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# Research Methodology Choices of Female Postgraduate Students in the Gauteng Province of South Africa

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## *Abstract*

This study investigated the research methodology choices of female postgraduate students, and the influencers of their choices. A quantitative descriptive survey research design was adopted. Thirty-six respondents from four universities in the Gauteng province, South Africa participated in the study. A closed-ended questionnaire was designed and sent out via email to the identified respondents. Descriptive statistics was used to analyse the data. The study's findings revealed that the respondents' preferred research methodology was qualitative. Quantitative methodology was revealed to be the 'methodological underdog' because it is the least preferred choice. Nine factors were revealed to be the influencers of their choice. These were: (1) the supervisor's methodology choice, (2) the student's perceived ease and comfort in using the methodology, (3) the faculty/department's preferred methodology, (4) the student's friends and colleagues' choice, (5) previously used methodology, (6) the career and lived experiences of the student, (7) the institution's organised/taught research methodology modules, (8) readings and review of the relevant literature, and (9) anticipated publication outlets. Of all of these, most of the respondents designated their institution's organised/taught research methodology modules as the top influencing factor of their choice. In line with the findings, a conclusion was reached and recommendations were made.

***Keywords:*** *Postgraduate Women Students; Quantitative Research; Qualitative Research; Mixed Methods Research; Rational Choice Theory*

## *1. Introduction*

My research interest includes women in education and development, and research methodologies. I have supervised and still supervising postgraduate students. From my supervision experience, I note that the interest of both the supervisor and the student in a particular research area or focus is key to the completion time of the research because both tend to enjoy the process even with the rigour that comes

with it, yet, they look forward to the findings which for them is intriguing and a genuine reason for venturing into the research in the first place.

Research methodologies comprise clear and conventional procedures that provide or set out directions and guidelines for conducting research. According to Patel and Patel (2019), research methodology is the science of studying how research is done scientifically. Whilst scholars often disagree and sometimes agree on the research methodology for their intended research, the issue of research methodology choice varies from one researcher to another. This contestation is something that Williams (2020) refers to as the paradigm war. This article, therefore, is concerned with investigating the research methodology choice of female postgraduate students in universities, and the factors that influence their choices due to: their increased interest in higher education (Potokri, 2016; Mead, 2023)]; their roles in the transformation of higher education (Potokri et al., 2018); and the improvement in the enrolment of female students in postgraduate studies (Department of Higher Education and Training, 2020). In light of this, the question to be answered in this article is – what are the research methodology choices of female postgraduate students, and what are the influencers of their choices?

## *2. Literature Review*

### 2.1 Choice and Research Methodology

In Barnett et al. (2008) study, four main themes about choice were identified: positive aspects of choice; the appearance of choice; unwanted choice; and the role of information in choice. Accordingly, choice is believed to be valued in principle, and having a choice is seen as positive. However, the provision of options to choose from is not always associated with the possibility of meaningful choice. In their study, the participants expressed that in some instances they were given the appearance rather than the substance of choice (Barnett et al., 2008). Making – as opposed to having – a choice was often unwanted and considered indicative of the erosion of trust. Information was seen as a necessary, but insufficient prerequisite for informed choice. Significantly, they conclude that people value having choices rather than making choices, but are concerned about the provision of choices for its own sake, rather than a choice that is available in a meaningful way.

There are three research methodology options that researchers and postgraduate students can choose from. These options are the quantitative research method; the qualitative research method; and mixed methods research. Cornelissen et al. (2019) note that even though theory is often seen as the driver of what we do as researchers, it is only through empirical engagement with our focal phenomena that we are able to derive insights that truly provide value to the organisations or phenomena we study. Therefore, methodology holds a special place in science, and in knowledge generation in general (Molina-Azorin et al.,2017). In recent times, there has been an increasing need for rapid transformation and advancement in methodological rigor. As such, researchers face many new challenges regarding how to conduct their research, as well as in understanding the implications that are associated with their research choices (Fleming & Zegwaard, 2018).

### 2.2. Qualitative Research Methodology

Drawing on ideas found in existing work, and based on Becker's classic study of marijuana consumption, Vaughn and Jacquez (2020) define qualitative research as an iterative process. This comprises an improved understanding of the scientific community, which is achieved by making new, significant distinctions resulting from getting closer to the phenomenon being studied. In agreement with these authors, this definition captures the core elements of the qualitative method. Understanding is the result of research, and is due to an *iterative process* in which data, concepts, and evidence are related to one another (Becker, 2017).

