however, does not come as a shock, as the journal itself originates from South Africa. The high number of authors actually signifies that there is a growth in the field of HRM and social science research in the country.

There were 18 authors whos country of origin was unknown due to the fact that little was revealed about them and their personal background. There were authors contributing from countries outside Africa, such as Sweden, Brazil, Dubai, Singapore, Finland, Canada and the Philippines. In addition to these countries, there were 4 authors from Iran and Zimbabwe publishing in the SAJHRM and 10 Authors from Netherlands in the SAJIP. These countries recorded the highest number of authors from outside the African continent. These countries are particularly interesting because it shows the widespread reaching that the SAJHRM and SAJIP have. There are authors contributing from around the globe spanning from Iran which is in West Asia all the way to Europe. The wide dispersions of authors add a lot of value in terms of the differentiated ideologies and opinions which are influenced by their backgrounds, cultures and places of origin.

6.6. Research methods and design

With respect to research approaches,146 research articles within the SAJHRM and 235 articles in the SAJIP utilised a quantitative approach between 2006 and 2016. This corroborates observations made by Moyo (2012) which states that scholars prefer to use quantitative research methods as opposed to qualitative. Stier (2014) explains that the use of quantitative research may be increasing in order to act as a defence mechanism against criticism from the fields of natural science. Critics who state that social science cannot

and should not be considered as 'real' science due to its inability to produce 'real' facts that can be generalised for most environments.

The research also revealed that from 2006 to 2016 the use of qualitative research methods in the SAJHRM and SAJIP was underrepresented. Only 68 and 102 research publications utilised this approach respectively. Similar results were obtained by Coetzee and Van Zyl (2014). They found that 235 articles used quantitative methods and 61 out of 342 articles used qualitative methods.

Twisk (2013) explains that a reason for this underrepresentation could be due to the complexity of qualitative research and the exorbitant amount of time associated with conducting those studies. From research done in prior chapters, it has been established that qualitative research requires a significant amount of effort. Data collected has to be processed painstakingly in order to generate meaningful conclusions. While qualitative data can be collected and analysed through virtual means with statistical software. The extensive work perceptions associated with qualitative research coupled with the high amount of pressure exerted onto researchers from universities to proverbially 'publish or perish'. Means that they are more inclined to make use of quantitative research approaches in order to maximise the output of research per annum.

Storbacka (2014) states that the demand and increased pressure on academics to produce articles will result in the publishing of "stylish rubbish". These words used by Storbacka (2014) are harsh but paint a picture of the increasing reality that academics are under immense pressure to publish research. Therefore, academics do not focus on their passions or quality of work produced.

Given the results of this research which states that the SAJHRM and SAJIP use predominantly quantitative research approaches. The journals could essentially become a victim of Storbacka's (2014) prediction. However, to prove this more extensive research based on the authors choice of research approach will have to be done. The SAJHRM should strive to encourage the use of qualitative research in an attempt to narrow the boundaries between practitioner and scientist.

According to the statistics collected in this study, many articles published in the SAJIP and SAJHRM used questionnaires in their data collection. In both journals over 35% of articles used this type of data collection method. Since questionnaires are mostly used in quantitative studies and it has been established that articles published in both journals were mostly quantitative. It makes sense that questionnaires would have a higher presence than any other qualitative data collection technique. It should be noted that while it is understood that surveys and questionnaires fall within the same umbrella. Many authors listed them separately in their

methods section of the article. Therefore, it has been concluded that questionnaires and surveys were used the most.

This can also be linked to the fact that questionnaires are an easier and cheaper method of data collection, and most researchers and participants are knowledgeable and comfortable with this method as opposed to other methods. Kelley, Clark, Brown and Sitzia (2003) explain that although questionnaires are an easy data collection tool there is a higher chance that poor quality data could be collected. However, in contrast to Kelly et al. (2003), Bird (2009) states that questionnaires are an extremely well-recognized research tool within the discipline of social science. In the sense that it provides a good representation of past and present standards of attitudes and behaviour as well as the reasons and beliefs for certain actions.

6.7. Software packages

Data collected based on the use of software packages to analyse articles in both journals revealed that majority of authors made use of a statistical analysis software package/ program called the Statistical Package for the Social Sciences (SPSS). From both journals, a combination of 303 articles were written using the SPSS software, 121 from the SAJHRM and 182 from the SAJIP.

