# SCHOOL HEALTH NURSING AT MSUNDUZI MUNICIPALITY IN KWAZULU-NATAL: TEACHERS' PERSPECTIVES

by

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## DECLARATION

I declare that **SCHOOL HEALTH NURSING AT MSUNDUZI MUNICIPALITY IN KWAZULU-NATAL: TEACHERS' PERSPECTIVES** is my own work and that all sources that I have used or quoted have been properly referenced.

I further declare that I ran the dissertation using originality checking software and that it meets the acknowledged standards for originality.

I also certify that I have not previously submitted this work, or any portion of it, for exami nation at UNISA or any other school in order to obtain another qualification.

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**SIGNATURE** **DATE**

Nelisiwe Buthelezi

# SCHOOL HEALTH NURSING AT MSUNDUZI MUNICIPALITY IN KWAZULU-NATAL: TEACHERS' PERSPECTIVES

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## ABSTRACT

The Integrated School Health Policy (ISHP) is designed to promote the health of students; identify and prevent health problems and injuries, and ensure care for students. School health nurses have an important role in ensuring students (learners) optimal development. They bridge the gap between the school and health care facilities by screening students and referring them according to health needs. Most children spend up to thirteen of their formative years, from early childhood to adolescence, in a classroom environment. This provides an ideal opportunity for health education and interventions to address health and socioeconomic factors which affect children in South Africa

The purpose of the study was to describe perspectives of schoolteachers on the current ISPH in schools in Msunduzi Municipality, KwaZulu-Natal province. The researcher selected a quantitative, non-experimental, descriptive research design for the study. The participants were 147 randomly selected teachers from selected primary schools and data was collected, using a self-administered structured questionnaire anchored on a 5-point Likert scale. A statistician analysed the data using the Statistical Package for Social Sciences (SPSS) version 14, and presented the findings in tables and diagrams. Descriptive statistics summarised data and inferential statistics described the participants' perspectives on the current school health services.

The study found that the participants acknowledged the importance and benefits of school health nursing services in schools but inadequate resources and lack of intersectoral collaboration between the Department of Health (DOH), Department of Basic Education (DOBE) and Department of Social Development (DOSD) hampered

effective implementation of the ISHP. The study makes recommendations for policy, school health services, and further research.

**Key terms**

Nurse; perspectives; primary school; school health; school health policy; teachers.

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## DEDICATION

*In admiration and thanks for their unconditional love and support, I dedicate this dissertation to my family and friends.*

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## LIST OF ABBREVIATIONS

Please check if all the abbreviations are listed

| | |
|---|---|
| CDC | Centre for Disease Control |
| CFA | Confirmatory Factor Analysis |
| CSHP | Comprehensive School Health Programme |
| DOBE | Department of Basic Education |
| DOH | Department of Health |
| DOSD | Department of Social Development |
| HPS | Health Promoting School |
| ISHP | Integrated School Health Policy |
| KZN | KwaZulu-Natal |
| MSA | Measure of Sampling Adequacy |
| NRHM | National Rural Health Mission |
| PHC | Primary Health Care |
| SHP | School Health Programme |
| SPSS | Statistical Package for Social Sciences |
| UNESCO | United Nations Educational, Scientific and Cultural Organisation |
| UNFPA | United Nations Population Fund |
| UNICEF | United Nations Children's Fund |
| UNISA | University of South Africa |
| WB | World Bank |
| WHO | World Health Organization |

# CHAPTER 1

# ORIENTATION TO THE STUDY

## 1.1 INTRODUCTION

In 1995, the World Health Organization (WHO 1995:1) published the *Global health initiative: guideline on school health services* and defined a comprehensive school health programme as an integrated set of planned, sequential, school-affiliated strategies, activities and services designed to promote the optimal physical, emotional, social, and educational development of students. The Integrated School Health Programme was launched in 2012 by the Departments of Health and Basic Education (ISHP). The ISHP is intended to enhance student health, diagnose and prevent health problems and injuries, and guarantee that students are properly cared for. School health nurses play a critical role in supporting the optimal development of students (learners). They serve as a link between the school and health-care facilities by assessing children and sending them to the appropriate facilities based on their health needs. From early childhood until adolescence, most children spend up to thirteen years of their formative years in a classroom setting. This is an excellent chance for health education and interventions to address the health and socioeconomic problems that influence children in South Africa (Department of Health [DOH] & Department of Basic Education [DBE] 2012:6).

Road traffic accidents, HIV, suicide, lower respiratory infections, and interpersonal violence were the major causes of death among adolescents in 2012, according to the WHO's mortality, morbidity, and disability in adolescence report published in 2014. According to the research, HIV-related mortality have risen since 2000, and HIV is now the second highest cause of death among teenagers. Maternal causes were ranked second in the world among 15-19-year-old girls, with maternal death rates in Africa more than three times higher than in the Eastern Mediterranean (WHO 2014).

The role of school health services is critical in improving adolescent health. Baltag, Pachyna and Hall (2015:268) found that school health services exist in at least 102 countries and are usually provided within school premises (in 97 countries) by dedicated

school health nurses (in 59 countries). The top five interventions are vaccinations, sexual and reproductive health (SRH) education, vision screening, nutrition screening, and nutrition health education (Baltag et al 2015:269).

The Integrated School Health Policy (ISHP) was implemented by the South African government in 2012 with the goal of improving the health of school-aged children and their communities (Department of Health [DOH] & Department of Basic Education [DOBE], 2012). The ISHP's goal is to provide a package of services that addresses not just learning challenges, but also circumstances that lead to morbidity and death among learners throughout their lives, both in infancy and adulthood (DOH & DOBE 2012:17). All role players must commit to close collaboration in order to implement the ISHP, with the DOH and DOBE, as well as the Department of Social Development (DOSD), sharing responsibility for ensuring that the ISHP is comprehensive and long-term (Rasesemola, Matshoge & Ramukmba 2019).

School health nurses have a critical role in improving the health status of school going children (DOH & DOBE 2012:9). They can empower the school and community at large to make lifestyle changes that positively influence learners' health outcomes by intervening when potential or actual health problems are identified. Although school health nurses are essential to health promotion in schools, limited resources have resulted in unbalanced learner-to-nurse ratios and limited coverage.

Over the years the role of the school health nurse has changed from being a full-time in-school health nurse to visiting schools on certain days a month, which has made stakeholders unsure of the role of or the need for their visits to the schools. With constant economic, epidemiological and political changes, their role has been questioned as well as their actual benefit to the children and community at large.

## 1.2 BACKGROUND

Several important changes have occurred within the health system of South Africa since 1994. One of those changes is that children are put first and their needs are a top priority. In 2003, the first school health policy implementation guidelines were implemented.

Initially, the school health policy and implementation guidelines were launched as a component of primary health care (PHC). However, there was not enough coverage at sub-district, school and community level and non-optimal performing school health services contributed to insufficient support from stakeholders. Moreover, unequal distribution of resources led to urban and rural areas having to competing for supplies. Consequently, the ISHP was initiated in 2012 and prior to its implementation, the DOH distributed it widely for input and comments from both the health and education sector. This was to secure understanding, collaboration and buy in from the Department of Health and The Department of Education. Since teachers are in direct daily contact with learners, they are in a good position to assist the nurses by identifying children in need of prompt medical attention and improve the children's well-being.

The successful implementation of a policy is determined by the way in which stakeholders involved understand, communicate and collaborate. Effective communication ensures that information is received and understood correctly and clarifies uncertainties. Policies sometimes fail because they are not clearly understood, not because they are badly implemented. The researcher observed that when the roles between the stakeholders were misunderstood, the result was poor implementation. Poor collaboration between role players results in negative outcomes that can lead to negative attitudes. Close collaboration between the DOH, DOBE and DOSD is essential for favourable outcomes in the future.

The proper application of the ISHP could improve the quality of life of schoolchildren. The researcher is of the opinion that more focus should be on teachers' perspectives when attempting to implement the ISHP. This motivated the researcher to explore and describe the role of teachers in the implementation of the ISHP in Msunduzi Municipality, KwaZulu-Natal and the challenges they encounter.

In South Africa, the school health teams visit the schools and screen the learners with the necessary equipment. For health assessments, sick children in need of medical attention are referred to the closest local clinic. Children that present with diseases that need in-depth examination, diagnostic tests or further management can be identified by the school nurse. The school health teams are not permanently based at the schools, however, so not all children with physical, developmental or emotional problems are seen on a daily basis. Teachers are often tasked with the role of identifying the sick

children. Without the support of school nurses, many health needs of vulnerable pupils could go unmet and undermine their well-being and ability to learn and succeed.

Due to political instability and economic hardship in Nigeria, school health programmes were neglected prior to the creation of the national health strategy in 2006. (Toma, Oyebode, Toma & Agaba 2014:86). The majority of school administrators expressed a lack of understanding of the school health policy and program, which are implemented in schools based on educators' in-class and on-the-job training (Ademokun,Osungbade & Obembe 2014:1085). This highlighted the need of policy comprehension as well as teamwork between teachers and nurses for the health of pupils.

In South Africa, policy is implemented in a top-down approach; that is, policy is developed at national level and implemented downwards by national officials and then put into place by state then implemented by local government with no input from the people at the lowest or grassroots level who will actually be implementing the policy. It is a downward chain from national to provincial then district level (Kapti 2009:4 cited in Lenkokile 2016:3).

The National Rural Health Mission (NRHM) was initiated by the Indian government in 2005 to focus on bottom-up planning and flexible funding to address local needs. South Africa, on the other hand, does the exact opposite. The school health program is the only public-sector initiative aimed solely at school-aged children. The National Rural Health Mission (NRHM) provides a new chance to develop the school health program in order to meet the needs of school-aged children. The NRHM's mandate is that close coordination with the education sector is necessary at all levels in order to expand the school health program's reach (Prasad, Bhatia & Agrawal 2013:11 cited in Lenkokile 2016:14).

## 1.3 PROBLEM STATEMENT

Over the years, the school health programme has received a lot of attention since it has struggled due to poor management, lack of resources, and lack of support from the Department of Education (DOH & DOBE 2012:9). Teachers viewed the programme as the responsibility of the Department of Health alone.

School nurses and teachers are pivotal in the success of the school health programme because it results in schoolchildren's wellbeing. Teachers are becoming more of a team to bring about positive outcomes. Much research has been done on school nurses' perspectives on their working environment, but little has been done on the viewpoints of teachers involved in the school health programme. Consequently, it is not clear how schoolteachers perceive and understand the role of the school health nurse in the schools.

Teachers and school health nurses do not communicate on the delivery of school health services. This could be due to lack of awareness and clear understanding of the policy on the part of teachers and school health teams (Shung King, Orgill & Slemming 2014:59). Therefore, getting teachers' perspectives on school health service provision and policy and their contribution is the first step in correcting misunderstanding or misconception. This would lead to teachers' meaningful contribution to the effective provision of school health services.

## 1.4 PURPOSE OF THE STUDY

The purpose of the study was to describe the perspectives of schoolteachers on the current school health policy in the public schools of Msunduzi Municipality, KwaZulu-Natal with the aim of recommending possible ways to improve the school health policy.

## 1.5 OBJECTIVES

To achieve the purpose, the objectives of the study were to:

- Describe teachers' perspectives on the Integrated School Health Policy of Msunduzi Municipality.
- Identify teachers' challenges in the implementation of school health services.
- Make recommendations to improve school health services at Msunduzi Municipality.

## 1.6 RESEARCH QUESTIONS

The study therefore wished to answer the following research questions:

- How do schoolteachers perceive the current school nursing services in schools in Msunduzi Municipality, KwaZulu-Natal?
- What challenges do schoolteachers face when implementing the integrated school health services in schools in Msunduzi Municipality, KwaZulu-Natal?
- What recommendations could be made to relevant stakeholders on the school health policy within schools in Msunduzi Municipality, KwaZulu-Natal?

## 1.7 RESEARCH DESIGN

A research design is the general strategy for answering a research topic, as well as the guidelines for ensuring the study's integrity (Polit & Beck 2012:741). For the study, the researcher chose a quantitative, non-experimental, descriptive strategy. Quantitative investigations are systematic, follow a set of methods, and collect empirical data (evidence), so the results are grounded in reality (Polit & Beck 2012:16). This design was deemed appropriate by the researcher for obtaining in-depth understanding about the situation.

Descriptive research has as its main objective to accurately portray all the characteristics of persons, situations, or groups, and the frequency with which certain phenomena occur (Polit & Beck 2012:725). A descriptive design identifies phenomena of interest and describes variables in a study situation (Burns, Gray & Grove 2017:128; Singh 2006:104). Such an approach is useful in the assessment of opinions, behaviour and characteristics of a population and for describing the state of affairs (Pophalia 2010:16). This design assisted the researcher to determine and understand the participant teachers' perspectives.

## 1.8 RESEARCH METHODOLOGY

The plan for carrying out the specific steps of a study is known as research methodology (Burns et al 2017:129). The approaches researchers employ to structure a study and obtain and analyze material relevant to the research issue are known as research methodologies (Polit & Beck 2012:741). Setting, population, sampling and sample, data collecting and analysis, and trustworthiness are all part of the process (Burns et al 2017:129).

### 1.8.1 Setting

A research setting is a physical location and conditions in which data collection takes place in a study (Polit & Beck 2012:272). The study was conducted in the selected primary schools' natural setting.