An iterative process of inferences means that researchers tend to analyse data by identifying patterns tied to instances of a phenomenon. They then develop a sense of the whole phenomenon as informed by those patterns. Seeing the pattern can shift the way the whole is understood, just as seeing a pattern in the context of the whole phenomenon can shift the way it is understood (Levitt et al., 2017; Osbeck, 2014). It is therefore a hermeneutic circle. Several authors, including Levitt et al., (2017) and Osbeck (2014) theorise that this hermeneutic circle contains fundamental inferential processes within the qualitative inquiry. In light of this, it is important to note that qualitative research is a combination of two criteria (Vaughn & Jacquez, 2020): (i) how to do things — namely, generating and analysing empirical material — which is an iterative process in which one gets closer by making distinctions, and (ii) the outcome — improved understanding that is novel to the research community.

Uniquely, qualitative research is usually inductive in nature (Rovai et al., 2014), and has several underlying assumptions: reality is a social construct; variables are difficult to measure, complex, and interwoven; there is a primacy of subject matter; and the data collected will consist of an insider's viewpoint. This research method values individuality, culture, and social justice and thus provides content and context-rich information that is current, despite being subjective in nature (Rovai et al., 2014; Tracey, 2013; Denzin & Lincoln, 2011). Data can be collected for qualitative research through interviews, observation, oral histories, field notes, and focus group discussions, to mention a few methods. The methods that involve talking about paradigms, controversies, contradictions, and emerging confluences are based on a constructivist worldview (Lincoln et al., 2011). When conducting qualitative research, it helps to be familiar with the various categorisations, which are also regarded as different or separate qualitative methods. These categorisations include case study, phenomenology, ethnography, Grounded Theory, and the use of narrative (Melosik, 2021). These qualitative research categorisations are simply qualitative research designs.

### 2.3. Quantitative Research Methodology

Research methodologies that are concerned with quantification typically fall under the category of quantitative research. This is a type of research in which scholars collect and analyse data mainly in numerical form. Quantitative research aims to establish a cause-and-effect relationship between two variables by using mathematical, computational, and statistical methods. Quantitative research methodology is described as a form of research that relies on numerical data and hard facts (Ahmad, 2019). Their work presents quantitative research as empirical research, which casts it as the only methodology that is empirical. Quantitative research is indeed empirical, but I herein wish to emphatically underline that qualitative and mixed methods research are equally considered to be empirical research as they possess characteristics such as observation, experimentation, and experiential data, amongst others.

Rovai et al. (2014), like other quantitative researchers, regard the world as being outside of themselves, and view objective reality as something that is independent of any observations. It is for this reason that quantitative methodology is associated with or identified as part of a positivist worldview (Phillips & Burbules, 2000). The reason for this is that its data collection techniques — such as structured questionnaires, social surveys, and official statistics — have good reliability, validity, and representativeness. In his doctoral thesis, Potokri (2011) establishes the notion that quantitative research is conventional and methodological, as well as being appropriate for explaining a phenomenon. Alternatively, qualitative research is equally suitable for understanding a phenomenon. Thus, researchers who want to include an explanation in their study's objective are advised to consider quantitative research. Quantitative methodology is placed into the following categories: descriptive research; survey research; correlational research; experimental research; and causal-comparative research (Apuke, 2017).

Noting the fact that research approach and design make up a research methodology, it is thus imperative to talk about the composition of quantitative research. Quantitative research is divided into

experimental research designs and non-experimental research designs. Experimental research is an investigation where one or more dependent variables are manipulated to measure the effect of something on one or more independent variables (Asenahabi et al., 2019). It is based on the cause-and-effect relationship of a selected subject matter (Jongbo,2014). It "employs the use of two groups namely experimental and control groups where the experimental group is given treatment while the control group is not manipulated to establish the nature of the relationship between the studied variables" (Asenahabi et al., 2019, p.351). This makes it possible for the researcher to manipulate/vary the independent variable(s), and then allows the dependent variable(s) to vary on their own. This method is important in situations where the testing of theories or hypotheses is central to the study (Wobwoba & Ikoha, 2011).

Alternatively, a non-experimental design does not involve the use of experiments for data collection. In this design, the researcher does not have quite as much control as they would have in an experimental design. Non-experimental research designs are typically descriptive and, at best, correlational (Swart et al., 2019). They are mostly retrospective in nature, and are sometimes called 'ex post facto' (after the fact) research because they examine activities that have already occurred. Therefore, these types of research design are a manipulation of independent variables, meaning that randomisation is not possible. These designs, by themselves, are unable to make any claims relating to causality, and as such suffer from poor internal validity. Nonetheless, they can generalise better than their experimental counterparts and, as such, tend to have relatively stronger elements of external validity (Swart et al., 2019). It is important to note that non-experimental research can be both qualitative and quantitative, depending on the number of variables to be addressed or researched. Non-experimental research is used in cases where the research question or hypothesis concerns one variable rather than two or more. Here, the relationship between variables can be determined or compared. On the one hand, if the research focuses on one variable, it is considered a qualitative non-experimental research design. On the other hand, the research is considered to be a quantitative non-experimental design if there are two or more variables present in the research question or hypothesis.