Paura and Arhipova (2012) explain that SPSS is one of the more popular types of software used for analysing statistics. As it is designed to provide a wide range of graphs and charts to analyse statistical data. SPSS also provides procedures to clean and screen data in preparation for additional analysis. Furthermore, other programs similar to SPSS may need extra plug-ins in order to analyse sophisticated data. SPSS is further designed to ensure that data that has already been processed is retained isolated from the unprocessed data. SPSS holds all outcomes in distinct files that are separate from raw data. Although, in other programs such as Excel all information is contained on a single worksheet. This means there is an increased chance that information can be mixed and overwritten accidentally. However, there are many available software packages that provide good methods of organising data. SPSS, however, is appropriate for complex data analysis.

While researchers may be choosing SPSS due to its simplicity and easy to grasp features it has also been found that many authors have chosen not to make use of statistical programs. We can assume that if authors did not provide any indication of the use of a software package that they analysed the data manually. However, in the SAJHRM 17 articles explicitly stated that no software package was used. Analysing the data collected manually can be a highly reliable method. There is no chance of virus's deleting data or software malfunctions, the researcher finds the mean, median, mode and frequency of data manually often

using basic tools such as pen, paper and a calculator. Although this leaves much room for human error. The reasons why an individual would choose the manual analysis method is unknown in this research and perhaps could be explored further in future research.

6.8. Types of intersectionality used

From earlier research in chapter 3, it has been established that the theory of intersectionality refers to the method through which social individualities such as class, gender and race interact. Usually to form life experiences specifically that of oppression and privilege (Gopaldas, 2013). This theory can be adapted by researchers to study the relationship that exists amongst the various dimensions of social foundations.

This study examined articles within the SAJIP and SAJHRM for any evidence of the use of intersectionality. Intersectionality was determined to have three main types, categorical, anticategorical and intracategorical intersectionality. The most frequently used type of intersectionality was inter-categorical intersectionality (otherwise known as categorical intersectionality) as 84 articles in the SAJHRM and 140 articles in the SAJIP used elements of categorical intersectionality.

As explained in chapter three intersectionality is most suitable to social studies as social science commonly evaluates the dynamics or characteristics of groups of people. It can be concluded from explanations provided by Walby, Armstrong and Strid (2012) that authors publishing in the SAJHRM and SAJIP have mostly used elements of inter-categorical intersectionality because it is the most basic complexity of the intersectional theory. When authors apply the inter-categorical complexity to their research they are able to make comparisons across any social disparity. This complexity assists authors to provisionally adopt analytical categories that already exist and assess the relationships among them. With the aim of discovering conflicting dimensions and inequalities. It was found that in the SAJHRM and SAJIP the most frequent types of social identities being studied with the use of inter-categorical complexities was race and gender. Many authors centered their research around analysing the inequalities that are present between different races and between both genders.

The second most popular type of intersectionality in both journals was the anticategorical complexity. It was used 34 times in the SAJHRM and 32 times in the SAJIP. In chapter 3 it was explained that anticategorical intersectionality is set in the belief that categories and social identities should not be used to differentiate people. Therefore, with the diversely modern world and 21st century developing so rapidly, it is unsurprising that this type of intersectionality is becoming more common amongst authors. This complexity explains that when people are analysed according to a specific category inequality is further amplified. Authors in recent years may be choosing anticategorical intersectionality to assess people

because the world is evolving, and social barriers are being broken down to accommodate an inclusive and equal society. A society where all individuals have opportunities for advancement and the eradication of oppressive tendencies is being pursued.

The type of intersectionality used the least was intracategorical. Seven articles in the SAJHRM and 25 articles in the SAJIP used intracategorical complexities. Authors that use this type of intersectionality acknowledge that there are certain social categories and boundaries that exist. However, they work towards breaking down and deconstructing these barriers. The distinction of this type of intersectionality is that it focuses on only one group of people and the inequalities that they face. The most common social groups being studied in the journals was females from the gender category and Blacks from the female category.

These findings had some similarities to the research conducted by Jones *et al.* (2013). Jones *et al.* (2013) also found that the most common type of intersectionality being used by authors in social science disciplines was intercategorical. Although Jones *et al.* (2013) found that anticategorical intersectionality was least popular. The analysis of the SAJHRM and SAJIP revealed that the use of anticategorical research is increasing. This finding is consistent with the conclusion that the more recent articles are being written with elements of anticategorical intersectionality. Jones *et al.* (2013) conducted his research in 2009, whereas this research analysed a broad spectrum of articles from 2006-2016. Which provided a holistic view of older and more recent publishing patterns.