### 1.8.2 Population and sample

Bacon-Shone (2015:34) defines a population as the potential respondents of interest. In this study the population was the primary schoolteachers employed by the Department of Education within Msunduzi Municipality in KwaZulu-Natal (Engwa 2015:64). There are a fixed number of teachers/educators per primary school and the uMgungundlovu District Office's school health team offered service delivery to the schools in Msunduzi Municipality.

A sample is a subset of a population (persons, elements, or objects) or a group of individuals chosen to represent the entire population (Polit & Beck 2012:275). The process of selecting respondents, events, behaviors, or other aspects that represent the population under investigation is known as sampling. The full population could not be used due to budget and timing constraints. As a result, the researcher employed basic random sampling, which ensured that every member of the population had an equal chance of being chosen (Bacon-Shone 2015:36).

The researcher obtained permission from the school principals and the heads of departments at the schools, assigned numbers to the defined population and randomly drew numbers out of a hat to select participants (Engwa 2015:64). The researcher had an estimated 842 teachers and a sample of 264 was drawn (Cochran 1977:72).

The sample size was determined in two steps. First the sample size for infinite population was determined then adjusted to the required population. This was done, using two formulas:

SS= (Z-score) ² *p*(1-p)/ (marginal of error) ²
SS= Sample size for infinite group
p= Population proportion (assumed to be 50%=0.5)
Z-score is determined based on confidence level.

Confidence level is the probability that the value of parameter falls within a specified range of values.

For the purpose of this study, the confidence was 95% where the z-score was 96.

The margin of error is a small amount allowed for in case of miscalculation or change of circumstance.

Generally, the margin of error is 5%=0.05.

S=(1.96) ²*0.5(1-0.5)/(0.05) ²
S=3.8416*0.25/0.0025
S=384.16

This sample was adjusted to the required population of 842 with an adjustment formula:

(S)/1+[(S-1)/population]
=384.16/1+[384.16-1)/842
=384.16/1,4550593824228
=264

#### *1.8.2.1 Inclusion criteria*

To be included in the study, participants had to:

- Be permanently employed by the schools.
- Have worked in primary schools within the Msunduzi Municipality, for at least five years.
- Have five or more years' teaching experience.
- Teaching grade 1- 7

#### *1.8.2.2 Exclusion criteria*

Teachers who were not permanently employed; were younger than 20 or older than 55, or had less than five years' teaching experience were not included in the study.
Grade R teachers

### 1.8.3 Data collection

Data collection is the systematic gathering of information (data) relevant to the study issue in order to solve a research problem (Polit & Beck 2012:725). Data collection, according to Gray, Grove, and Sutherland (2017:511), is the systematic gathering of information relevant to the research purpose or the study's specific aims, questions, or hypotheses. A data-collection instrument is used to collect information from respondents (Polit & Beck 2012:725).

### 1.8.4 Data-collection instrument

In this study data was collected using a structured, self-administered questionnaire. A questionnaire is a structured document that is used to collect information from respondents in a study (Engwa 2015:82).

The researcher distributed the questionnaire to the participant teachers. The participants completed the questionnaires in their own time and had two days to do so. The participants placed the completed questionnaires in sealed envelopes or returned them via email. The researcher collected the completed questionnaires at an agreed time.

The researcher developed the questionnaire on the basis of the literature review and research done in this field. The questionnaire consisted of closed questions and was divided into three sections:

- Section A: Demographic profile
- Section B: Perceptions
  B1: Positive

B2: Negative

- Section C: Challenges
  C1: Resources and capacity
  C2: Collaboration
  C3: System enablement

The questions were based on a 5-point Likert scale, ranging from 1 − strongly disagree to 5 − strongly agree (Bacon-Shone 2015:63). The scale measured the participants' perspectives on the current school nursing services.

### 1.8.5 Pilot study or pre-test

A pre-test or pilot study is a small-scale trial with participants who are not included in the final study (Polit & Beck 2012:730). The rationale for testing the instrument was to determine the validity and reliability of the instrument, how long it took for the respondents to complete the questionnaire, and whether they understood all the questions. The pilot study was done with five teachers who were excluded from the main study. After the pre-test, a health professor scrutinised and critiqued the questionnaire.

### 1.8.6 Reliability and validity

The quality of a research instrument is determined by its validity and reliability.

**Validity**

Validity refers to whether an instrument accurately measures what it is supposed to measure (Burns et al :133; Stuart, Rinaldi & Higgins-Averill 2011:15). The pre-test enabled the researcher to determine whether the required data could be obtained from respondents.

**Reliability**

Reliability refers to the extent to which measures are consistent or repeatable over time (Bacon-Shone 2015:54). In this study, the internal consistency of items was tested using Cronbach's alpha criterion. Cronbach's alpha criterion assesses the extent to

which similar responses can be obtained from participants should the same questions be asked several times in similar settings to similar participants. Stuart et al (2011:41) says that reliability means that the instruments made are consistent, i.e. if the same experiment is performed under the same conditions, the same measurements will be obtained. The pre-test also allowed the researcher to assess whether the repeating the measurement in the study yielded the same results.

### 1.8.7 Data analysis

Data analysis is the systematic organisation and synthesis of data to establish order, structure and meaning (Polit & Beck 2012:725). The goal of the research is to provide answers to the problem addressed after data has been collected (Engwa 2015:94).

A statistician analysed the data using the Statistical Package for Social Sciences (SPSS) version 26 and/or Stata version 14. The statistician statistically analysed the data, using descriptive analysis and summarising by means of frequencies and cross-tabulation.

Descriptive statistics summarised data and inferential statistics described the respondents' perspectives on the current school health services. In descriptive statistics, the aim is to describe data and examine relationships between the variables, while inferential statistics examine the casual relationship between variables (Engwa 2015:94).

## 1.9 DEFINITIONS OF KEY TERMS

For the purposes of the study, the following key terms were used as defined below:

**Nurse:** The South African Nursing Council (SANC) (2013:6) defines a *nurse* as a person who is registered as a nurse or midwife in terms of section 31(1) of the Nursing Act, 33 of 2005.

**Perspective:** The *Oxford Advanced Learner's Dictionary* (2015:1094) defines *perspective* as "a particular attitude towards something; a way of thinking about something".

**Policy:** The *Oxford Advanced Learner's Dictionary* (2015:1131) defines *policy* as "a plan of action agreed or chosen by a political party, a business, etc; a principle that you believe in that influences how you behave".

**School:** The *Oxford Advanced Learner's Dictionary* (2015:1320) defines *school* as "a place where children go to be educated".

**Teacher:** The *Oxford Advanced Learner's Dictionary* (2015:1532) defines *teacher* as "a person whose job is teaching, especially in a school".

**School health:** School health mainly refers to all the health activities and measures that are carried out with the community to promote and protect the health of the students as well as the school personnel. Schools play an important role in promoting the health and safety of children and adolescents by helping them to establish lifelong health patterns (ISHP 2013).

## 1.10 LIMITATIONS OF THE STUDY

The study was conducted on a sample population with 264 teachers in the Msunduzi Municipality, KwaZulu-Natal therefore the findings cannot be generalised to all schools and municipalities in Kwa-Zulu Natal, the whole province or the rest of the country. Due to time and financial constraints, the data was collected by means of a self-administered survey questionnaire therefore the results might not reflect the full situation in other schools and municipalities. This will make the study outcome difficult to accurately replicate.

## 1.11 ETHICAL CONSIDERATIONS

Ethics is concerned with issues of right and wrong. In order to protect the rights of research participants, ethical considerations must be incorporated into the design of any study involving human subjects (Singh 2016:219). As a result, the researcher received permission to perform the study and followed the norms of informed consent, autonomy, anonymity, privacy, and confidentiality, as well as justice and beneficence.

**Permission**

Ethical approval was obtained from the Higher Degrees committee of the University of South Africa, Department of Health Studies (HSHDC/940/2019) before commencing the study (see Annexure A). Permission was also obtained from the KwaZulu-Natal provincial research committee as well as the local government authorities to do the study in the local schools (see Annexures B and C). The research protocol was made available to the local government authorities. The researcher informed the department which schools had been selected as well as the dates on which they would be visited. In addition, the researcher obtained verbal permission from the schools to conduct the study there on dates suitable for them.

**Informed consent**

The researcher obtained written informed consent from the participants in order to guard against violation or invasion of privacy (Singh 2016:220). The researcher gave information sheet (Annexure D) the participants of the purpose of the study, and allowed them to ask questions. They were then given an informed consent form to sign (see Annexure E).

**Anonymity**

By not include any names on the questionnaires, the researcher guaranteed the respondents' privacy. There were also no schools mentioned. On the questionnaires, the respondents were given numbers. As a result, the researcher was unable to correlate any data to any participant.

**Privacy and confidentiality**

The participants were assured of their privacy and confidentiality by not providing any personal information, not sharing any information with anyone else, and treating all the data with the strictest confidentiality.

### Autonomy

Without any external pressure or control, the respondents were offered the option of participating in the study or not. They declared their desire to participate by signing the consent form (see Annexure D).

### Justice

The right to fair treatment and the right to privacy are both part of the concept of justice. Throughout the study, researchers should ensure that participants' privacy is protected (Polit & Beck 2012:155). The researcher treated the participants fairly and equitably, and explained the study's goal and methodology. There was no pressure on any of the participants to participate.

### Beneficence and non-maleficence

Beneficence is an ethical notion that emphasizes the positive outcomes of research. Beneficence is defined as the avoidance of harm and the provision of benefits to the subjects or participants. Beneficence requires researchers to minimize harm while maximizing benefits. Human research should be conducted with the goal of benefiting participants, other people, or society as a whole (Polit & Beck 2012:252). As a result, the researcher ensured that the respondents were not harmed.

## 1.12 OUTLINE OF THE CHAPTERS

The study consists of five chapters.

- Chapter 1: Orientation to the study
- Chapter 2: Literature review
- Chapter 3: Research design and methodology
- Chapter 4: Data analysis and interpretation, and results
- Chapter 5: Findings, limitations and recommendations

## 1.13 SUMMARY

This chapter 1 described the background to the study, the problem, research design and methodology, and ethical considerations of the study. Key terms used in the study were also defined.

Chapter 2 discusses the literature review conducted for the study.

# CHAPTER 2

# LITERATURE REVIEW

## 2.1 INTRODUCTION

This chapter discusses the literature review conducted for the study. The literature review covered the definition of school health programmes; the rationale for school health programmes; international perspectives on school health programmes; South Africa's integrated school health programme, including structures and levels of implementation, the legislative framework of the ISHP, policy implementation approaches, conditions enabling programme implementation and factors causing policy implementation failure.

## 2.2 DEFINITION OF SCHOOL HEALTH PROGRAMMES

A school health programme (SHP) is defined as a set of measures performed to understand, improve and maintain the health of learners through provision of health care services across different health programmes implemented at school levels (Pearson, Chilton, Wyatt, Abraham, Ford, Woods & Anderson 2015:12). In South Africa, the Integrated School Health Policy is a set of related measures and activities provided to schoolgoing learners to improve their physical, mental and social well-being (DOH & DOBE 2012:6). In terms of the 2013 Integrated School Health Policy, the health services are required to be provided only to learners whose parents have signed consent forms expressing agreement for provision of such services (DOH, DOBE & DOSD 2013).

## 2.3 RATIONALE FOR SCHOOL HEALTH PROGRAMMES

School health programmes enable health and education stakeholders, and relevant agencies to collaboratively provide health services to school learners with the aim of improving both education and health outcomes (Pearson et al 2015:11). In the United States of America (USA), children and adolescents spend many hours in school and children with chronic health conditions (CHCs) could face lower academic achievement,

increased disabilities, and fewer job opportunities as they enter adulthood (Leroy, Wallin & Lee 2017:64). School health services provide safe and effective management of CHCs, disease-specific education, and improved health and academic outcomes among students with CHCs (Leroy et al 2017:66). School health services are aimed at improving education and health outcomes, including reducing behaviours that are risky to physical and mental health through several components of the programme. Kolbe (2019:446) identifies eleven interactive components of the programme, which include the following:

- health services
- health education
- counselling
- physical education and activity
- nutrition environment and services
- physical environment
- psychological and social services
- social and emotional climate
- family engagement
- community involvement
- employee wellness

## 2.4 INTERNATIONAL PERSPECTIVES ON INTEGRATED SCHOOL HEALTH PRACTICES

This section discusses the implementation of school health services in the United States of America (USA), Canada, India, Brazil and Nigeria.

- **United States of America (USA)**

In the USA, the Center for Disease Control and Prevention introduced the comprehensive school health programme (CSHP) concept with the goal of providing health services to learners (Bundy 2011). The concept was anchored on a “school-based” approach where school environments ensure provision of a range of selected health activities combined together to form an assimilated package of health services.

The approach facilitated linkages between health and education with education planning processes as an integral component of schooling as opposed to being regarded as an ancillary programme (Bundy 2011).

Health and education are interdependent components. Accordingly, healthy learners participate much better than unhealthy learners and become better-educated and healthier in future (Bundy 2011). Consequently, it is critical for health and education authorities to ensure consistent strengthening of the linkages between health and education. Such linkages can be facilitated through the use of services of school health nurses and educators. Participation of school health nurses and educators in the planning and implementation of programmes strengthens the provision of school health services.