### 2.4. Mixed Methods Research

The 'paradigm war,' led to the emergence of mixed methods research, which can be perceived as an additional methodology (Cohen et al., 2011) and may be labelled as the third 'methodological movement' (Johnson, 2007) or as the 'pragmatic' approach (Shannon-Baker,2016). Potokri (2011; 2016) defines mixed methodology as a combination of quantitative and qualitative research techniques in one study. Quantitative research can be viewed as a research approach that emphasises the quantification of numbers and/or generalisation of statistical data, while qualitative research is a research approach that conforms to a tradition of words rather than numbers (Denzin & Lincoln,2011). It has been noted that the "teaching and learning process starts with the identification of numbers and letters/alphabets which form the basis of meanings at all levels of formal and informal education" (Potokri, 2016, p.165). Based on this, linking numbers and letters/alphabets to quantitative and qualitative research respectively underpins the idea that the degree of truth derived from research that utilises both as a combination (mixed methods) would be higher.

Today's research world is increasingly becoming interdisciplinary, multi-disciplinary, complex, and dynamic. Therefore, many researchers need to complement one method with another (Johnson & Onwuegbuzie, 2004). I am thus confident that working with this methodology paves the way for a "superior research product" (Johnson & Onwuegbuzie, 2004, p.17; Potokri, 2016). The use of mixed methods can help researchers to understand, and perhaps develop a more complete understanding of the research phenomenon through obtaining different but complementary data (Creswell & Plano Clark, 2011). Using it would help to establish the 'point of interface,' that is, the point where both quantitative and qualitative data collection/analysis meet to allow for comparison, resulting in a convergent or divergent view concerning new findings or conclusions. There are different mixed methodology designs

— namely, explanatory sequential, exploratory sequential, and convergent parallel design. The convergent parallel design requires researchers to concurrently collect quantitative and qualitative data (Creswell, 2009).

The exploratory sequential design requires the researcher to first collect quantitative data, and thereafter qualitative data (Tashakkori & Teddlie, 2008). This design requires the use of themes from qualitative data to drive the development of a quantitative instrument, which further helps to explore the research problem (Creswell & Plano Clark, 2011). This design is suggested for use because qualitative data and their analysis refine and explain the statistical results obtained by exploring the participants' views in more depth (Tashakkori & Teddlie, 2008).

### 2.5. Research Methodology Usage and Application

In this section, emphasis is placed on the application and usage frequency of the different research methodologies in research publications. The works of authors such as Fejes and Nylander (2015), and Boeren (2018)] are rich expositions and referral points. Given the revelation of his work, Boeren (2018) shows less usage of quantitative research methodology when compared to other methodologies in research published in journals. Fejes and Nylander (2015) — who undertook a bibliometric analysis of the top cited articles in *Adult Education Quarterly*, *International Journal of Lifelong Education*, and *Studies in Continuing Education* — realised and concluded that qualitative methodology or approaches have near total dominance. In their analysis of 57 articles, they found that only seven articles used a quantitative component.

The empirical aspects of the few quantitative research articles published were either purely quantitative or part of a multi-strategy design, combining qualitative and quantitative methods (Boeren, 2018). Therefore, quantitative research can be regarded as a 'methodological underdog' – a concept used by Fejes and Nylander (2015), though not elaborately explained, to label quantitative research as the lesser used methodology. Goldschmied (2005) helps to understand the 'underdog' as a state of competitive disadvantage. So, it becomes logical to think of quantitative research as the 'methodological underdog' in research, especially research published in adult education and others mentioned previously (Goldschmied, 2005). It can be assumed that any methodology identified as an 'underdog' risks having a lack of ample anecdotal support, resulting in researchers possibly avoiding aligning themselves with this methodology.

In recent times, researchers have shown an increased interest in research that concerns the perceptions and experiences of people, communities, organisations, and groups as a means of understanding the world (Reed & Rudman, 2022). The purpose of these kinds of research is to unravel the confusion and navigate the proliferation of ideologies that require learning, rethinking, and unlearning where necessary. Given this, research that utilises qualitative research methods appears to be on the rise, especially in social sciences and humanities. Although quantitative research allows scholars to explore experiences, such research is more likely to provide an overview of 'what' participants are feeling, instead of 'why' they are experiencing these feelings. This is due to the different nature of the questions posed when using quantitative research approaches, as they generally focus more on static objective data instead of subjective meanings (Robson, 2011). This assertion is an additional reason for qualitative methodology to be utilised more often in research (Boeren,2018).