6.8.1. Examples of Intersectional categories from the SAJIP and SAJHRM

Berstein and Osman (2016) published an article in the SAJIP in 2016. They used elements of intercategorical intersectionality to conduct their research. The authors studied the positive and negative sex role identities (SRI) that individuals assume in South Africa. From figure 4.2 it is evident that Berstein and Osman (2016) study a range of social categories. The categories ranged from gender, age and language to marital status. Individuals from each of these social groups were studied and then placed into SRI groups. Individuals were described as having one of four SRI's, positive masculine traits which meant that they had high levels of well-being and self-esteem. Negative masculine traits meaning that the individuals had high senses of dominance and a need for power. Positive femininity referred to individuals that genuinely cared for others and had the strong urge to help people. Individuals with negative femininity had elevated levels of anxiety and neuroticism.

From this example, the criterion for categorical intersectionality is met. There are multiple social identities being study and differences between the identities are looked at.

Puente, Crous and Venter (2007) published an article in the SAJHRM. The intersectional approach used by them was anticategorical. Puente *et al.* (2007) aimed to study authentic leadership development. The article focused on social development issues but did not include any social identity. The authors used interviews as a data collection method. Despite this human interaction, all individuals were seen as one big group, independent of social ideologies. The findings were also general and not specific to a social group. Puente *et al.* (2007) found that the levels of performance thrive when employees constantly receive positive reinforcement and constructive criticism. Performance also increases when there is a high spirit of "Ubuntu". Ultimately, the factor that placed this article in the anticategorical class was that no social identity was used to segregate participants in the interview phase.

Kinnear and Ortlepp (2016) wrote an article for the SAJIP that studied the ways in which women can construct power in their lives. Particularly in the business portion of their lives. This article was classified as intracategorical. This type of intersectionality was appropriate because only one social group was being studied and that was women. The women were not divided into any other social identity such as race or age. All women were on the same platform irrespective of their other social characteristics. For example, they were not separated into Black women or women within a particular age group. Kinnear and Ortlepp (2016) found that women associated and constructed power around models of tradition and patriarchy. This finding applied to all women in a general sense, and this is what made the article intracategorical in nature.

6.9. Popular themes

Table 5.13 and 5.14 illustrates the most common themes present in the SAJHRM and SAJIP.

Emotional intelligence was a dominating theme in the SAJHRM, however, it was also present many times in the SAJIP.

Emotional intelligence involves being sensitive to and perceptive of other people's emotions and having the ability to intuitively facilitate improved performance based on this knowledge. It is understandable that emotional intelligence has ranked in the top 10 themes in both journals. As the modern workplace is characterized by open communication, teamwork, and mutual respect among employees and their supervisors. Possessing the skill of emotional intelligence will, therefore, allow managers to better understand and motivate the people that they supervise.

Variable	Category	f	%
Age	18–25	130	3.75
	26–35	1557	44.91
	36–45	1331	38.44
	46–55	360	10.39
	56–65	84	2.42
Biological sex	Women	2531	73.10
	Men	931	26.901
Population group	Black	810	23.39
	White	1451	41.91
	Mixed-race	620	17.90
	Asian	530	15.30
	Missing	51	1.50
Language	English	1741	50.28
	Afrikaans	983	28.39
	African Language	738	21.33
Level of education	Less than Matric	67	1.93
	Matric	1439	41.57
	Post-Matric diploma	935	27
	Degree	858	24.78
	Postgraduate degree	77	2.24
	Missing	86	2.48
Marital status	Single	852	24.61
	Married	1681	48.57
	Cohabiting	184	5.31
	Divorced	698	20.16
	Widowed	47	1.35

Figure 6.1: Example of categorical intersectionality

Source: (Bernstein and Osman, 2016, p.5).

Work-life balance was another common theme amongst both journals. It was found that the elements being discussed pertaining to having a balanced work-life differed in both journals. The SAJHRM focused more on adapting the traditional working arrangement to suit dual couple families. The SAJIP concentrated on activities that can be performed to enrich the lives of employees holistically in a personal and professional capacity. Work-life balance is seemingly an important modern research area. It will ultimately create a supportive working environment that will maintain a healthy balance between one's occupation and personal responsibilities. It can also be justified that if an individual feels like the organisation they are working for is attempting to promote a healthy work and personal life they will in turn be productive and maintain loyalty.

Training and developing the skills of the workforce featured throughout the SAJHRM and SAJIP. The development of managers was prominent in the SAJHRM. While training and development of the entire workforce was evident in the SAJIP. George and Scott (2012) stress that training and development is essential to foster a culture of learning amongst employees. It will broaden the skills of individuals to ensure that they are capable of accommodating future responsibilities. It is also important to note that training and development is an ever-evolving but constantly relevant research area. Individuals in a workplace are continuously subject to change especially with the modern and fast-paced working environment of the 21st century. Employees should seek innovative and motivating training and development methods that aim to maximize employee satisfaction. It can be assumed that for many years of the past and many future years training and development will be a relevant and evolving subject of research.