In 2000, the World Education Forum, World Health Organization (WHO), United Nations Educational, Scientific and Cultural Organisation (UNESCO), World Bank (WB) and United Nations Children's Fund (UNICEF) undertook to assist national governments towards the implementation of school health programmes (Strickland 2011). A framework called the Focusing Resources on Effective School Health (FRESH) framework was implemented to guide monitoring and evaluation of school health interventions. The framework is anchored on the collaborative agreement among different cooperating agencies that work together toward ensuring that schools have healthier learners who are better able to learn in an effective manner and achieve good academic results (Bundy, 2011). The framework stipulates that in order to achieve success from the implementation of school health programmes, there must be effective and strong partnerships between education and health authorities that strengthen sustainable collaboration between educators and health workers.

- **Canada**

In 2006, the Battle River Project, a school-division level of intervention in Novia Scotia, rural Alberta, Canada, implemented a school health programme built on the Health-Promoting Schools (HPS) (Gleddie & Hobin 2011:39). The HPS is a planned, integrated and holistic approach to health and education in order to promote physical activity, healthy eating, and a conducive learning environment (Gleddie & Hobin 2011:39). The introduction and implementation of the HPS strategy in Nova Scotia was motivated by

the policy goal to address childhood obesity (McIsaac, Storey, Veugelers & Kirk 2014:131). In addition, Canada introduced vaccinations for the Human Papilloma Virus (HPV) to female pupils aged 11 years of and older to increase the uptake of the vaccine across the country (Hayes & Berdan 2013:334).

- **India**

In 2005, the government of India launched the National Rural Health Mission (NRHM) to improve health services and outcomes for childbirth. The programme was subsequently transformed to the National Health Mission (NHM) with the goal to enhance bottom-up planning and malleable funding towards dealing with domestic needs (Prasad et al 2013:11). The school health programme (SHP) is an individual public sector programme focused on schoolgoing children. The NHM provided an opportunity to strengthen the SHP to deal with the needs of schoolgoing children. The NHM ensured strong collaboration with the education sector across all levels and consistently worked towards increasing the coverage of the school health programme in the country (Prasad et al 2013:11). The framework of school health programme implementation was decentralised across states to enable them to implement appropriate and relevant school health programmes.

- **Nigeria**

In 2006, the National School Health Policy (NSHPo) was adopted in Nigeria to promote health and education for school-age children and improve the status of school health services (Federal Ministry of Education 2006). However, the implementation across the country was sub-optimal and the school health programme remained largely at policy level with minimal implementation. In 2011, Nigeria's Federal Ministry of Health (MOH) and Ministry of Education (MOE) collaborated with the World Health Organization (WHO) to conduct a Rapid Assessment and Action Planning Process (RAAP) to assess the status of school health in the country (Whitman & Aldinger 2009:107). The assessment found many health problems amongst learners; a lack of health facilities around schools; shortages of sanitation facilities in schools, and the need for prompt action towards the provision of school health. The Rapid Assessment and Action Planning Process recommended that school health be part of school policy (Whitman & Aldinger 2009:107). In 2014, a study of school health services in primary schools in Jos,

Nigeria found that there was a need to re-establish or strengthen the SHP and the review and redefine stakeholders' participation for effective coordination (Toma et al 2014:85).

## 2.5 BACKGROUND TO SOUTH AFRICA'S SCHOOL HEALTH POLICY (SHP)

Since the election of South Africa's first democratic government in 1994, several significant developments have occurred in the nation's education system regarding school going children's access to public health care services. According to the DOH and DOBE (2012), government remains committed to providing children with reliable access to basic primary health care services across the country. This commitment remains in place consistent with the pre-democracy epoch in which school health services were structured as an integral component of the country's general health system. In 2003, the government formulated a National School Health Policy which aimed to prioritise the implementation of standard practices in the provision of school health services in the country (DOH & DOBE 2012:7).

However, following the failure of the National School Health Policy, the government, through the Department of Health (DOH) and Department of Basic Education (DOBE), implemented an Integrated School Health Policy as the initial step towards addressing the health care needs of school learners by following standard protocols, practices and guidelines in the country (DOH & DOBE 2012:11). The implementation of the Integrated School Health Programme (ISHP) envisioned the provision of comprehensive school health care services through the coordination of skills, efforts and capacity of school educators and primary health care providers with the goal to decentralise decision making (top-down) to a system that ensures adherence to the principles of a primary level (bottom-up) method managed according to a robust service provision level approach (DOH & DOBE 2012:11).

## 2.6 STRUCTURES AND LEVELS IN IMPLEMENTATION OF THE INTEGRATED SCHOOLS HEALTH POLICY (ISHP)

The implementation of the Integrated School Health Policy involves four levels, namely national, provincial, district, and service provision level. The responsibilities of the levels are discussed next.

### 2.6.1 National

Policy formulation is done at national level, including the development of guidelines for implementation of policy by provinces. The development of the school health policy at national included determining a framework of the responsibilities of each of the stakeholders involved in the implementation of the ISHP, as well as actions agreed upon between the Department of Health (DOH) and Department of Basic Education (DOBE).

In Lao, Saito, Keosada, Tomokawa, Akiyama, Kaewviset, Nonaka, Waikugul, Kobayashi, Souvanvixay and Jimba (2015:844) found that the department of education should take the lead in the implementation of the school health policy and the programme and a school health task force should be developed at administrative level across national, provincial, district and school levels. This involved the determination and specification of stakeholders responsible for planning or formulation of interventions, and stakeholders responsible for implementation of interventions.

The Department of Health (DOH) is the major stakeholder in the health sector, while the Department of Basic Education (DOBE) is the key stakeholder in the basic education sector, with responsibility for monitoring the implementation of the ISHP and school health program in South Africa. The Integrated School Health Policy was implemented by the South African government in 2012 with the goal of enhancing the health of schoolchildren and their communities (DOH & DOBE 2012). The ISHP's goal is to provide a package of services that addresses not just learning challenges, but also circumstances that lead to morbidity and death among learners throughout their lives, both in infancy and adulthood (DOH & DOBE 2012:17). Implementing the ISHP necessitates a commitment to close coordination among all stakeholders, including the DOH and DOBE as well as the Department of Social Development (DOSD) taking joint responsibility for ensuring that the ISHP is comprehensive and sustainable (Rasesemola et al 2019).

### 2.6.2 Provincial level

The implementation of the school health policy at provincial level is based on the priority needs of each province. However, these needs and their implementation must first be approved by the DOH, DOBE and DOSD for implementation by the province. The plans for the implementation of the ISHP at provincial level are developed by provincial task teams in each province. The policy requires that the plans developed by provincial task teams should take into consideration the distinct needs of each school, and that the coverage take into account all learners and all schools.

In addition, the provincial task teams should incorporate the provision of health services in the primary health care (PHC) service package, and facilitate coordination in the implementation of the school health programme. The approach used by each province towards provision of support to the lower level in implementation of the programme largely depends on the distinct identified and documented local needs, as well as the availability of resources. Hence, the implementation of the ISHP is rolled out differently in each province due to the differences in provincial needs. The provincial DOH, DOBE and DOSD in each province have a team of coordinators who facilitate school health (Shung King et al 2014:67).

### 2.6.3 District level

The policy implementation at district level is based on the needs of each district, following the proper channels for the provision of health care services. The District Support Teams (DSTs) are responsible for the development of implementation plans at district level. The implementation plans must have clearly stated objectives and indicators, and should appropriately fit into the respective district's integrated development plan (IDP). Although not a strict requirement, it is advised that district coordinators from both the health and education sectors should facilitate the coordination of the implementation of the school health programme, although most district coordinators from DBE are not allocated to school health (Shung King et al 2014:67).

### 2.6.4 School health service provision level

The direct provision of school health services to learners occurs at school and PHC management levels. In terms of the South African Schools Act, 84 of 1996, the school principals or heads are responsible for managing schools and have the authority to provide oversight on all matters and activities in the school environment (South Africa 1996a). School-based support teams have the responsibility of ensuring effective implementation of the ISHP at school level under the guidance and leadership of school managers. Concomitantly, school health teams are responsible for successful implementation of the school health programme at the primary health care level under the guidance of the primary health care (PHC) facility manager (De Klerk 2013).

## 2.7 LEGISLATIVE FRAMEWORK OF THE ISHP

The formulation and implementation of the ISHP is underpinned by a legislative framework which ensures the coordination and integration of school health services provision. The legislation framework includes:

- Constitution of the Republic of South Africa Act, 108 of 1996
- South African Schools Act, 84 of 1999
- Mental Health Care Act, 17 of 2002
- National Health Act, 61 of 2003
- Children's Act, 38 of 2005

### 2.7.1 Constitution of the Republic of South Africa Act, 108 of 1996

Children have the right to a name, citizenship, and some sort of care under Section 28(1)(c). Food and shelter are essential for children, as is protection from abuse, neglect, and degradation. Section 29(1)(a) [gives everyone] the right to a basic education and the right to further education and (b) to further education, which the state must make gradually available and accessible by reasonable measures. Everyone has the right to health care services, including reproductive health care, under Section 27 of the Constitution, and no one can be denied emergency medical treatment (South Africa 1996b).

Accordingly, the Department of Basic Education ensures the provision of basic education to every learner together with the provision of health services through implementation of the ISHP in collaboration with the Department Health.

### 2.7.2 South African Schools Act, 84 of 1996

In terms of the South African Schools Act, 84 of 1996**,** the school principal is responsible for oversight of learners' attendance and the identification of learners at risk. Furthermore, if a learner is continuously absent (i.e., 10 days or more), the reasons or circumstances for the absence must be investigated, and remedial measures suitable to address the situation instituted (South Africa 1996a). If the reasons for the learner's absence are related to health, the school principal is allowed to refer the learner to a nearby primary health care facility where the manager of that facility can assess the learner for suitable intervention regarding the learner's health needs. The aim is to enhance learners' school attendance and educational performance in order to reduce drop-out rates and simultaneously increase throughput rates.

In this regard, the ISHP has a critical role in ensuring that learners are provided with health services to improve their educational outcomes. The school responsibility of ensuring implementation of the school health programme is provided for in terms of the South African Schools Act section 16(2) (a) (vi) which places the responsibility of implementation of the health policy squarely on school managers as part of duties relating to management of schools, along with the implementation of other legislation for basic education. The Act strictly prohibits discrimination of learners from learning due to health barriers (South Africa 1996a). Learners must have equal access to learning opportunities, and primary health care facility managers are required to make primary health care facilities accessible to learners experiencing health barriers.

### 2.7.3 Mental Health Care Act, 17 of 2002

Mental health is a fundamental component of an individual's health. The Mental Health Care Act, 17 of 2002 makes provision for the care, treatment and rehabilitation of persons who are mentally ill. The Act ensures the provision of mental health care, treatment and rehabilitative services at primary, secondary and tertiary levels and health establishments. Mental health problems affect learners' school attendance,

participation, focus and performance (South Africa 2002). However, the ISHP does not include mental health services as part of the core health service package.

In 2003, the Department of Health developed the child and adolescent mental health (CAMH) policy guidelines to guide the establishment of CAMH policies provincially, using a primary care and intersectoral approach. However, a study in 2018 found that no province had a CAMH policy or identifiable implementation plans to support the national CAMH policy (Mokitimi, Schneider & De Vries 2018).

### 2.7.4 National Health Act, 61 of 2003

In terms of section 2(c)(i) of the National Health Act, 61 of 2003, every person has the right to have access to health care services, and the state is tasked with the responsibility of ensuring that this right is observed (South Africa 2003). This emphasises the need for the implementation of the ISHP to be done within frameworks that promote health at schools by upholding the principles of primary health care (DOH & DOBE 2012). The ISHP is therefore intended to ensure school going children's access to school health services in order to address health barriers they might experience. The policy requires that Grades R and 1 learner receive health assessments as a core service as the first phase of policy implementation (Department of Health 2003).

### 2.7.5 Children's Act, 38 of 2005, as amended

As part of South Africa's commitment to observing the rights of children, the country signed the United Nations Convention on the Rights of the Child (UNCRC) in 1993 and ratified it on 16 June 1995 to strengthen the civil, economic, political, cultural and social rights of children. The most important rights of children are the right to health, education, development, family life, protection from violence, abuse or neglect, and to be raised by, or have relationships with, both parents even if they are separated.

In 2005, the government introduced the Children's Act, 38 of 2005. Section 6(2)(d) of the Children's Act stipulates that all proceedings, decisions or actions in any matter concerning a child must protect the child from unfair discrimination on all grounds, including health status. In circumstances where a child has special needs, an enabling

environment characterised by provision of such special needs should be created (South Africa 2005).

The ISHP is intended to promote the health and meet the health needs of all schoolgoing children (DOH, DOBE & DOSD 2013).