## *3. Theoretical Framework: Rational Choice Theory*

Choices about "education should correspond to values of self-actualisation – derived from ideologies of high modernity (individualisation) – which in turn makes the decision even harder"

(Andersson, 2016, p. 1). Decisions, or choices, sometimes turn out to be wrong *ex-post*, either from the individual or from society's point of view (Löfgren. & Nordblom, 2020). At the heart of decision-making in the social sciences is Rational Choice Theory – the theoretical framework that underpinned this study.

This theory has its root in economics, but over the years permeated into many fields including sociology, anthropology, political science, philosophy, history, and law (Satz & Ferejohn, 1994; Levy, 1997), as well as education-related studies (Löfgren & Nordblom, 2020). It has been argued that the Rational Choice Theory, in its classic form, assumes that decision makers have full knowledge of the relevant aspects of their environment, a stable set of preferences for evaluating choice alternatives, and unlimited skill in computation (Becker, 2017; Bruch & Feinberg,2017). Contrarily, Sato (2013) writes that Rational Choice Theory assumes that an actor chooses an alternative that he/she believes brings about a shat optimises his/her preference under subjectively conceived constraints. Actors who are seemingly the decision makers "are assumed to have a complete inventory of possible alternatives of action; there is no allowance for the focus of attention or a search for new alternatives" (Simon, 1990).

Like any other theory, Rational Choice Theory is not without its defenders and critics. Part of the criticism thereof is the lack of attention to the process of decision making (Sato, 2013), which should not exist because preference maximisation is a synonym for choice (Kokkoris,2020). Alternatively, support for the theory includes the underlying intentional states – desires and beliefs – of social actors (together, perhaps, with some intervening chain of causal or functional explanations carrying us from these decisions to the outcome in which we are interested) (Andersson, 2016). The debates about Rational Choice Theory have been characterised by disunity and confusion about the object under scrutiny, which calls into question the effectiveness of these criticisms (Herfeld,2020). Rightly so, the theory is not a single and unified choice theory—let alone an empirical theory of human behavior—as some critics seem to suppose (Herfeld,2020). Rather, there are several variants of a Rational Choice Theory that can be used (Melosik, 2021). Following this, Herfeld (2020) proposes, that we think of Rational Choice Theory as a set of distinct research strategies in order to appreciate its diversity. This accordingly suggests that the use of any reasons relating to support or rejection must depend on the variant of Rational Choice Theory being considered and — most importantly — the research objective(s) or research question(s) one seeks to answer.

Rational choice provides a theory of action that can anchor empirical research in meaningful descriptions of individuals' behaviour (Hedström & Swedberg, 1996). Importantly, the choice behaviour of rational actors can also be directly implemented in regression-based models that are readily available in statistical software packages (Bruch & Feinberg, 2017). Indeed, while some scholars explicitly embrace rational choice as a model of behaviour (Kroneberg & Kalter, 2012), others implicitly adopt it in their quantitative models of individual behaviour (Bruch & Feinberg, 2017).

There are five critical elements included in the assumptions of Rational Choice Theory, namely: constraints; alternatives; social outcomes; utility; and belief (Bruch & Feinberg, 2017). Accordingly, constraints affect an actor's choices in two ways. First, constraints make some of the possible alternatives impossible. Second, constraints change the costs and benefits of alternatives. Sato (2013) emphasises that constraints placed on the actor are subjectively conceived given their beliefs about the world, of which constraints form a part. This situation, rather than processes, undoubtedly affect the actor's choices of alternatives. At this point, the actor has chosen an alternative that he/she believes will realises a social outcome that maximises his/her utility under subjective constraints. Subjective constraints are, however, not independent of objective constraints. Social resources such as money, assets, prestige, privilege, authority, and power affect the formation of subjective constraints, depending on the frame(s) through which the actor views their choices.

## *4. Material and Method*

This study used a quantitative design where questionnaires were used to collect data from the respondents. One hundred female postgraduate students were approached to participate in the study, but only 36 eventually participated. Postgraduate students in the context of this study refer to students currently registered and studying for their honours, master's, and doctoral degrees at universities in the Gauteng province of South Africa.

Purposive sampling was applied as the sampling strategy of choice in this research. This refers to the selection of respondents who would provide valuable data for the study in response to the research question posed by this study. Specifically, the researcher opted for students who were busy with their dissertations in pursuit of a postgraduate degree.