Work/employee engagement has also been a recurring theme in the SAJHRM and SAJIP. For any organisation having sound employee engagement initiatives ensures that employees are connected to their job. They are therefore willing to go the extra mile to guarantee that the tasks are performed to the best of their capabilities. By facilitating job satisfaction, it also provides a basis for employees to be loyal to the companies' goals. By conducting quality research on employee engagement practitioners can take the findings of researchers and adapt it to their organisations. Much of the research focused on ways that employers can keep employees engaged or the role of employee engagement in the workplace. Practitioners can utilise these findings to create sustainable employee engagement initiatives.

One of the most influential and relevant themes to South Africa that was identified in the journals was workplace diversity. Workplace diversity is a particularly important research area for South Africa because the legacy of apartheid has created intense divisions of the workforce. Research on diversity can be used to determine the requirements that the country needs to reinforce and create a cohesive working environment characterised by teamwork. Mazibuko and Govender (2017) clarify that sometimes research on workplace

diversity is confused with that of affirmative action and employment equity. However, it should be research focusing solely on programmes that can be used as tools to accept and affirm socially tolerable differences of employees. Perhaps future research can provide a deeper insight into the areas within diversity that are being studied and how the findings of such can be applied to the practical world

Articles in the SAJHRM placed a considerable amount of emphasis on the state of "brain drain" in South Africa. This phenomenon can severely impact the level of specialised skills a country has available. Brain drain does not only impact the practical working sector of a country, in terms of not having sufficient doctors or engineers. It also results in the deterioration of the higher education system. When individuals with PhD's and other higher qualifications leave a country there are less qualified people left to educate the youth. A country has to then make provisions which could lead to inferior education being disseminated to the population. By conducting research based on brain drain the journal is generating knowledge on the impact it has on a country. Providing methods that can be utilised to prevent skilled people from leaving or efforts that need to be made to attract those skilled workers back to the country.

In the SAJIP much focus was placed on the experiences that females have in the workplace. Female representation is important in the workplace. Not only for diversity purposes but to increase the talent pool of the organisation. In the SAJIP the basis of multiple research studies was placed on all aspects of female experiences in the organisation, including but not limited to diversity, harassment, fair treatment and opportunities for progression. The pleasing aspect of the recurrence of this research theme in the SAJHRM is that as the years went by from 2006-2016 the findings started become favourable towards women. There is an increased presence of females in the modern organisation, particularly in those fields that were previously dominated by males.

The overall themes in both journals were very similar. It was observed that the SAJIP had many overlapping themes with the SAJHRM. This is understandable since both fields deal with managing people in the workplace. However, there should still be some variation in the themes being discussed. If both journals are producing similar articles it makes the need for two separate journals redundant. Perhaps industrial psychology researchers should try and steer their studies more towards analyzing the reasons why people behave in the ways that they do, discussing the underlying reasons for certain behaviours.

Some of the themes identified in this study are similar to those found by Coetzee and Van Zyl (2014). Coetzee and Van Zyl (2014) studied articles in the SAJIP from 2004 to 2014. The main themes that they found were:

- Psychometrics and selection techniques
- Coaching and mentoring
- Career development
- Consumer behaviour
- Emotional intelligence
- Deviant work behaviour and ethics
- Diversity management
- Employee and organisational wellness

Both the SAJHRM and SAJIP had themes of emotional intelligence, employee wellbeing and some element of organisational diversity. These are similar to what has been identified by Coetzee and Van Zyl (2014). There could be corresponding themes because the study conducted by Coetzee and Van Zyl (2014) was done on overlapping years to this study. In addition to an overlap in years, we have already discovered that SAJHRM and the SAJIP publish similar research topics. This can be expected due to the fact that both journals are from management studies.