## 2.8 KEY HEALTH POLICIES AND PROGRAMMES OF THE ISHP

The DOH and DOBE (2012:30) indicate that the key health policies and programmes constituting the Integrated School Health Policy and Programme include:

- Immunisation policy
- Integrated nutrition programme (INP)
- South African national oral health strategy
- Health-promoting schools initiative
- Youth and adolescent health policy
- Child and adolescent mental health policy guidelines
- HIV counselling and testing (HCT) policy guidelines
- National Strategic Plan on HIV, STIs and TB, 2012-2016
- Mini drug master plan for the health sector, 2011/12-2013/14
- Negotiated service delivery agreement and restructuring of PHC
- Household and community component of the integrated management of childhood illness strategy
- Policy guidelines for the management and prevention of genetic disorders, birth defects and disabilities
- Regular treatment of school going children for soil transmitted helminthic infections and
- Bilharzia policy and implementation guidelines

## 2.9 POLICY IMPLEMENTATION APPROACHES

"A specified set of activities designed to put into practice an activity or program of known dimensions," according to Signé (2017:12), "where processes are purposeful and described in sufficient detail so that independent observers can detect the presence

and strength of the specific set of activities related to implementation." Signe (2017:13) goes on to say that when it comes to policy implementation, there are fundamentally two approaches: top-down and bottom-up.

### 2.9.1 Top-down implementation

The top-down approach recognises that top decision makers have the best capability to formulate policy objectives that are aimed at achieving the desired outcomes and impact. In this regard, the policy decisions taken reflect the outcomes which policy makers intend to attain through the coordinated efforts by structures at different levels of the implementation process. In respect of the ISHP, the structures consist of stakeholder representatives at national, provincial, district and service levels from both the health and education sectors (Shung King et al 2014:67). Hence, in the top-down implementation approach, the decisions regarding planning and resource allocation are made largely by decision makers at the top of the governance structure. In order to ensure that the policies formulated are effective, policy makers at the top should conduct wide consultations with stakeholders at diverse levels of the implementation chain.

### 2.9.2 Bottom-up implementation

In the bottom-up approach, the network of all the key stakeholders relevant to the implementation of the policy or programme is mapped out prior to formulation of the programme. The rationale for the bottom-up approach is that centralised decision making is poorly adapted to the challenges and real conditions on the ground, where flexibility is needed to ensure attainment of the desired goals (Signe 2017:14). For instance, in the process of implementing the ISHP, decisions around resources allocation should be informed by the inputs of actors or players at the district level through the chain up to the national level, since the responsibility for implementation of the programme is entrusted to the district level (DOH & DOBE 2012:18). This implies that the planning around implementation of the programme should be coordinated first by districts with their sub-districts and schools and PHC facilities in those sub-districts.

## 2.10 CONDITIONS ENABLING PROGRAMME IMPLEMENTATION

Donaldson, Lloyd, Gabbe, Cook, Young, White and Finch (2016:277) maintain that success in the implementation of a programme is largely influenced by the degree of robustness in planning, resource allocation and coordination with key stakeholders. In the implementation of school-based policies or practices targeting risk factors for chronic disease, Wolfenden, Nathan, Sutherland, Yoong, Hodder et al (2017:7) identified strong stakeholder collaboration, implementers' knowledge, and effective communication as the main facilitators.

### 2.10.1 Strong stakeholder collaboration

Strong collaboration among stakeholders remains critical from planning and throughout the entire process of implementation of the programme (Wolfenden et al 2017:7). Success in implementation of integrated school health programme requires the active collaboration of stakeholders from family, community, school, and health and education sectors. In Spain, Sánchez-Cruz, De Ruiter and Jiménez-Moleón (2014:7) found that individual, family and environmental factors played an equal role in ensuring successful implementation of a programme to improve children's health.

### 2.10.2 Implementer knowledge

The knowledge of stakeholders involved in the implementation of programmes is essential to ensure success. A study of effective implementation of primary school-based healthy lifestyle interventions targeting childhood obesity in 14 primary schools in North England found lack of skills, limited training and support were barriers (Day, Sahota & Christian 2019:14). Well-resourced programmes, effective leadership at all levels, and pupil and parent involvement facilitated implementation (Day et al 2019:15).

### 2.10.3 Effective communication

In their study in 14 primary schools in North England, Day et al (2019:7) found that sufficient and effective communication at all levels had an integral role in the implementation of school health promoting interventions. Effective communication between principals, teachers, school-based programme coordinators, pupils, and parents was essential to success and sustainability.

## 2.11 FACTORS CAUSING POLICY IMPLEMENTATION FAILURE

Various reasons contribute to policy or programme implementation failure (Hudson, Hunter & Peckham 2019:2), including:

- Poor communication
- Lack of inter-sectorial collaboration
- Exceedingly optimistic expectations
- Implementation in dispersed governance
- Insufficient collaborative policy making
- Vagaries of the political cycle

### 2.11.1 Poor communication

Success in the implementation of a policy depends largely on effective communication among all relevant stakeholders or actors involved in implementation of the programme. In terms of the ISHP, communication on matters relating to the policy occurred from the national level down to provincial level then to district and sub-district level. From sub-district level, communication cascades down to schools and primary health care facilities in each respective department.

In their study on discipline policies in schools, Van Wyk and Pelser (2014:840) found that inadequate resources and communication, and lack of commitment and training of school leaders led to failure in implementation of discipline (Van Wyk & Pelse 2014:834). Effective communication between health and education departments at sub-district, district, provincial and national levels is critical for policy implementation.

### 2.11.2 Lack of inter-sectorial collaboration

Mohlabi, Van Aswegen and Mokoena (2010:252) found that lack of strong inter-sectorial collaboration contributed to the failure of the implementation of the 2003 national school health policy. Strong inter-sectorial collaboration among role players in both the Department of Health, and Department of Basic Education should be strictly monitored

jointly by both these departments to ensure that all school learners have access to the integrated school health services to promote learners' health (DOH & DOBE 2012:7).

### 2.11.3 Overly optimistic expectations

In the UK, Hudson et al (2019:2) found that overly optimistic expectations resulted in policy implementation failure. Over optimism often led to failure in policy implementation through underestimating delivery challenges; insufficient objective, accurate and timely information on costs, time scales, benefits and risks; not taking stakeholders' different views into account; behaviour and incentives when interested parties boost their own interests, and challenge and accountability (Hudson et al 2019:12). It is important to take ownership and responsibility. High optimism can lead to underestimation of resources and cause time lags between implementation and outcomes.

### 2.11.4 Implementation in dispersed governance

According to Norris, Kidson, Bouchal and Rutter (2014:5), policies that are formulated at national level sometimes face challenges of preserving some degree of consistency in implementation at sub-national levels where there are distinct levels of political authority. Based on the concept of "local university" which points out that policies made at high levels need to be tailored to fit into lower contexts when enacted, central authorities at national levels usually lack the understanding of the need to decentralise implementation of policies at different levels (Sausman, Oborn & Barrett 2016:567). Even when governance remains concentrated rather than detached, policy implementation still remains highly dependent on local contexts at lower levels (Hudson et al 2019:3).

### 2.11.5 Insufficient collaborative policy making

Insufficient collaboration in policy making between role players at different levels frequently causes failure in policy implementation (Hudson et al 2019:4). Isolated policy making at different administrative levels without collaborative inputs has serious negative implications in the implementation of formulated policies (Gazley, 2017). Hudson et al (2019:4) maintain that weak or insufficient collaboration among relevant

stakeholders in policy-making is usually accompanied by implementation difficulties and failure.

### 2.11.6 Vagaries of the political cycle

Politicians should be held accountable for the outcomes of policy initiatives they make. However, due to the high chance that by the time failure is realised, they might have moved out, most politicians are largely attracted to the prospects of short-term results (Hudson et al 2019:4). According to Ilott, Randall, Bleasdale and Norris (2016:12), there are three stages of political behaviour in the policy formulation and implementation process: *rising salience*, where issues are politicised and problems to be resolved are identified; *building blocks*, where politicians and officials put in place institutions, policies and targets aimed at solving a problem, and *embedding*" which constitutes the risk of diminishing political interest.

## 2.12 SELECTED EMPIRICAL LITERATURE

Table 1.1 summarises the selected literature reviewed, including authors, years, data collection and analytical technique(s) used, and major findings.

**Table 1.1 Summary of selected literature reviewed**

| Author(s) | Year | Main focus of the study | Primary findings |
|---|---|---|---|
| Dibakwane, ST & Peu, MD | 2018 | Explore experiences of school health nurses in the provision of school health services. | Nurses had both positive and negative experiences in the implementation of the integrated school health programme. |
| | | | |
| Keothaile, KJ | 2016 | Assess the implementation and related outcomes of the integrated school health programme. | No dedicated school health service providers, learners did not use the integrated school health programme due to lack of consent by parents. |
| | | | |
| United Nations Population Fund (UNFPA) | 2015 | Baseline to assess the effectiveness of the implementation of integrated school health programmes | Bad learners' attitudes and behaviour regarding conduct towards sexual intercourse, community generally passive in receiving services and expect the government to take lead, logistic and resource constraints, poor infrastructure and road networks. |
| | | | |
| Khoza, TR | 2017 | Explore learners' perceptions awareness and satisfaction pertaining to implementation of the integrated school health programme. | School nurses visited the schools once every six months; implementation of the programme deemed inconsistent with the objectives of the ISHP and poor infrastructure. |
| | | | |
| Rasesemola, RM, Matshoge, GP & Ramukumba, TS | 2018 | Examine compliance with the Integrated School Health Policy in an intersectoral and multisectoral collaborative manner. | Extensive non-compliance with the integrated school health programmes by schools, inadequate stakeholder integration at schools in the city |
| | | | |
| Strauss, M, Rhodes, B & George, G | 2015 | Analyse adolescents' key perceptions regarding the barriers and facilitators of HIV counselling and testing in schools. | Stigma and judgment attached to HIV testing, fears related to negative beliefs about HIV counselling and testing |
| | | | |

| Author(s) | Year | Main focus of the study | Primary findings |
|---|---|---|---|
| Poudel, AP | 2018 | Explore teachers' perceptions of learners' health promotion through school health services. | Child-friendly schools create environments that are conducive for open learning and keep learners mentally sound, creative and motivated in learning. |
| | | | |
| Yates, ND | 2017 | Obtain insight into teachers' perceptions of their needs to assist learners with emotional and behavioural challenges | Teachers are frontline workers with learners and their role should be supported by programmes such as the school health services to ensure that learning becomes conducive. |
| | | | |
| Kupolati, MD, Gericke, GJ & MacIntyre, UE | 2015 | Explore teachers' perceptions of the impact of nutrition education on learners' eating behaviours. | Limited school support undermines capacity of school nutrition education to promote healthy eating behaviours of learners. |
| | | | |
| Leite, CT, Machado, MFAS, Vieira, RP, Marinho, MNAB & Monteiro, CFS | 2015 | Understand teachers' perceptions of a school health programme and its relationship to health education activities. | Teachers perceive school health programme as welfare without integration between teachers and health professionals. |

Dibakwane and Peu (2018:1) explored the experiences of school health nurses in the provision of school health services in Tshwane district, South Africa. The study found that nurses encountered positive and negative experiences in the implementation of the ISHP. The positive experiences included appreciation of the services of school health nurses, benefits received by learners from comprehensive health care, and on-site treatment of the learners (Dibakwane & Peu 2018:6).

The negative experiences were attributed to poor school infrastructure and poor health care facility infrastructure in terms of lack of space, and lack of proper offices for use by school health nurses, which resulted in the use of vehicles and shacks as offices. In addition, the absence of management support, staff shortages, increased numbers of learners, and increased workload had a negative impact (Dibakwane & Peu 2018:7).

Keothaile (2016) assessed the implementation and outcomes of the ISHP in Ditsobotla sub-district, in South Africa and found a lack of sufficient dedicated school health service providers, and learners were not able to utilise the ISHP due to lack of consent by their parents.

The United Nations Population Fund (UNFPA) (2015) conducted a baseline study to assess the effectiveness of implementation of the ISHP at Nzululwazi High School and surrounding community in KwaZulu-Natal, South Africa. The study found evidence of bad attitude and behaviour by learners regarding their conduct towards sexual intercourse, and the community generally remained passive in receiving services and expected the government to take the lead. In addition, logistic and resource constraints, poor infrastructure and poor road networks affected implementation.

Khoza (2017) explored learners' perceptions, awareness and satisfaction pertaining to implementation of the ISHP in selected secondary schools in UMgungundlovu district, KwaZulu-Natal province, South Africa. The main findings indicated that school nurses visited the schools once every six months and, for that reason, several learners reported that they had never seen a school health nurse in their schools. Most learners reported that they were not aware of their individual health problems, both physically and emotionally. In addition, learners perceived that educators were not equipped with knowledge to address learners' health problems. Poor infrastructure at schools and

shortages of school nurses were also major challenges hence the implementation did not meet the objectives of the ISHP.

Rasesemola et al (2019:1) examined compliance with the ISHP from an intersectoral and multisectoral collaboration standpoint in the City of Tshwane, Gauteng province. The study found extensive non-compliance by schools, and inadequate stakeholder integration at schools (Rasesemola et al 2019:7).

Strauss, Rhodes and George (2015:1) assessed adolescents' perceptions the barriers and facilitators of HIV counselling and testing in 12 rural schools in a sub-district in uMgungundlovu, KwaZulu-Natal province, South Africa. The study found that the biggest barriers to HIV counselling and testing (HCT) were the stigma and discrimination. The participants were concerned about the stigma and discrimination associated with testing, as well as the possibility of a positive result. Peer, partner, and family attitudes regarding HIV, whether perceived or actual, increased these worries. Strauss et al. (2015:12) advocated for incorporating HIV and HCT testing into regular and SRH programs for youth to reduce stigma. They emphasized the importance of incorporating HCT into school health services as part of the ISHP implementation.