A close-ended questionnaire was designed to elicit responses from the identified respondents. The questionnaire comprised two main sections — namely, background sections and core questions sections. I was mindful of the global pandemic situation, and the absence of research assistants when I started the study. Therefore, I had to decide on a data collection method that would allow me to send the questionnaire to targeted participants at the various universities. Following this, the questionnaires were administered and returned via email. I obtained their email addresses from different sources, including postgraduate schools of the sampled universities, programme coordinators of postgraduate programmes, and some academics in my acquaintance who were supervising postgraduate students. Prior to the finalisation and administration of the questionnaire, validity and reliability were ensured. The questionnaire was validated by a research professor, as well as a professor of education leadership whose specialisation is female leadership. Further to this, a pilot of the questionnaire was administered to a few female postgraduate students who did not form part of the study's participants. This process is known as the test-retest reliability method. Both the validity and reliability assisted in pointing out of errors which were avoided in the constructs and types of questions posed.

The data obtained were then analysed through descriptive statistics in the format of tables and percentages. Before the data were collected, I wrote to the participants to solicit their agreement and willingness to participate in the study. The purpose of my letter — which was sent through email — was to fulfill all ethical considerations applicable to any research process. The ethical issues addressed included seeking the consent of the respondents; assuring them of the confidentiality and anonymity of the research; and informing them of the option to leave the study at any time if they wished to do so. To deal with the issues of confidentiality and anonymity, any names or information that could lead to the identification of the participants have been replaced with pseudonyms. To ensure that the ethical guidelines were adhered to, I obtained ethical clearance from the university I was affiliated with at the time of the study.

## *5. Data Analysis and Findings*

The data obtained from the questionnaire are presented in three sub-sections. The data are presented and analysed in relation to the reviewed literature, as well as the theoretical framework of the study in order to answer the research question(s). Given this, the research question is restated here for ease of reference – what are the research methodology choices of female postgraduate students, and what are the influencers of their choices? To answer this question, I considered it necessary to split the question into two parts and thereafter make sense of the parts as a whole in the conclusion section of this article. The two parts referred to comprise the questions — what are the research methodology choices of female postgraduate students? And, what are the influencers of female postgraduate students' research methodology choices?

### 5.1. What Are the Research Methodology Choices of Female Postgraduate Students?

To answer this research question, I start by looking at the biodata, which tells us who the respondents are. Table 1 below illuminates the characteristics of the respondents.

Table 1. Biodata

| Respondents | Age | Marital Status | Institution | Faculty | Course | Programme | Study year |
|---|---|---|---|---|---|---|---|
| 1 | 53 | Married | UNISA | Education | Masters | Part-Time | 2018 |
| 2 | 49 | Married | UNISA | Education | PhD | Part-Time | - |
| 3 | 48 | Married | TUT | Education (MSBE) | PhD | Full Time | 4th |
| 4 | 39 | Married | UNISA | Education | M.Ed. | Online | Final year |
| 5 | 48 | Married | UNISA | Education | M.Ed. | Online | 3rd |
| 6 | 49 | Single | UNISA | Education | MEd | Full Time | Final year |
| 7 | 43 | Married | UNISA | Education | M.Ed | Part-Time | 2nd |
| 8 | 40 | Married | UJ | Education | PhD | Full Time | 2nd |
| 9 | 31 | Single | UJ | Education | PhD | Full Time | 1st |
| 10 | 43 | Married | UP | Education | PhD | Full Time | 3rd |
| 11 | 38 | Married | UJ | Education | PhD | Full Time | 3rd |
| 12 | 34 | Single | UJ | Education | M.Ed. | Online | Master's |
| 13 | 50 | Divorced | UJ | Education | PhD | Full Time | 1st |
| 14 | 41 | Married | UP | Education | PhD | Full Time | Final year |
| 15 | 36 | Married | UJ | Education | M.Ed. | Full Time | 1st |
| 16 | 34 | Married | UJ | Econs and Magt. | M.SC | Full Time | Final year |
| 17 | 50 | Married | UJ | Education | BEd Hons | Online | 2nd |
| 18 | 34 | Married | UJ | Education | Bed Hons | Online | 2nd |
| 19 | 32 | Married | UJ | Education | Hons | Online | Honours |
| 20 | 41 | Single | UJ | Education | M.Ed. | Online | 3rd |
| 21 | 45 | Single | UNISA | Education | M. Ed | Part-Time | 2nd |
| 22 | - | Single | UJ | Engineering | M.Eng. | Part-Time | Master's |
| 23 | 29 | Single | UJ | Bus & Economics | Hons | Full Time | 3rd |
| 24 | 28 | Married | UJ | Education | M.Ed. | Online | 1st |
| 25 | 45 | Married | UJ | Education | M.Ed. | Online | 1st |
| 26 | 46 | Married | UJ | Education | M.Ed. | Online | 1st |
| 27 | 54 | Married | UJ | Education | M. Ed | Online | 1st |
| 28 | 32 | Single | UJ | Education | M. Ed | Online | 1st |
| 29 | 53 | Single | UJ | Education | M. Ed | Online | 2nd |
| 30 | 32 | Single | UJ | Education | MEd | Online | 1st |
| 31 | 31 | Married | UJ | Education | M. Ed | Online | 1st |
| 32 | 51 | Married | UJ | Education | M. Ed. | Part-Time | 1st |
| 33 | 41 | Married | UJ | Education | M. Ed. | Online | Final year |
| 34 | 38 | Married | UNISA | Education | Hons | Online | Final year |
| 35 | 39 | Single | UNISA | Engineering | M.Eng. | Online | Final year |
| 36 | 48 | Married | UNISA | Education | PGCE | Part-Time | Final year |