However, compared to research that is not content analysis in nature there are very little similarities in themes. Schreuder and Coetzee (2012) analysed themes of South African research in organisational career psychology from 1970 to 2011. The themes that Schreuder and Coetzee (2012) identified were:

- Issues of professional importance
- Career theory and concepts
- Development of life stages
- World of work

None of the themes identified by Schreuder and Coetzee (2012) are similar to themes found in the SAJHRM and SAJIP. The only common characteristic between the themes found by Schreuder and Coetzee (2012) and this study is that they each deal with some element of management studies. The differences between themes could be attributed to the vast difference in years being studied. This research focused on more recent years while much of the research done by Schreuder and Coetzee (2012) done prior to the year 2000. Trends have evolved over the years and individuals are now interested in more dynamic and innovative topic, such as dual couple families, ergonomics and emotional intelligence. Schreuder and Coetzee (2012)

also focused on practical themes that actually occur in an organisational environment. This study developed themes from relying solely on academic research with very little reporting on practical trends.

To do a current and accurate comparison of themes both studies would have to contain identified elements of practical and theoretically based themes.

6.10. Conclusion

In this chapter, the findings presented in chapter 5 were discussed in detail. It was discovered that while the South African research sector has progressed in terms of equal representation of authors, there is still a long way to go. Mainly White males were writing articles in the SAJHRM. However, the SAJIP proved that this trend is changing as Black females are publishing more frequently in recent years. Many authors are using quantitative research methods to collect data, the majority of which is being analysed with the software SPSS. Articles were scanned for the use of intersectional elements and it was found that most articles were classified as intercategorical. Themes being discussed in the SAJHRM and SAJIP tended to overlap which meant that both journals were producing similar articles during the period of study. Overall patterns identified across data sets were similar in both journals.

CHAPTER SEVEN

CONCLUSION

7.1 Introduction

This chapter will examine how each research question was answered and the extent to which this research has practical value. Additionally, the limitations posed on this study are considered and recommendations for further research are discussed.

7.2 Summary of research findings

7.2.1. Research question 1: Which authors have published the most articles in the SAJIP and SAJHRM from 2006 to 2016?

In the SAJHRM Mark Bussin published the most articles (f =13). Melinde Coetzee and Gert Roodt both published 12 articles followed by Sebastiaan Rothman (f =7) and Willem Schurink (f =6). In the SAJIP it was found that most articles were published by Frans Cilliers (f =13), Sebastiaan Rothmann published 11 articles. Johann Schepers was the third most frequent publisher (f =10) followed by Melinde Coetzee (f =8) and Leon DeBeer (f =6). Furthermore, it has been established that in the SAJHRM 242 authors were lecturers and 189 were students. In the SAJIP 332 authors were lecturers and 165 were students.

7.2.2. Research question 2: Which countries do authors from the SAJHRM and SAJIP originate?

The top three countries of origin for authors in the SAJHRM were South Africa (f=380), Iran (f=4) and Zimbabwe (f=4). The origination of 18 authors were unknown. In the SAJIP authors originated from South Africa (f=450), Netherlands (f=10) and (f=7) from Australia and Belgium each.

7.2.3. Research question 3: Which Universities do authors from the SAJHRM and SAJIP originate?

Many individuals publishing in the SAJHRM were affiliated with the University of Johannesburg (f =132) followed by the University of the North West (f =79) and the University of South Africa (f =47). Most authors from the SAJIP were affiliated with the University of Johannesburg (f =128) and the University of the North West (f =102). The University of South Africa producedb74 articles and the University of Stellenbosch was affiliated with 38 articles.

7.2.4. Research question 4: What are the demographic profiles of authors publishing in the SAJHRM and SAJIP?

In the SAJHRM it was determined that males contributed the most by publishing 229 articles while females published 198 articles. Articles in the SAJIP were authored and published by 238 females and 258 males. The race of authors in the SAJHRM included 318 were Whites, 71 Blacks, 26 Indians and 11 Coloureds. The SAJIP comprised 419 Whites, 38 Blacks, 32 Indians and 8 Coloureds.

7.2.5. Research question 5: Which software package is most frequently used to analyse data?

SPSS was found to have been used the most frequently to analyse data within articles of both journals, it was used 121 times in the SAJHRM and 182 times in the SAJIP.

7.2.6. Research question 6: What are the most widely used research methodologies in the SAJHRM and SAJIP?

In the SAJHRM the most popular research approach was quantitative as it was used in 146 articles. Qualitative research was used in 68 articles and 29articles comprised of mixed method techniques. Data from articles in the SAJHRM were mostly collected through the use of questionnaires, surveys and interviews. Many articles in the SAJIP were completed with the use of quantitative research methods ($f=$ 235). Qualitative research was adopted in 102 articles and a mere 5 articles used a mixed method approach. Data in the SAJIP was collected via the use of questionnaires, surveys and interviews.