In Nepal, Poudel (2018:5) stated that teaching health and physical education by qualified teachers could support health promotion among school children. Poudel (2018) conducted the study with 12 teachers in 6 community schools in Kathmandu to explore their perceptions of school health services, health promotive activities, water, sanitation and hygiene. The teachers perceived that child friendly schools created an open learning environment and kept students mentally sound, creative and well-motivated in learning. However, the teachers' health activities were limited to within the classroom practice. The study found that effective school health services are critical and should be provided because they promote learners' health, control epidemics and communicable diseases in the school environment (Poudel 2018:10).

Yates (2017) conducted a study in North Carolina, USA, to obtain insight into teachers' perceptions of the need to assist learners with emotional and behavioural challenges through school-based mental health programmes. Qualitative data was collected through interviews and analysed using a thematic approach. The key themes covered in the analysis include the school's role in upholding the provision of mental health

services, quality of mental health services, barriers to the provision of mental health services, support needed by schools, and administration of training and classes on mental health. Major findings from the study show that teachers are frontline workers with learners and their role should be supported by school health programmes and services.

Trained teachers are invaluable in interventions to improve nutritional behaviours of learners and thereby their health. Kupolati, MacIntyre and Gericke (2014:520) explored teachers' perceptions of the impact of nutrition education on learners' eating behaviours. The review covered 39 articles and found that capacity training for teachers, time constraints, school policies and implementation of multi-component interventions were challenges.

In Brazil, Leite, Machado, Vieira, Marinho, and Monteiro (2015:280) conducted a study to better understand teachers' perceptions of a school health program and its relationship to school-based health education activities. Data was collected from ten instructors at a public school using a descriptive qualitative design and analyzed using a thematic approach. Teachers viewed the school health program as welfare, with no synergy between teachers and health specialists and no appeal to teens, according to the survey. The school's educational activities and their connection to the program were viewed as clinical evaluations that were not integrated into the school's existing operations. According to Leite et al (2015:287), there is a need for a closer link between actions in order to optimize efforts to promote school health.

## 2.13 THEORETICAL FRAMEWORK

The researcher used Pearson et al's (2015:12) approach as the theoretical framework for the study as a guide for implementation of health promoting programmes in schools as depicted in Figure 2.1.

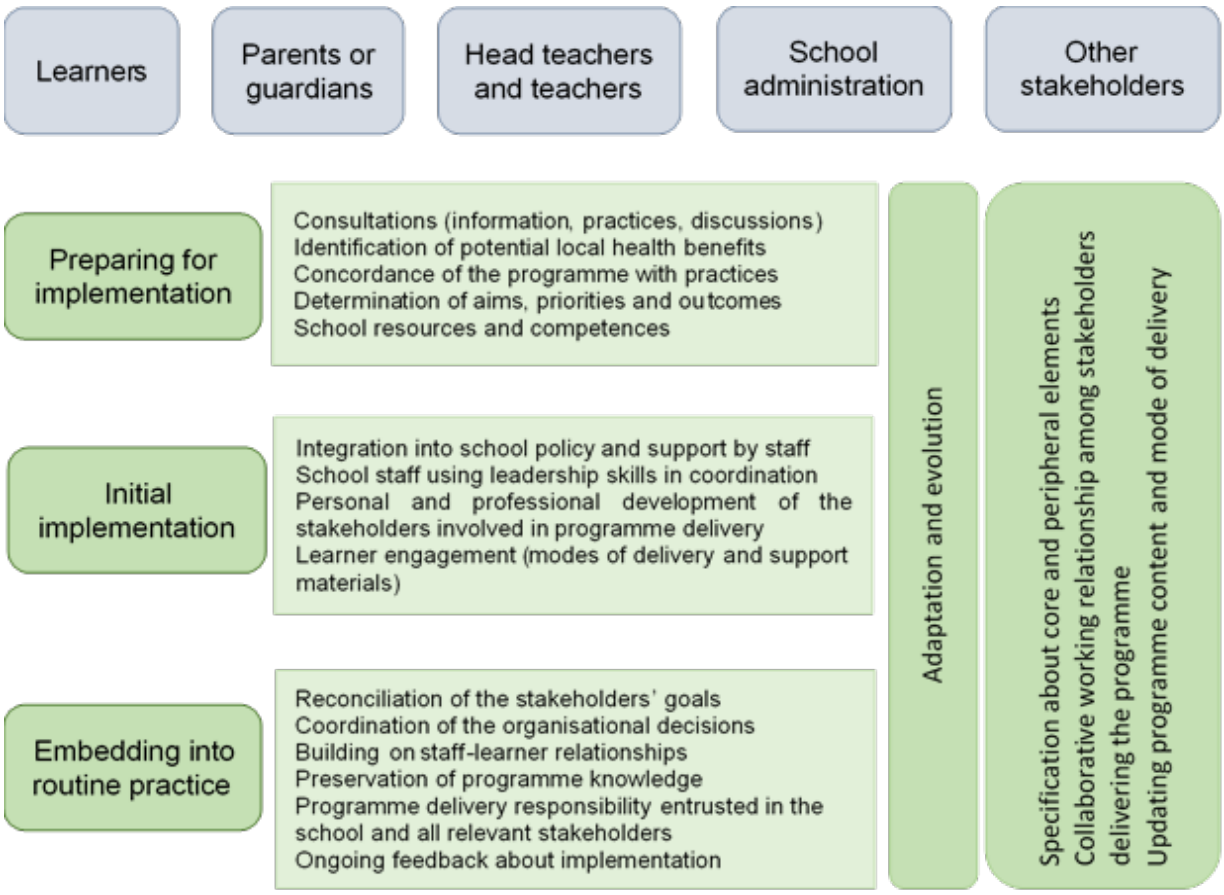



**Figure 2.1 Theoretical framework for implementing school health programmes**

(Source: Pearson et al 2015:12)

The theoretical framework indicates that implementation of health promoting programmes in schools requires collaborative participation by distinct types of stakeholders, which include learners, parents or guardians, head teachers and teachers, school administration and others. The spectrum of the implementation of the programme involves three key layers, namely preparation for implementation, initial implementation, and embedding the implementation into routine practice. The respective layers or phases are then finally sustained through adaptation and evolution in the implementation process.

Figure 2.1 indicates that implementation of school health programmes is a collaborative process that requires active participation by distinct stakeholders at the school environment level, including learners, parents or guardians, head teachers and schoolteachers, school administration bodies, and other relevant stakeholders. These stakeholders have different but integral roles in the implementation of the specified set

of activities designed to put into practice dimensional processes of the school health programme (Signé 2017:12).

In the implementation process of a school health programme, a top-down approach is commonly used in the initial stages of preparations for implementation. Top decision makers such as head teachers, school administration bodies and other high-level stakeholders at the top of the planning, policy and decision-making levels engage in consultations that aim to achieve specified desired health outcomes and impacts (Shung King et al 2014:67). Such wide consultations may focus on identification of potential local health benefits, practices to be observed during the implementation of stipulated activities, priorities, and resources and competences required at the school level (Pearson et al 2015). In complementing the top-down approach, auctioning of the programme implementation is then driven through a bottom-up approach in which decisions about resources allocation are informed by inputs of actors or players at sub-national levels down through to the school level (DOH & DOBE 2012:18).

Subsequent to the understanding of the goals of the programme by all critical relevant stakeholders and role players, the programme becomes integrated into the school policy with the support of the school staff. As a key part of the initial implementation phase, personal and professional development is provided to all stakeholders involved in the implementation of the programme delivery, including the learners to whom school health services are provided (Pearson et al 2015). In the actual implementation stage at the school level, routine practices ensure that reconciliation of stakeholders' goals has first been attained to sustain implementation of the programme (Donaldson et al 2016:337). Strong stakeholder collaboration, implementers' knowledge and effective communication of roles of players from health and education sectors are considered as key conditions for the success of the implementation (Wolfenden et al 2017:7). Figure 2.1 indicates that decisions are coordinated among key role players, relations between staff and learners are also built to ensure strong participation, which the main responsibility of programme delivery is vested in the school and relevant stakeholders.

Continuous feedback among stakeholders on the implementation of the programme ensures improved understanding of the goals and intended benefits and impacts of the programme. Through feedback, positive lessons can be learned from the results realised over time, while lessons on challenges experienced can be used to develop

improvement plans that optimise achievement of the desired outputs and impact. In addition, strong communication and collaboration among stakeholders can minimise possible negative perceptions of the programme. Minimisation of negative perceptions can finally facilitate reviewing and improving practices relating to the delivery of the programme.

## 2.14 SUMMARY

This chapter discussed the literature review conducted for the study.

Chapter 3 describes the research design and methodology of the study.

# CHAPTER 3

# RESEARCH DESIGN AND METHODOLOGY

## 3.1 INTRODUCTION

This chapter describes the research design and methodology of the study. The purpose of the study was to describe the perspectives of schoolteachers on the current school health policy in public schools in Msunduzi Municipality, KwaZulu-Natal with the aim of recommending possible ways to improve the school health policy.

## 3.2 PARADIGM

A paradigm is a technique of looking at natural events that includes a set of philosophical assumptions and directs a researcher's investigation (Polit & Beck 2012:12). Paradigms, according to Polit and Beck (2012:12), are lenses that assist researchers focus on a phenomenon.

The researcher used positivism as the study's paradigm. Ontological, epistemological, and methodological principles are central to positivism. Ontology is a branch of philosophy that investigates the nature of reality. Reality exists and is impacted by natural causes, according to the ontological hypothesis. The researcher's (enquirer's) relationship to the research subjects is questioned by the epistemological premise. Epistemology assumes that the researcher is apart from the people being studied and has no influence over the results. The optimum strategy to collect evidence is considered by the methodological assumption (data). The focus is on specific notions and whether or not they can be quantified (Polit & Beck 2012:12).

Positivism follows rigid norms, laws, truth axioms, and prediction in order to comprehend facts and develop knowledge, as well as a logical process for theory verification (Gray et al 2017:25). Data is quantitative, and statistical analysis is used to quantify it (Pilot & Beck 2012:12).

Because questions may only be what the researchers judge essential, data-collection tools produced by positivist researchers have an element of subjectivity. Respondents may interpret questions in a variety of ways (Saks & Allsop 2013:24).

## 3.3 RESEARCH DESIGN

A research design is the general strategy for answering a research topic, as well as the guidelines for ensuring the study's integrity (Abutabenjeh & Jaradat 2018:242; Polit & Beck 2012:724). For the study, the researcher chose a quantitative, non-experimental, descriptive strategy. Quantitative investigations are systematic, follow a set of methods, and collect empirical data (evidence), so the results are grounded in reality (Polit & Beck 2012:724). This design was deemed appropriate for the study by the researcher. The researcher thought this approach was adequate for gaining a thorough understanding of the situation and accurately describing the viewpoints of the participating teachers on the ISHP in the schools.

### 3.3.1 Quantitative

Quantitative research is a systematic empirical exploration of phenomena characterized by objective measurements and statistical analysis, with rigorous and controlled designs frequently used (Pilot & Beck 2012:739).

The researcher selected a quantitative, non-experimental, descriptive design for the study. Quantitative studies are systematic, follow prescribed steps, and collect empirical data (evidence) hence the findings are based on real situations (Polit & Beck 2012:724). The researcher considered this design appropriate to obtain in-depth knowledge of the situation and to accurately describe the participant teachers' perspectives on the ISHP in the schools.

### 3.3.2 Non-experimental

There is no manipulation of the independent variable and no cause-and-effect relationship between the variables in non-experimental research (Brink, Van der Walt & Van Rensburg 2012:112). In an area where knowledge is inadequate, a non-experimental approach allows for a deeper understanding of phenomena (Gray et al

2017:28). The goal of this study was to identify and describe the viewpoints of the participating teachers on the ISHP.

### 3.3.3 Descriptive

Descriptive research is concerned with the present and its main objective is to accurately portray all the characteristics of persons, situations, or groups, and the frequency with which certain phenomena occur (Singh 2016:104; Polit & Beck 2012:725). A descriptive design identifies phenomena of interest and describes variables in a study situation (Burns et al 2017:128; Singh 2006:104). Such an approach is useful in the assessment of opinions, behaviour and characteristics of a population and for describing the state of affairs (Pophalia 2010:16). This design assisted the researcher to determine and understand the participant teachers' perspectives on the ISHP and the role of school nurses in the schools.

## 3.4 RESEARCH METHODOLOGY

The plan for carrying out the specific guidelines of a study is known as research methodology (Burns et al 2017:129; Polit & Beck 2012:741). The approaches researchers employ to structure a study and obtain and analyze material relevant to the research issue are known as research methodologies (Polit & Beck 2012:741). Setting, population, sampling and sample, data collecting and analysis, and trustworthiness are all part of the process (Burns et al 2017:129).

### 3.4.1 Setting

A research setting is a physical location and conditions in which data collection takes place in a study (Grove, Gray & Burns 2015:38; Polit & Beck 2012:272). The study was conducted in the selected primary schools' natural setting.

### 3.4.2 Population

A research population refers to the entire set of elements, individuals or objects having some common characteristics in which a researcher is interested (Polit & Beck 2012:272). Bacon-Shone (2015:34) defines a population as the potential respondents of

interest. In this study, the population was the primary schoolteachers employed by the Department of Education within the Msunduzi Municipality in KwaZulu-Natal (Engwa 2015:64). There are a fixed number of teachers/educators per primary school and the uMgungundlovu District Office's school health team offered service delivery to the schools in Msunduzi Municipality.