Source: Fieldwork. Key: Unisa= University of South Africa; UJ= University of Johannesburg; UP=University of Pretoria; TUT= Tshwane University of Technology

It can be seen in the table above that 36 respondents participated in this study. The age, marital status, and institutions where they were studying are indicated. Moreover, the degree they were studying for, the mode of their study, and their respective year of study can are also presented. The respondents were all from public institutions in the Gauteng province, except for those form Witwatersrand University. Respondents from Witwatersrand were not deliberately excluded, it was purely by coincidence that none of the respondents were from that institution. A large number of 23 (63.8%) respondents were from the University of Johannesburg (UJ), 10 (27.8%) were from the University of South Africa (UNISA), two (5.6%) were from the University of Pretoria (UP), and one (2.8%) was from the Tshwane University of Technology (TUT). The respondents were in different years of study, although the majority of them were in their entry or exit years of study. Eleven (30.6%) of the participants were in their first year of study, while eight (22.2%) were in their final year.

For no given reason, one of the respondents from UJ elected not to disclose her age. The lowest and highest age of sampled respondents across the four different institutions were respectively 28 and 54. Both respondents were studying towards their master's degree. Out of the respondents, eight (22.2%) were studying towards a doctorate degree, 22 (61.1 %) were studying toward a master's degree, five (13.9%) were studying toward an honour's degree, and one (2.8%) was studying towards their PGCE (Postgraduate Certificate in Education). The Faculty of Education at two institutions dominated with 21 (58.3%) respondents from UJ, and nine (25%) from UNISA. This is respectively followed by two (5.5%) respondents from the Faculty of Engineering, and two (5.5%) from Economics and Management Sciences. The data on the mode of study of the sampled respondents is of interest to note. The participants' marital status included being single, married and divorced. Seven (19.4%) of the sampled postgraduate students were studying part-time, 18 (50%) were studying online, and 11 (30.5%) were full-time students. Except for one (2.7%) doctoral student, who was studying part-time, the other 10 (27.7%) were studying full-time. Lastly, the majority of the female postgraduate students were studying education related courses.

Table 2. Representation of the research methodology choices of the respondents.

| | **Items** | **Responses** | | |
|---|---|---|---|---|
| **A** | | **Agree** | **Disagree** | **Undecided** |
| 1 | Research should have a predetermined assumption. | 55.5% | 25.0% | 19.5% |
| 2 | A close-ended questionnaire is the most suitable for research. | 38.9% | 50.0% | 11.1% |
| 3 | Research data must be numerical. | 19.5% | 69.5% | 11% |
| 4 | Statistical analysis must be used for determining research findings. | 47.3% | 36.1% | 16.6% |
| 5 | Survey methods should be used to determine sample size. | 66.7% | 25.0% | 8.3% |
| | | **227.9%** | **205.6%** | |
| **B** | | | | |
| 1 | Interviews, observations, and open-ended questionnaires are most suitable for answering research questions. | 77.8% | 5.6% | 16.6% |
| 2 | Research findings should consist of verbal responses from the population sample. | 72.2% | 22.2% | 5.6% |
| 3 | Research questions should be broad and general. | 69.6% | 19.4% | 11% |
| 4 | Data should be collected in the respondents' natural settings. | 86.1% | 11.1% | 2.8% |
| 5 | Research should allow for a social constructivist worldview. | 83.4% | 11.1% | 5.5% |
| | | **389.1%** | **119.4%** | |

| C | | | | |
|---|---|---|---|---|
| 1 | Research should be flexible: Participants should determine the best method to use. | 47.2% | 27.7% | 18.8% |
| 2 | Numeric and text-based data should both be used in solving a research problem. | 86.1% | 11.1% | 2.8% |
| 3 | Research should be pragmatic in nature. | 80.6% | 11.1% | 8.3% |
| 4 | A single type of research method is usually not enough to address a research problem. | 75.0% | 19.4% | 5.6% |
| 5 | One research method should be used to complement the other for a robust understanding of the research problem. | 83.2% | 0% | 16.8% |
| | | **372.1%** | **69.3%** | |

Source: Fieldwork.