7.2.7. Research question 7: What are the main themes explored in the SAJHRM and SAJIP?

Emotional intelligence was the dominant theme in the SAJHRM, other themes identified were the development of managerial skills, health and safety in organisations and work arrangements to accommodate dual couple families. In the SAJIP the bulk of articles focused on themes such as work-family enrichment, employee wellbeing, ergonomics and training and development.

7.2.8. Research question 8: Which approaches of intersectionality are more evident amongst articles?

The findings for the type of intersectionality used by authors was similar in both journals. Articles in the SAJHRM and SAJIP both mainly used categorical intersectionality, it was used in 84 and 140 articles respectively. Anticategorical intersectionality was applied to 34 articles in the SAJHRM and 32 articles in the SAJIP. Intracategorical intersectionality was used the least, 7 times in the SAJHRM and 25 times in the SAJIP.

7.3. Limitations of the study

For the period of this study, there were various constraining factors that placed certain limitations on the range of the research.

The most pressing limiting factor was that multiple areas of literature deemed to be important to this study were found to be insufficiently researched. This forced the researcher to be heavily dependent on the work and findings of a few authors. The areas that were discovered as inadequately researched were, bibliometric analysis of South African journals. Additionally, it was observed that organisational intersectionality in South Africa has not been explored in-depth. This forced the study to rely mainly on international findings, with very minimum reference to intersectionality in South Africa.

Some of the articles extracted from the SAJHRM and SAJIP did not contain all the relevant bibliographic information about the authors. In some instances, the researcher was able to make an educated guess from the information that was provided. This process was facilitated with social media and general internet searches. Essentially the race and gender classifications of authors were made by the researcher. Situations could arise where the authors identify as one race, but the researcher classifies them as another. However, all avenues have been explored and every attempt has been made to accurately classify the authors.

Due to constraints such as time, funding and the scope of this study the research focused only on management studies. There were only two journals studied, the SAJHRM and SAJIP over a 10-year period. While the results are still generalisable a more intensive study could incorporate journals from outside the management field.

7.4 Recommendations

As explained previously, for this study only two management journals were studied. The scope of future research could be expended to include journals from other disciplines. It is recommended that journals from four other disciplines are examined for a period of 15 years. This will ensure that the researcher will get an accurate depiction of how the patterns of knowledge production have evolved in South Africa.

Furthermore, in addition to just expanding the scope of this study in South Africa, future research could incorporate international journals. By doing this a comparison could be made to decipher how South Africa is fairing up to other countries. This will provide insight into research methods used to produce articles locally and internationally as well as the biographical differences of individuals publishing articles.

In order to get accurate findings about an author's gender or race future research could invest more time into actually getting in touch with authors. Realistically, getting a hold of every author is impractical. However, in instances when information is unattainable, a simple email could be sent out, as articles do provide the email addresses of authors. This will eliminate the inherent guesswork done by the researcher.

A recommendation for journal administrators is that they should seek to close the gap that exists between practitioners and academics. Although as explained by Casio and Aguinis (2008) it is common for there to be a distinct division between those two aspects. It is still necessary to have mechanisms in place to unify the profession and discipline of HR. Anderson (2007) states that various strategies can be used to bridge this gap. The first strategy that could be adopted by the SAJHRM and SAJIP is that the journal could allow for articles and reports that are shortened practice-based research to be published. The journals could also invite practitioners to assist academics in reviewing new submissions.

In order for future research to have more practical elements, the researcher could incorporate surveys into the study. The surveys could seek to gather information from individuals based on their research and publishing patterns or aspirations. This will provide practical information about why certain individual groups choose to publish more than others.

7.5. Practical value of this study

Practical value generally refers to the extent to which the research could be adapted and used in "real life". This research can be adapted to practical settings, especially to assist universities and policymakers to reassess the research output. It can also to some extent be used by managers in organisations.

As we have discovered, authors publishing around South Africa are mainly White South African males. While the country does have certain quotas in place, these are not research specific and tend to focus more on university enrolment. This research could help policymakers realise that many females and Black individuals are not publishing research articles. Universities could make certain research opportunities and incentives available exclusively to females and Black individuals. The results from this study can further assist policymakers to offer incentives to researchers from specific institutions. Institutions such as the University of the North-West, University of Johannesburg and University of Cape Town have been identified as those that produce predominantly White-male authored studies. The universities could possibly team up individuals of different races and genders. With the provision of a monthly stipend these diverse groups will be able to produce research that is publication worthy.

In addition to regulating the gender and race of publishing authors, this research provides insight into research methods used most frequently. It was found that quantitative research is most common using surveys and questionnaires. Academic supervisors, universities and first authors could use this research to identify which research methods are being used the least. By incorporating the unpopular methods into their studies these researchers will be enhancing the type of knowledge produced while adding variety to the body of knowledge South Africa publishes.