### 3.4.3 Sampling

The practice of selecting representative individuals or other items that represent the population under investigation is known as sampling (Polit & Beck 2012:277). According to Brink et al (2012), sampling is the process of selecting a sample from a population to collect information about a phenomenon in a way that is representative of the community. The full population could not be used due to budget and timing constraints. As a result, the researcher employed basic random sampling, which ensured that every member of the population had an equal chance of being chosen (Bacon-Shone 2015:36).

#### *3.4.3.1 Sampling method*

There are two types of sampling, namely non-probability or probability. In non-probability sampling, the elements of a population do not have an equal chance of being selected (Abutabenjeh & Jaradat 2018:243). Probability sampling guarantees that each participant or case in the chosen sampling frame has an equal probability of being chosen and included in the study. Probability sampling may be systematic, stratified, cluster or simple random sampling (Terre Blanche, Durrheim & Painter 2006:133). In this study, the researcher used simple random sampling in which each participant had an equal chance of selection (Collis & Hussey 2014). In addition, simple random sampling ensured speed, ease and cost-effectiveness in the process of data collection.

### 3.4.4 Sample

A sample refers to a subset of a population (individuals, elements or objects) or a group selected to act as representatives of the population as a whole (Polit & Beck 2012:275). The primary concern is that a sample should passably and scientifically be representative to ensure that reliable inferences and generalisations about the

population can be made with confidence. The researcher consulted a statistician to assist in determining the appropriate sample size in order to draw meaningful conclusions. The following simple random sampling formula was applied to calculate the sample size:

$$n = \frac{\chi^2 N \hat{\rho}\left(1-\hat{\rho}\right)}{\alpha^2 (N-1) + \chi^2 \hat{\rho}\left(1-\hat{\rho}\right)}$$

(3.1)

where :
$n$ = required sample size
$N$ = the population size
$\hat{\rho}$ = population proportion; assumed to be 0.5
$\alpha$ = the degree of ccuracy set at 0.05
$\chi^2$ = Chi-square value (= 3.841 for 0.95 confidence interval)

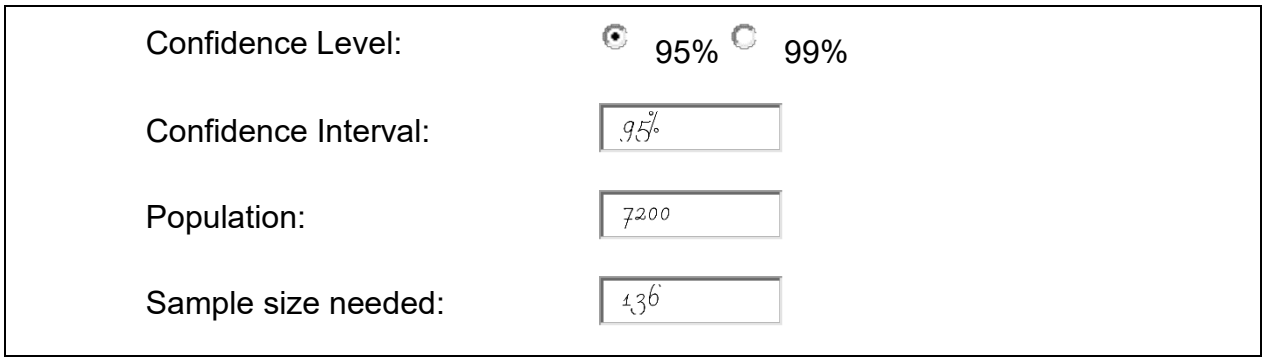



**Figure 3.1 Sample size calculation**

Based on the formula, the statistician calculated a minimum sample size of 136 teachers for the study. The sample size was determined at 95% confidence interval and 5% margin of error with 10% response distribution.

### 3.4.5 Data collection

Data collection is the systematic collection of data relevant to the study issue in order to solve a research challenge (Gray et al 2017:511; Polit & Beck 2012:725). Researchers utilize organized data-collection equipment and statistical data analysis in quantitative

investigations (Appelbaum, Cooper, Kline, Mayo-Wilson, Nezu & Rao 2018:8; Polit & Beck 2012:16).

#### *3.4.5.1 Data-collection instrument*

Secondary data from other sources or original data acquired using structured standardised questionnaires can be used for analysis (Appelbaum et al 2018:8). When large samples are used, a questionnaire is an objective data gathering instrument that gives generalizable insights (Appelbaum et al 2018:9). For data collection, the researcher employed standardised, structured self-administered questionnaires (Abutabenjeh & Jaradat 2018:243). To minimize technology-related concerns that could generate undue stress, hard copy questionnaires were used.

#### *3.4.5.2 Development of the data-collection instrument*

The researcher developed a structured questionnaire consisting of closed questions (Taber, Mehmood, Vedagiri, Gupta, Pinto & Bachani 2020:11; Engwa 2015:85). The questionnaire was based on a 5-point Likert scale using ordered response levels (Bacon-Shone 2015:63). Likert scales are used in studies where the purpose is to establish opinions or attitudes about a situation. In order to measure the participants' perspectives on the school nursing services, the responses were labelled according to 1=strongly disagree; 2=disagree; 3=neutral; 4=agree and 5=strongly disagree (Likert 1932).

Closed questions anchored on a 5-point Likert scale question are easier for respondents to answer and eliminate bias (Engwa 2015:83). Closed questions allow for statistical analysis (Pilot & Beck 2012:298).

The questionnaire consisted of three sections:

- Section A: Respondents' demographic profile
- Section B: Perceptions
  B1: Positive
  B2: Negative
- Section C: Challenges

C1: Resources and capacity
C2: Collaboration
C3: System enablement

#### *3.4.5.3 Pilot study or pre-test of the questionnaire*

A small-scale trial involving volunteers who will not be included in the final study is known as a pre-test or pilot study (Polit & Beck 2012:730). The purpose of the questionnaire testing was to establish its validity and reliability, as well as how long it took respondents to complete it and whether they understood all of the questions (Gray et al 2017:401). The pilot study was done with five teachers who were excluded from the main study.

Two schools were visited on 2 February 2021 and three teachers who met the selection criteria and were willing to participate were selected per school. This group was excluded from the main study. The researcher addressed the teachers in the staff rooms at the primary schools. The teachers were informed that participation was voluntary and they were given information sheets and informed consent forms. The questionnaires were then filled out in a time frame of 1 hour and collected afterwards. The purpose of the pre-test was to identify flaws in the questionnaire, such as repetition and ambiguity and the time required to complete the questionnaire. No flaws were identified.

The pilot study found that the respondents understood the questions, had no difficulty completing the questionnaire, and the time allowed was adequate for completion. Based on the pilot study, no changes were made to the questionnaire. The researcher kept the questionnaires from the pre-test separate under lock and key in a cupboard for safety.

#### *3.4.5.4 Data-collection process*

After obtaining permission from the principals/head of departments of the selected schools, data was collected from different schools on different days. Two schools were visited per date and a consistent process was followed on all the data-collection days. The researcher obtained permission from the principals and heads of departments to meet the teachers at their preferred time. Data was collected on 2 February 2021 with

16 respondents, 3 February 2021 with 19 respondents, and 9 February 2021 with 10 respondents.

From 1 February 2021 teachers were the only ones present at the school so the researcher thought this would be the best time to collect data while the pupils were on holiday. A consistent process was followed on all the days of data collection, permission was obtained from the principals and head of departments to meet the teachers in their preferred time as they have not yet started teaching.

Data was collected on the following dates 2 February 2021 where 16 respondents were enrolled, 3 February 2021 where 19 respondents were enrolled, and 9 February 2021 where 10 respondents were enrolled. The data collection process was the same for all the mentioned date.

The researcher met the participants in a staff room, handed out participant information sheets (see Annexure D), read the information sheet, addressed any issues and concerns and provided clarification. The participation information sheets had the researcher's contact details and the aims, objectives and ethical considerations of the study. Respondents who were willing to participate in the study were asked to complete the informed consent forms (see Annexure E). The consent forms were collected, checked for completion and placed in an envelope and sealed then labelled consent forms. The researcher thanked the respondents for their willingness and participation. The questionnaires were handed out to the respondents (see Annexure F) and they were allowed one hour to complete the questionnaire. The researcher remained in the room and collected and checked the completed questionnaires then placed them in separate, sealed envelope.

After the schools opened to pupils on 15 February 2021, the principals informed the researcher that the schools had to take precautions due to the Covid-19 pandemic and restrict school visitors. Moreover, teachers had to catch up on lessons with the pupils and could not take time off to complete the questionnaires. The researcher and heads of the schools agreed that the researcher should explain the procedure to the heads of the schools who would then distribute the information sheets, questionnaires and consent forms to teachers who agreed to participate voluntarily.

The school principals were given an information sheet to read and the researcher's contact details were highlighted should clarification be needed. They were then asked to perform data collection in three steps.

Hand out the information sheets to the teachers. Read the information to the teachers and answer any questions or concerns, and enquire whether there were volunteers. Hand out consent forms for willing participants to sign then collect signed consent forms and place them in the envelopes provided (labelled "consent forms"). Hand out the questionnaires and collect them after completion, and place in separate envelopes provided (labelled questionnaires). The researcher arranged to collect the questionnaires and consent forms 5 days after completion. The heads of schools emailed the researcher and called the researcher to arrange suitable times to collect the completed questionnaires.

This procedure was followed on the following dates: initial visit on 15 February 2021, collection on 19 February 2021 where 23 respondents were enrolled; initial visit on 10 May 2021 collection on 15 May 2021 where 25 respondents were enrolled; initial visit on 12 May 2021 collected on 17 May 2021 where 22 respondents were enrolled, and initial visit on 1 June 2021 collected 7 June 2021 where 21 respondents were enrolled. Two schools were visited per date to leave the information sheets, consent forms and questionnaires.From the total 137 questionnaires 137 were fully completed and the other 6 were incomplete giving an effective response rate of 100% .
All the questionnaires handed out were completed correctly therefore none had to be discarded. The paper based informed consent forms and questionnaires were kept safely in a locked cupboard and the electronic copies in a password protected hard drive and only the researcher had access to them.

### 3.4.6 Data analysis

Data analysis is the systematic organization and synthesis of data to establish order, structure and meaning (Polit & Beck 2012:725). The goal of the research is to provide answers to the problem addressed after data has been collected (Engwa 2015:94).

Following data collection, data capturing, cleaning and processing were conducted using the Census and Survey Processing System (CSPro) and the processed data was

exported to the Statistical Package for Social Sciences (SPSS) version 26 for statistical analysis. A statistician analysed the data using the SPSS version 26 and/or Stata version 14. The statistician statistically analysed the data, using descriptive analysis and summarising by means of frequencies and cross-tabulation. Descriptive statistics summarised data and inferential statistics described the respondents' perspectives on the current school health services. In descriptive statistics, the aim is to describe data and examine relationships between the variables, while inferential statistics examine the casual relationship between variables (Engwa 2015:94). The statistician used exploratory factor analysis to assess factor structures and confirmatory factor analysis to assess relationships between the observed variables and their corresponding underlying latent constructs.

#### *3.4.6.1 Exploratory factor analysis (EFA)*

Exploratory factor analysis (EFA) is a multivariate statistical method that analyses the dimensionality of a set of variables for which latent variables are unobserved constructs referred to as factors (Watkins 2018:219). EFA was conducted based on the classical function:

$$Z_k = \alpha_{k1} G_1 + \alpha_{k2} G_2 + ..... + \alpha_{ju} G_u + \varepsilon_j \qquad (3.2)$$

where u is the number of indicators $(Z_1, Z_2, ...., Z_p)$, thus an indicator $Z_k$ is included in construct, u is the number of factors $(G_1, G_2, ...., G_u)$, and k = 1, 2, …, p. Loadings of items under factors $\alpha_{k1}, \alpha_{k2}, ..., \alpha_{ku}$ show that $\alpha_{k1}$ is a factor structure loading of $k^{th}$ indicator on the initial factor, and $\alpha_{k2}$ is the factor structure loading of $k^{th}$ variable on the second factor. Item loadings sizes on factors show the degree of their association to a relevant factor.

## 3.5 VALIDITY

The validity and reliability of a research instrument influence its quality. The degree to which an instrument accurately measures what it is designed to measure is referred to as validity (Polit & Beck 2012:582). Validity refers to whether a research instrument

accurately measures what it was designed to assess or whether the study findings are accurate. The researcher ensured internal and external validity in this investigation.

The amount to which the research instrument measures what it was meant to measure is referred to as the validity of the research instrument (Collis & Hussey 2014). In other words, validity assesses the research instrument's suitability for its intended use. The researcher determined internal and external validity in this study.

### 3.5.1 Internal validity

Internal validity is concerned with the research findings' consistency with reality. It refers to the extent to which the researcher observes and measures what the data-collection device is designed to measure.

Internal validity was examined in this study during the pre-test and main study to determine whether the participants understood the operational definitions used in the study.

### 3.5.2 External validity

The extent to which the findings may be applied to different populations and circumstances is known as external validity (Heale & Twycross 2015:66). The researcher employed a representative sample and a real-world situation in this investigation. Prior to evaluating the underlying premises, the constructs' validity was established in order to generate conclusions that might be used to generalize the findings (Collis & Hussey 2014).