Items A, B, and C in Table 2 above are statements based on the constructs that are central to the three research methodologies on which the respondents were probed. Item A is specific to quantitative methodology, B is exclusive to qualitative, and C relates to mixed methods research. The statements applicable to each item were pinned to the fundamental attributes and beliefs of each type of methodology.

To understand the choices of the respondents, all of the respondents were asked to respond to all statements in items A, B, and C to ascertain their preferred research methodology choice. As can be seen from the table above, there were different percentages for the different items. The responses are categorised as agreed and disagreed. The responses for item A were 227.9% (agree), and 205.6% (disagree). For item B, 389.1% (agree) and 119.4% (disagree). For Item C, 372.1% (agree) and 69.3% (disagree). The 'agree' and 'strongly agree' responses were collapsed into one category, and the same was done for the 'disagree' and 'strongly disagree' responses.

To determine the research methodology choice of the respondents, I relied firstly on the writing of Barnett et al. (2008). According to them, there are four main themes concerning choice — namely, positive aspects of choice; the appearance of choice; unwanted choice; and the role of information in choice. Following the descriptive data analysis carried out in this study, I noted that positive aspects of the respondents' choices are shown in their 'agree' responses. Based on this, it can be seen that the preferred research methodology choice was qualitative as it had the highest 'agree' response. Whilst I do not entirely understand their choices – it was obvious that they preferred qualitative methodology constructs. This was therefore considered to be the dominant choice in comparison to quantitative and mixed methods research approaches.

This revelation concurs with the work of Fejes and Nylander (2015) and Boeren (2018), who maintain that qualitative methodology or approaches have near total dominance due to their more frequent usage in different studies and publications. This is confirmed in the literature (Robson,2011), where it has been found that the quantitative method is viewed as less attractive to researchers. In this study, quantitative methodology had the lowest score, with 227.9% as compared to 389.1% (qualitative) – the highest being mixed methods at a score of 372.1%.

The 'disagree' responses of the participants could denote it as an unwanted research methodology choice. As a researcher, I prefer to see it as the 'less favoured choice' of the respondents. The positive responses of the participants were believed to be motivated by their beliefs regarding the kind and role of information (the fourth theme) to which they consent. The information that the respondents had about each kind of methodology foregrounded and consolidated their understanding. This is intrinsically worthy of note because to borrow Taylor's (1993, p. 59) words, their understanding was "structured historically in the traditions, prejudices and institutional practices that come down to them and any other researcher".

Therefore, it could be said that these respondents might not be aware of the invisible ideology that guides their actions and choices (Scotland, 2012, p. 13).

Be that as it may, the responses of the respondents are an indication that they were knowledgeable of what informed their elicited responses. The participants' responses point us to their beliefs, which in turn signals their preferred choice of methodology. Drawing on the theoretical framework of this study, I agree with Bruch and Feinberg (2017), who argue that the Rational Choice Theory — in its classic form — assumes that decision makers have full knowledge of the relevant aspects of their environment, a stable set of preferences for evaluating choice alternatives, and unlimited skill in analysis. With this notion in mind, it can be said that the responses of the respondents highlight or define their choice (Sato, 2013). This is rational because they chose (agree or disagree) alternatives/methodological attributes that they believed could bring about a social outcome that would optimise their research results under subjectively conceived constraints.

### 5.2. What Are the Influencers of Female Postgraduate Students' Research Choices?

Table 3. Responses regarding the influencers of research methodology choice.

| Items | Agreed | Disagreed | Undecided |
|---|---|---|---|
| The methodology choice of my supervisor is what I followed. | 30.6% | 49.9% | 19.4% |
| The easier and more comfortable methodological approach is personally preferred. | 63.9% | 22.2% | 13.9% |
| The methodology preference and choice of my faculty/department are what determined my research methodology choice. | 33.4% | 52.7% | 13.9% |
| My research choice was influenced by my friends/colleagues. | 25.0% | 69.4% | 5.6% |
| I used the same research methodology from my previous research project. | 41.7% | 44.5% | 13.9% |
| My lived experiences and career experiences were key to my methodology choice. | 77.8% | 8.4% | 13.9% |
| What was learned from the research methodology modules helped me to make my methodology choice. | 83.8% | 16.7% | 0% |
| The most suitable method for the topic following my readings and review of the literature guided me in my choice of methodology. | 80.5% | 11.1% | 8.3% |
| My anticipated publication outlet (e.g., journals, books, conference proceedings) was a factor that I considered when I made my methodology choice. | 55.5% | 27.8% | 16.7% |

Source: Fieldwork.