The administrators of journals can use the findings of this research to diversify the content of research being published. As it stands, we noted that most of the articles are written with some elements of categorical intersectionality. This is a very basic type of intersectionality as it focuses on the existence of various social characteristics. In an effort to introduce depth and variety to the journals, administrators could require that anticategorical and intracategorical intersectionality be used to direct research studies.

Managers of organisations can use the intersectionality portion of this study. It will widen managers perspectives of how individuals with different social identities interact in a team setting. Generally, when managers assemble teams, they combine people with relevant job skills. While in this research it has been discovered that it is the way in which social identities such as class, gender and race interact to form levels of involvement. By adopting this to the workplace it can be said that social identities of individuals determine their work capabilities or even their willingness to perform certain tasks.

7.6. Concluding remarks

The demographic and bibliometric trends of the research environment in South Africa are relatively underdeveloped. Extensive patterns pertaining to this are still in the foundation phases of recognition. This entire research study has been dedicated to studying the patterns of knowledge production in South Africa. The nature of the research provides a detailed analysis of the range and focus of the SAJHRM and SAJIP. This serves to provide valuable insights into the contributions of articles to the research output of the country.

This study establishes that there is a severe skewness in the demographic profiles of authors. A large portion of academic authors in South Africa are White males. Additionally, a large sum of the research is being produced by historically White universities. This can be an after effect of the severe oppressions of the Apartheid compounded by the assumption of social identities that are imposed onto individuals.

It was also established that there is a tendency for authors to lean towards using a quantitative method of research. This creates a very one-sided representation of research and capabilities of authors.

The results from this study, if used correctly can transform the way research and knowledge is produced.

The aim is to create a demographic profile of authors that is diverse and an accurate representation of the democratic backbone of South Africa.

Appendix A: A replication of the Personnel Practice Bill

ALGEMENE KENNISGEWING	GENERAL NOTICE
KENNISGEWING 621 VAN 1985	**NOTICE 621 OF 1985**
DEPARTEMENT VAN MANNEKRAG	**DEPARTMENT OF MANPOWER**
KONSEPWETSONTWERP OP PERSONEELPRAKTYK	DRAFT PERSONNEL PRACTICE BILL

Die volgende Konsepwetsontwerp word hierby vir algemene inligting en kommentaar gepubliseer.

The following Draft Bill is hereby published for general information and comment.

Enige kommentaar of vertoë daaromtrent moet voor 1 Desember 1985 skriftelik en in duplikaat by die Direkteur-generaal: Mannekrag, Privaatsak X117, Pretoria, 0001, ingedien word.

Any comments or representations thereanent should be lodged in writing and in duplicate with the Director-General: Manpower, Private Bag X117, Pretoria, 0001, before 1 December 1985.

KONSEPWETSONTWERP OP PERSONEELPRAKTYK

DRAFT PERSONNEL PRACTICE BILL

Om die Suid-Afrikaanse Raad vir Personeelpraktyk daar te stel, vir beheer oor die vrywillige registrasie van personeelpraktisyns en personeeltegnici, insluitend registrasie in die verskillende kategorieë van spesialis-dissiplines binne die gebied van personeelpraktyk en vir die erkenning van die opleiding van Personeelpraktisyns en Personeeltegnici; om voorsiening te maak vir beheer oor sodanige registrasie en vir die erkenning van sodanige opleiding; en om voorsiening te maak vir verwante aangeleenthede.

To establish the South African Board for Personnel Practice, for control of the voluntary registration of personnel practitioners and personnel technicians, including registration in the various categories of specialist disciplines within the field of personnel practice, and for recognition of the training of Personnel Practitioners and Personnel Technicians; to provide for control over such registration, and for recognition of such training; and to provide for matters incidental thereto.

1. Woordomskrywing

In hierdie Wet tensy uit die samehang anders blyk, beteken—

(i) "kandidaat" 'n persoon in opleiding en as sodanig geregistreer ingevolge hierdie Wet, wat tans besig is om die tydperk van praktiese ondervinding te deurloop wat nodig is vir registrasie as Personeelpraktisyn of Personeeltegnikus;

(ii) "kwalifikasie" 'n graad, diploma, of sertifikaat, wat toegeken is na eksaminering van 'n persoon se vaardigheid in 'n toepaslike vak, of vakke;

(iii) "lid" 'n lid van die Raad;

1. Definitions

In this Act, unless the context indicates otherwise—

(i) "Board" means the South African Board for Personnel Practice;

(ii) "candidate" means a person in training, registered as such under this Act, who is undergoing the period of practical experience necessary for registration as a personnel practitioner or personnel technician;

(iii) "chairman" means chairman of the Board;

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Source: (Van Rensburg, 2009, p.59).