## 3.6 RELIABILITY

The degree of consistency or dependability with which the instrument measures the traits it is supposed to measure is referred to as reliability. The results will be consistent each time the test is conducted if the instrument is dependable (Polit & Beck 2012:194). The possibility that the instrument will produce the same results time after time is referred to as reliability (Burns et al 2017:389; Bacon-Shone 2015:54).

In this study, the internal consistency of items was tested using the Cronbach's alpha criterion to assess the responses from different participants. Stuart et al (2011:41) states that reliability means that the instrument is consistent; that is, if the same is used under the same conditions, the same measurements or responses will be obtained. The pre-test allowed a researcher to assess whether the repeating the measurement in the study yields the same results. The same instrument was used in all the schools for all the respondents to ensure consistency.

The internal consistency of the items was assessed using the Cronbach's alpha criterion to assess the questionnaire's reliability (Cronbach 1951). The Cronbach's alpha criterion measured how similar responses might be gotten from people who answered the identical questions. Cronbach's alpha coefficients were calculated using the following method to analyze the internal consistency of the items under each of the constructs utilized in the study:

$$\alpha = \frac{h}{h-1}\left(1 - \frac{\sum_{i=}^{h} \sigma^2_{y_i}}{\sigma^2 Z}\right)$$

(3.4)

where:

$h$ = number of items

$\sigma^2 Z$ = variance of observed total scores

$\sigma^2 Y_i$ = variance of item i for the current sample

The scale reliability of questionnaire items under each construct was tested using Cronbach's alpha coefficients. The higher the coefficient value, the higher the reliability of the responses (Likert 1932:11). The calculated alpha coefficient was used to show how well various items positively correlated to one another (Matheson 2019:6).

## 3.7 RIGOUR

In quantitative research, rigor refers to the degree of correctness and consistency of the study's measurable features. In order to obtain reliable results, the study design and methodology employed must be thoroughly thought out to meet the research questions.

All of the processes in the research process must be logically consistent (Gray et al 2017:42).

The selection of an appropriate research design and volunteers with sufficient experience to answer the research questions were used to ensure rigour in this study. Data was meticulously gathered and entered into an Excel spreadsheet. The statistician used SPSS version 26 and/or Stata version 14 to statistically analyse the data.

## 3.8 ETHICAL CONSIDERATIONS

Ethics is concerned with issues of right and wrong. In order to protect the rights of research participants, ethical considerations must be incorporated into the design of any study involving human subjects (Singh 2016:219). It is the responsibility of researchers to defend the rights of study participants (Gray et al 2017:162). As a result, the researcher adhered to the following ethical guidelines:

### Ethical approval and permission

The researcher obtained ethical approval and permission to conduct the study from the Higher Degrees Committee of the Department of Health Studies of the University of South Africa, Department of Health Studies ref. number REC-012714-039 (HSHDC/940/2019) on 3 December 2019 (see Annexure A). Approval for the study was granted and signed ethical clearance was issued.

### Permission from local authorities and the schools

Permission was also obtained from the KwaZulu-Natal provincial research committee as well as the local government authorities to do the study in the local schools (see Annexures B and C). The research protocol was made available to the local government authorities. Verbal permission was obtained from the local education department to conduct the study. The researcher informed the department which schools had been selected as well as the dates on which they would be visited. In addition, the researcher obtained permission from the schools to conduct the study there on dates suitable for them. Due to the Covid19 pandemic and the Government lockdown restrictions, the researcher received permission and approval on 19 November 2020 ref 2/4/8/7050 (see Annexure B).

The researcher asked for permission to meet with the selected primary school principals at the schools' offices individually. A brief meeting was held with the principals and heads of departments to explain the aim and objectives of the study, and permission was obtained. The researcher assured the meeting attendees that the results of the study would not be linked to their respective schools and will not cause any harm or

disrepute of their school. The results would be shared with the Department of Education Head Office as agreed.

**Informed consent**

The researcher obtained written informed consent from the participants in order to guard against violation or invasion of privacy (Singh 2016:220). The researcher informed the participants of the purpose of the study, and allowed them to ask questions. They were then given an informed consent form to sign (see Annexure E).

**Justice and respect for human dignity**

When it came to picking study participants, the researcher was fair. All teachers who met the study's requirements were invited to participate. The researcher chose the participants and treated them fairly, evenly, and respectfully, as well as explaining the study's goal and methodology. Without any external pressure or control, the participants were offered the option of participating in the study or not. They expressed their desire to participate by signing the consent form. No one was compelled to take part in the study. The study's purpose was explained to the participants, and they were given the opportunity to ask questions. They were then asked to sign an informed consent form. All of the participants were acknowledged by the researcher for their involvement (Gray et al 2017:172)

**Beneficence**

Beneficence refers to the act of avoiding damage and doing good, and it imposes on researchers the responsibility of minimizing harm and maximizing benefits to participants (Engwa 2015:180-181). Respondents were given structured self-administered surveys to complete and share their opinions in a secure atmosphere. The respondents were also told that the study's findings will aid instructors by improving their methods and helping to improve the implementation of the ISHP (Gray et al 2017:173). The participants were not in any danger as a result of the study.

**Justice**

The term "justice" refers to how people are treated fairly (Gray et al 2017:172). All respondents were treated equally. All of the teachers who satisfied the criteria were invited to take part in the study. There was no special treatment for any of the responses. All of the respondents' information was gathered in a uniform manner. An information sheet, an informed consent form, and a questionnaire were given to each respondent (see Annexures D,E and F). Before data collection, the researcher was accessible to provide clarification and answer any queries.

**Privacy, anonymity and confidentiality**

The researcher respected participants' freedom to decline participation. The respondents' privacy, anonymity and confidentiality were assured by not providing their names on the questionnaires (Singh 2016:220).

Lenkokile (2016:60) states that anonymity is assured when a respondent's identity cannot be linked to individual responses. No personal information of any of the participants was documented. Schools and teachers that participated in this study were not named to ensure they could not be linked to the responses. The completed questionnaires were kept in a locked cupboard to which only the researcher had access and all electronic data was kept safe in password protected files. The data will be destroyed after a period stated by the Higher Degrees Committee of the Department of Health Studies at UNISA by means of approved, suitable destruction at the time of expiration of storage as per UNISA Committee guidelines.

## 3.9 CONCLUSION

The setting, demographic, data collection and processing, and ethical considerations were all discussed in this chapter.

Data analysis, interpretation, and outcomes are discussed in Chapter 4.

# CHAPTER 4

# DATA ANALYSIS AND INTERPRETATION AND RESULTS

## 4.1 INTRODUCTION

This chapter discusses the data analysis and interpretation, and the results. The purpose of the study was to describe the perspectives of schoolteachers on the current school health policy in the public schools of Msunduzi Municipality, KwaZulu-Natal with the aim of recommending possible ways to improve the school health policy.

## 4.2 DATA ANALYSIS PROCESS

Categorizing, organizing, altering, and summarizing data, as well as describing them in relevant terms, are all part of data analysis (Brink et al 2012:170). Data analysis is defined by Polit and Beck (2012:725) as "the methodical organization and synthesis of research data." The statistical manipulation of numerical data for the aim of characterizing phenomena or generating judgments about how phenomena are related is known as quantitative data analysis (Polit & Beck 2012:725).

The data from the questionnaires was captured on an Excel spreadsheet. The statistician analysed the data using the SPSS software program version 27 for data processing and statistical analysis. During data processing, missing data and outliers were checked on all question items under each construct. No missing values and outliers were detected, and statistical analysis was conducted, using descriptive statistics, exploratory factor analysis and scale reliability, while Stata software version 14 was used to conduct confirmatory factor analysis.

The findings are presented according to the sections of the questionnaire.

## 4.3 SECTION A: PARTICIPANTS' DEMOGRAPHIC PROFILE AND SCHOOL TYPES

Table 4.1 presents the participants' demographic profile and school types.

**Table 4.1 Participant teachers' demographic profile and school**

| Item | Number (n) | Percentage (%) |
|---|---|---|
| **Sex** | | |
| Male | 29 | 19.7 |
| Female | 118 | 80.3 |
| **Age group** | | |
| 20-29 years | 18 | 12.2 |
| 30-39 years | 61 | 41.5 |
| 40-49 years | 41 | 27.9 |
| 50-55 years | 26 | 17.7 |
| 60 years – above | 1 | 0.7 |
| **Type of school** | | |
| Urban | 84 | 57.1 |
| Rural | 63 | 42.9 |
| **Frequency of school health nurse visits to the school** | | |
| Never | 2 | 1.4 |
| Once in three months | 74 | 50.3 |
| Once in six months | 71 | 48.3 |
| **Main health services offered in your school** | | |
| Nutritional assessments | 9 | 6.1 |
| Visual assessments | 4 | 2.7 |
| Speech assessments | 28 | 19.0 |
| Hearing assessments | 53 | 36.1 |
| Ear examinations | 53 | 36.1 |

Of the participants, 80% (n=118) were females, and 20% (n=39) were males; 41.5% (n=61) were 30-39 years old; 27.9% (n=41) were 40-49; 17.7% (n=26) were 50-59; 12.2% (n=18) were 20-29, and 0.7% (n=1) were 60 years old; 57.1% (n=84) worked in urban schools and 42.9% (n=63) worked in rural schools.

Regarding school health nurse visits to the schools, 50.3% (n=74) of the respondents, indicated once in three months; 48.3% (n=71) indicated once in six months, and 1.4% (n=2) indicated never.

Regarding main health services offered at their schools, 6.1% (n=9) indicated ear examinations; 2.7% (n=4) indicated visual assessments; 19.0% (n=28) indicated speech assessments; 36.1% (n=53) indicated hearing assessments, and 36.1% (n=53) indicated ear examinations.

## 4.4 SECTION B: PARTICIPANTS' PERCEPTIONS

Section B of the questionnaire examined the participants' perceptions of the ISHP. Table 4.2 presents the participants' positive perceptions and Table 4.3 presents their negative perceptions.

**Table 4.2 Participants' positive perceptions**

| Item | N | Mean | | Std Dev |
|---|---|---|---|---|
| | Statistic | Statistic | Std error | Statistic |
| B101. There is less absenteeism at school since the introduction of the school health services | 147 | 2.88 | .107 | 1.292 |
| B102. The level of understanding of the origins and content of the policy architecture is reasonable | 147 | 3.14 | .108 | 1.309 |
| B103. There is meaningful promotion or advocacy around the implementation of the health policy | 147 | 3.16 | .106 | 1.282 |
| B104. Services rendered by nurses and teachers are appreciated | 147 | 3.33 | .108 | 1.305 |
| B105. Provision of on-site treatment through primary health care mobile trucks is quite beneficial | 147 | 3.94 | .096 | 1.160 |
| B106. There is involvement of the community in the programme | 147 | 3.35 | .107 | 1.301 |

Table 4.2 presents descriptive statistics of all the items measuring the construct positive perceptions. The responses were measured on a 5-point Likert scale of 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree. The arithmetic means equal to nearly 3 for five out of six items measuring positive perceptions show that respondents were generally neutral regarding whether there was less absenteeism at school since the introduction of the school health services (mean=2.88, the level of understanding of the origins and content of the policy architecture is reasonable (mean=3.14), there is meaningful promotion or advocacy around implementation of health policy (mean=3.16), services rendered by nurses and teachers are appreciated (mean=3.33) and there is involvement of the community in the programme (mean=3.35).

The respondents agreed (mean=3.94) there was involvement of the community in the programme. This concurred with Keothaile's (2016:52) that the health care services provided by care givers to learners with health problems were appreciated. Keothaile (2016:51) and Dibakwane and Peu (2018:4) reported that there was appreciation of

services of school health nurses, increased health benefits to learners and provision of comprehensive health care services.

**Table 4.3 Participants' negative perceptions**

| Item | N | Mean | | Std dev |
|---|---|---|---|---|
| | Statistic | Statistic | Std error | Statistic |
| B201. The school health service disturbs school lessons | 147 | 3.97 | .089 | 1.075 |
| B202. Poor road networks in rural communities make it difficult for outreach programmes | 147 | 2.65 | .110 | 1.339 |
| B203. Negative attitude by managers due to poor understanding of school health services | 147 | 2.55 | .083 | 1.008 |
| B204. Spot checks and supervisory visits are not conducted | 147 | 3.33 | .100 | 1.217 |
| B205. School health services are an additional responsibility leading to increased pressure for teachers | 147 | 3.38 | .100 | 1.213 |
| B206. Some school nurses are refused entry into schools | 147 | 1.56 | .068 | .829 |

Table 4.3 presents the items measuring the construct negative perceptions. The Likert scale options were 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree. Arithmetic means equal to nearly 3 for four out of six items assessing negative perceptions show that the participants generally remained neutral on whether poor road networks in rural communities made it difficult for outreach programmes (mean=2.65), negative attitude by managers due to poor understanding of school health services (mean=2.55), supervisory visits and spot checks were not conducted (mean=3.33), and school health services were an extra responsibility leading to increased pressure for teachers (mean 3.38).

The respondents agreed (mean=3.94) that school health services disturbed school lessons, and disagreed (mean=1.56) that some school nurses were refused entry into schools. These results concurred with Dibakwane and Peu's (2018:2) findings that poor road networks, lack of consistent supervisory visits, negative attitudes by management, lack of support from management, and added responsibilities for educators.