It was revealed in this study that nine factors influenced the methodology choice of the participating female postgraduate students. These factors were (1) the supervisor's methodology choice, (2) the student's perceived ease and comfort in using particular methodology, (3) the faculty/department's preferred methodology, (4) the student's friends and colleagues' choice, (5) previously used methodology, (6) the career and lived experiences of the student, (7) institution organised/taught research methodology modules, (8) readings and literature review, and (9) anticipated publication outlets. Table 3 above shows these factors framed as statements to which the participants responded to indicate their opinion.

The participants' responses were captured as agree, disagree, strongly agree, strongly disagree, and undecided. During the data analysis, as shown in Table 3, the responses were collapsed. Strongly

agree and agree were collapsed as 'agree'. Similarly, disagree and strongly disagree were collapsed as 'disagree'.

The factors influencing the respondents' methodology choice were ranked from the most influencing to the least influencing factor. The most influencing factor had the highest agreed percentage, and the least influencing factor had the lowest agreed percentage. Therefore, an institution's organised/taught research methodology module was the most influencing factor with 83% of agreed responses. This factor also had zero 'undecided' responses, meaning that all of the respondents were sure of the impact this factor had on them regarding their methodology choice. Of importance to the respondents was the suitability of their chosen methodology to their research. This factor had an 80% 'agree' response, making it the second highest ranked influencing factor.

The revealed factors influencing the participants' methodology choice were situated within the five critical elements of Rational Choice Theory — constraints, alternatives, social outcomes, utility, and belief (Sato, 2013). Of all of these, belief seemed to be central. Researchers, including the respondents in this study, see beliefs as comprising their world views or paradigms. The beliefs of the respondents depict their assumptions about the world. Therefore, based on the work of Denzin and Lincoln (2011, p. 3), the beliefs of most of the respondents in this study favoured "situated activity," "series of representations," and making sense of phenomena in the "terms of the meanings people (their own research participants) bring to them". This is different from other beliefs of other researchers, for example, quantitative researchers. These researchers see the world as being outside of themselves, and believe that there is an objective reality that is independent of any observations (Rovai et al, 2014). The respondents' belief was so powerful, that through it, they were able to understand the constraints associated with their chosen methodology. These comprised other methodology alternatives that were available to them, how they could go about its utilisation, as well as the appreciation of their research outcomes.

## *6. Limitation*

This was a small-scale study; therefore, the number of respondents remains a limitation of this research. Nonetheless, its findings are both noteworthy and noble because of the reliability and validity of the research instrument, methodological rigour, and the depth of the foregrounding in reviewed literature and the theoretical framework. Leaning on this for future research, I suggest that future research on this topic comprises a large-scale study to include more respondents.

## *7. Conclusion and Recommendation*

This study contributes to understanding the research methodology choices of female postgraduate students and the influencing factors of these choices. This study provides concise and concrete tenets, pluralism, and the intricacies of the three research methodologies – qualitative, quantitative, and mixed methods.

It was revealed in this study that qualitative methodology was the preferred choice of female postgraduate students. This was followed by mixed methodology. Quantitative methodology was the respondents' least preferred choice, thereby portraying it as the 'methodological underdog'. The research methodology choices of the respondents in this study were shaped by their own experiences, as well as epistemological and ontological beliefs. These informed and determined what they considered ethically proper and feasible. Their experiences, epistemological, and ontological beliefs were built on or derived from preliminary readings – reviewed literature that was particular to their research. The factor respondents considered to be the most influencing factor was centered on what they learned from their institution's research methodology modules.

In light of the top factor that influenced the research methodology choices of this study's respondents, I recommend that universities or higher education institutions offer postgraduate courses/programmes to ensure that their postgraduate schools, departments, and faculties teach and facilitate research modules comprehensively and regularly. The modules must be taught by experts in research methodologies. Another recommendation would be that supervisors of postgraduate students upskill themselves regarding research methodology issues. Furthermore, they should be fully informed on any of the methodologies that students opt to use in their study/research. It is advised that supervisors also seek assistance from colleagues as co-supervisors, or simply allow the student to be supervised by another supervisor who has vast knowledge of the methodology chosen by the student. In doing so, 'unhealthy' and 'fractured' student-supervisor relationships — which may lead to dissatisfaction and a high dropout rate among postgraduate students — can be avoided.

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