Appendix B: Case Study 1

Nololo is a middle aged colored woman who lives in Saldanha Bay on the West Coast. She owns a SMME in the fish-processing industry. She is a mother of four children. Nololo's parents were African migrant workers who required special residential permits to live in an urban area. Migrant workers did not own boats, and Nololo's father was the navigator of the trawler owned by a White man who also provided accommodation for the family. As a child, Nololo experienced her mother being imprisoned under the Group Areas Act of 1950 (Act No.41 of 1950). She lived with a coloured family in Cape Town and went to a local school. Consequently, she was classified colored because the Western Cape is a preferential area for people of mixed decent. Nololo worked from the age of 16 years in the local fish-processing factory and later as a cook at the local military academy for 20 years. The advent of democracy provided an opportunity to take advantage of affirmative action policies, and she started her own SMME. The Marine Living Resources Act (1998) recognised commercial, recreational and subsistence fishing, and thus provided some legal recognition to fishers, for the first time. Nololo purchased a mobile food stand to sell food at weekends. As time passed, she established a catering business in partnership with three other women- two White and one Indian woman. Government's preferential policies in the fish processing industry encouraged women to bid for a seasonal fishing permit. One among the eight-member company is a woman who is not a senior partner. Women are employed primarily as seasonal workers at the local fish-processing company or as small entrepreneurs on the West Coast. In Saldanha Bay and Paternoster fishing villages, women have significant roles in shore-based activities: making and repairing nets, preparing bait, and processing and selling fish. In addition, women collect mussels and other shellfish off the rocks. Younger women who have a matriculation school-leaving certificate are employed as engineering cadets to work on fishing trawlers.

Source: (Groenmeyer, 2011, p.255).

Appendix C: Case study 2

Nxolo is a middle aged African woman, one of the three women owners of the Germiston Women's Group (GCC). Nxolo is the president of the GCC and a skilled construction worker. She started a section of the Master Builders' Association in Germiston in 1997. Its name was later changed to Germiston Women's Group, and it was registered as a nongovernmental association, which organized women in the Industry. Women and black men both belong to historically disadvantaged communities, and have been targeted for preferential treatment in the guidelines for development corridors, especially In the flagship project of the Spatial Development Initiative (SDI) process, the N4 Highway. The N4 Toll Road stretches from Witbank in Mpumalanga Province in South Africa to Maputo in Mozambique. The N4 Toll Road is a part of the primary infrastructure of the Maputo Development Corridor (MDC), and is the most advanced international development corridor in Africa. A social contract for the N4 MDC has been established on three pillars. Namely, community participation, training and development and SMME development. These pillars collectively underpin the arrangements for building construction SMMEs. GCC was one of the three women-run enterprises that have been awarded tenders in the construction industry. Nxolo as a successful recipient of a sub-contract would become the employer of women from the local area who fall under the third tier of informal work. For the duration of the contract, Nxolo would be the employer of mainly unskilled, contract women workers. Germiston Women's Group engages in labour-intensive activity. Although this is because construction is considered an industry providing extensive employment with little investment, Nxolo has a different viewpoint, she considers these labour intensive tasks a stepping stone to learning further skills in construction. She and the member of the GCC attend workshops to learn skills in construction. According to Nxolo her work team consists of three men and three women who ensure the contract is fulfilled. The men have technical skills and transfer skills to women workers through learning by doing.

Source: (Groenmeyer, 2011, p.254).

Appendix D: TurnItIn Report

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Appendix E: Ethical Clearance

UNIVERSITY OF ™
KWAZULU-NATAL

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YAKWAZULU-NATALI

15 September 2017

Ms Rylla Pillay (213544710)
School of Management, IT & Governance
Westville Campus

Dear Ms Pillay,

Protocol reference number: HSS/1663/017M
Project title: Bibliometric and content analysis of the *South African Journal of Human Resource Management* and *South African Journal of Industrial Psychology* from 2006 to 2016

Approval Notification – No Risk / Exempt Application

In response to your application received on 08 September 2017, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has 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 Shamila Naidoo (Deputy Chair)

/ms

Cc Supervisor: Dr Shaun Ruggunan
Cc Academic Leader Research: Professor Isabel Martins
Cc School Administrator: Ms Angela Pearce

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