## 4.5 SECTION C: CHALLENGES

Section C examined the challenges that the participants encountered. The challenges included resources and capacity, collaboration and system enablement.

**Table 4.4 Resources and capacity challenges**

| Item | N | Mean | | Std dev |
|---|---|---|---|---|
| | Statistic | Statistic | Std error | Statistic |
| C101. Inadequate financial, human and material resources | 147 | 3.65 | .093 | 1.127 |
| C102. Lack of clarity of roles for school managers and primary health care facility managers | 147 | 3.03 | .087 | 1.053 |
| C103. Increased numbers of learners leading to constraints in the capacity of staff to accomplish tasks | 147 | 3.28 | .084 | 1.019 |
| C104. Lack of basic health knowledge among schoolteachers | 147 | 3.90 | .097 | 1.172 |
| C105. Inexperienced and unqualified providers of the school health programme | 147 | 2.79 | .061 | .742 |
| C106. High workloads which limit the optimal implementation of the programme's activities | 147 | 3.29 | .091 | 1.104 |

Table 4.4 presents descriptive statistics of the items measuring the construct resources and capacity challenges. The Likert scale options were 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree. Arithmetic means nearly equal to 3 for four out of six items measuring resources and capacity challenges show that respondents generally remained neutral regarding whether there is lack of clarity of roles for school managers and primary health care facility managers (mean=3.03), increased numbers of learners lead to constraints in the capacity of staff to accomplish tasks (mean=3.28), there are inexperienced and unqualified providers of the school health programme (mean=2.79) and there are high workloads which limit the optimal implementation of the programme's activities (mean=3.29). Participants agreed that there are inadequate financial, human and material resources (mean=3.65) and lack of lack of basic health knowledge among schoolteachers (mean=3.90). In Botswana, Shaibu and Phaladze (2010:201) found insufficient human resources and high staff workloads were challenges and in Ditsobotla, Keothaile (2016:53) reported lack of space, absence of offices for school health nurses, and high staff workloads.

**Table 4.5 Collaboration challenges**

| Item | N | Mean | | Std dev |
|---|---|---|---|---|
| | Statistic | Statistic | Std error | Statistic |
| C201. Lack of inter-sectoral collaboration between Departments | 147 | 2.81 | .077 | .939 |
| C202. Lack of consultation between school managers and primary health facility managers | 147 | 2.66 | .091 | 1.107 |
| C203. Lack the commitment to prioritise the implementation | 147 | 2.61 | .097 | 1.173 |
| C204. Ineffective communication between Department of Health and school role players | 147 | 3.12 | .101 | 1.227 |
| C205. Unbalanced distribution of school health education and nursing staff across schools | 147 | 3.24 | .100 | 1.214 |

Table 4.5 presents descriptive statistics of all items assessing the construct collaboration challenges. The Likert scale options were 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree. Arithmetic means nearly equal to 3 for items assessing collaboration challenges show that respondents generally remained neutral on lack of inter-sectorial collaboration between Departments (mean=2.81), lack of consultation between school managers and primary health facility managers (mean=2.66), lack the commitment to prioritize the implementation (mean=2.61), ineffective communication between Department of Health and school role players (mean=3.12) and unbalanced distribution of school health education and nursing staff across schools (mean=3.24). Rasesemola et al (2019:6) found lack of collaboration and consultations, limited commitment and low staffing levels were challenges to implementation of the ISH programme.

**Table 4.6 System enablement**

| Item | N | Mean | | Std dev |
|---|---|---|---|---|
| | Statistic | Statistic | Std error | Statistic |
| C301. Weak institutional arrangements relating to monitoring and evaluation systems | 147 | 3.36 | .094 | 1.134 |
| C302. Bad attitude and inadequate willingness by some role players involved in policy implementation | 147 | 3.73 | .098 | 1.185 |
| C303. Limited space for providing health services and no proper offices for school health nurses | 147 | 3.81 | .090 | 1.087 |
| C304. The support received from management is insufficient to efficiently execute roles and tasks | 147 | 3.97 | .097 | 1.170 |
| C305. Inadequate training of school managers or educators with regard to policy implementation | 147 | 3.53 | .096 | 1.160 |
| C306. Lack of national policy guidelines for the implementation of Integrated School Health Policy | 147 | 3.10 | .087 | 1.052 |

Table 4.6 presents descriptive statistics for the items measuring the construct system enablement. The Likert scale options were 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree. Arithmetic means equal to nearly 4 for four out of six items assessing system enablement show that the participants generally agreed that there is bad attitude and inadequate willingness by some role players involved in policy implementation (mean=3.73), limited space for providing health services and no proper offices for school health nurses (mean=3.81), the support received from management is insufficient to efficiently execute roles and tasks (mean=3.97), and there is inadequate training of school managers or educators with regards to policy implementation (mean=3.53). Dibakwane and Peu (2018:6) found poor school and health care facility infrastructure were barriers to the provision and delivery of school health care services. In this study, the respondents were neutral on whether there are weak institutional arrangements on monitoring and evaluation (mean=3.36) and lack of national policy guidelines for implementation of the Integrated School Health Policy.

## 4.6 SCALE RELIABILITY

Cronbach's alpha was used to assess scale reliability of the questionnaire's items. Scale reliability test was conducted to statistically determine the degree to which the same or closely similar responses could be obtained from respondents, should the same questions be asked numerous times under similar settings to the same respondents.

Suhr and Shay (2009:1) describe reliability as the degree of accuracy and precision of a measurement instrument. Table 4.7 presents the overall scale reliability coefficient results of all items describing the five constructs assessing the participant teachers' perceptions and perceived challenges in implementation of the ISHP. The five constructs were: positive perceptions, negative perceptions, resource and capacity, collaboration, and system enablement.

**Table 4.7 Scale reliability statistics**

| Construct | Item | No of items | Cronbach's alpha values |
|---|---|---|---|
| Positive perceptions | B101. There is less absenteeism at school since the introduction of the school health services<br>B102. The level of understanding of the origins and content of the policy architecture is reasonable<br>B103. There is meaningful promotion or advocacy around implementation of the health policy<br>B104. Services rendered by nurses and teachers are appreciated<br>B105. Provision of on-site treatment through primary health care mobile trucks is quite beneficial<br>B106. There is involvement of the community in the programme | 6 | 0.795 |
| Negative perceptions | B201. The school health service disturbs school lessons<br>B202. Poor road networks in rural communities, make it difficult for outreach programmes<br>B203. Negative attitude by managers due to poor understanding of school health services<br>B204. Spot checks and supervisory visits are not conducted<br>B205. School health services are an additional responsibility leading to increased pressure to teachers<br>B206. Some school nurses are refused entry into schools | 6 | 0.437 |
| Resources and capacity | C101. Inadequate financial, human and material resources<br>C102. Lack of clarity of roles for school managers and primary health care facility managers<br>C103. Increased numbers of learners leading to constraints in the capacity of staff to accomplish tasks<br>C104. Lack of basic health knowledge among schoolteachers<br>C105. Inexperienced and unqualified providers of the school health programme<br>C106. High workloads which limit the optimal implementation of the programme's activities | 6 | 0.480 |
| Collaboration | C201. Lack of inter-sectorial collaboration between Departments<br>C202. Lack of consultation between school managers and primary health facility managers<br>C203. Lack the commitment to prioritize the implementation<br>C204. Ineffective communication between Department of Health and school role players<br>C205. Unbalanced distribution of school health education and nursing staff across schools | 5 | 0.509 |

| Construct | Item | No of items | Cronbach's alpha values |
|---|---|---|---|
| System enablement | C301. Weak institutional arrangements relating to monitoring and evaluation systems<br>C302. Bad attitude and inadequate willingness by some role players the in policy implementation<br>C303. Limited space for providing health services and no proper offices for school health nurses<br>C304. The support received from management is insufficient to efficiently execute roles and tasks<br>C305. Inadequate training of school managers or educators with regards to policy implementation<br>C306. Lack of national policy guidelines for the implementation of Integrated School Health Policy | 6 | 0.443 |
| **Total** | | **29** | **0.836** |

Table 4.7 results showing the Cronbach's alpha coefficient value (α=0.836) for 29 items in the questionnaire was above the minimum acceptable (α=0.700) threshold (Cronbach 1951:311). The result therefore shows that all the items measured the broad unidimensional construct sought to be assessed in the study.

## 4.7 SAMPLING ADEQUACY

The construct validity of the questionnaire's items was tested by means of factor analysis, using the Keiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (MSA) criterion. Table 4.8 presents the findings.

**Table 4.8 Construct validity statistics**

| Construct | Item | No of Items | KMO-MSA value |
|---|---|---|---|
| Positive perceptions | B101. There is less absenteeism at school since the introduction of the school health services<br>B102. The level of understanding of the origins and content of the policy architecture is reasonable<br>B103. There is meaningful promotion or advocacy around implementation of the health policy<br>B104. Services rendered by nurses and teachers are appreciated<br>B105. Provision of on-site treatment through primary health care mobile trucks is quite beneficial<br>B106. There is involvement of the community in the programme | 6 | 0.809 |
| Negative perceptions | B201. The school health service disturbs school lessons<br>B202. Poor road networks in rural communities, make it difficult for outreach programmes<br>B203. Negative attitude by managers due to poor understanding of school health services<br>B204. Spot checks and supervisory visits are not conducted<br>B205. School health services are an additional responsibility leading to increased pressure to teachers<br>B206. Some school nurses are refused entry into schools | 6 | 0.575 |
| Resources and capacity | C101. Inadequate financial, human and material resources<br>C102. Lack of clarity of roles for school managers and primary health care facility managers<br>C103. Increased numbers of learners leading to constraints in the capacity of staff to accomplish tasks<br>C104. Lack of basic health knowledge among schoolteachers<br>C105. Inexperienced and unqualified providers of the school health programme<br>C106. High workloads which limit the optimal implementation of the programme's activities | 6 | 0.536 |
| Collaboration | C201. Lack of inter-sectoral collaboration between Departments<br>C202. Lack of consultation between school managers and primary health facility managers<br>C203. Lack the commitment to prioritize the implementation<br>C204. Ineffective communication between Department of Health and school role players<br>C205. Unbalanced distribution of school health education and nursing staff across schools | 5 | 0.577 |

| Construct | Item | No of Items | KMO-MSA value |
|---|---|---|---|
| System enablement | C301. Weak institutional arrangements relating to monitoring and evaluation systems<br>C302. Bad attitude and inadequate willingness by some role players the in policy implementation<br>C303. Limited space for providing health services and no proper offices for school health nurses<br>C304. The support received from management is insufficient to efficiently execute roles and tasks<br>C305. Inadequate training of school managers or educators with regards to policy implementation<br>C306. Lack of national policy guidelines for the implementation of Integrated School Health Policy | 6 | 0.550 |
| **Total** | | **29** | **0.795** |

Table 4.8 indicates that the KMO-MSA value equal to 0.795 above the minimum acceptable 0.600 score ratified sampling adequacy and validity of the full set of constructs (Chan & Idris 2017). Table 4.9 presents the results Bartlett's test of sphericity of the questionnaire's overall dimensions.

**Table 4.9 Determinants and Bartlett's test of sphericity statistics**

| Construct | No of items | Measure | | |
|---|---|---|---|---|
| | | Determinant | Bartlett's test of sphericity | |
| | | | Chi-square ($\chi^2$) | Significance |
| Positive perceptions | 6 | 0.181 | 244.552 | 0.000 |
| Negative perceptions | 6 | 0.558 | 83.608 | 0.000 |
| Resources and capacity | 6 | 0.529 | 91.069 | 0.000 |
| Collaboration | 5 | 0.637 | 64.806 | 0.000 |
| System enablement | 6 | 0.660 | 59.483 | 0.000 |

The determinants of the correlation matrices for each of the dimensions were all greater than 0.00001, showing that multicollinearity was not a problem for the respective data hence there was no need to eliminate any of the items from the data (Field 2013:686). To provide for a complex measure for evaluating the strength of relationships and factorability of items, the Barlett's test of sphericity was computed. The null hypothesis of the Barlett's test at 5 percent significance level states that the observed correlation matrix is an identity matrix, meaning that variables are unrelated and not suitable for structure detection (Field 2013:674). Barlett's test results in Table 4.9 were statistically significant ($p<0.05$) at 5 percent level and the null hypothesis was rejected, showing that the variables were related and suitable or useful for factor analysis.

## 4.8 EXPLORATORY FACTOR ANALYSIS

Following testing and confirmation of sampling adequacy and the suitability of data for factor analysis, exploratory factor analysis was conducted to detect factor structures of constructs (Watkins 2018:221). This assessed the participant teachers' perspectives on the ISPH at the selected schools in Msunduzi municipality, KwaZulu-Natal.

### 4.8.1 Total variances explained

The latent root criterion was used to assess how much the variance was distributed across extracted factors prior to extraction of factors using the alpha factoring method and Varimax rotation method. The results are presented in Tables 4.10 to 4.14.

**Table 4.10 Positive perceptions − total variances explained**

| Total variance explained | | | | | | |
|---|---|---|---|---|---|---|
| Factor | Initial Eigenvalues | | | Extraction sums of squared loadings | | |
| | Total | % of variance | Cumulative % | Total | % of variance | Cumulative % |
| 1 | 2.993 | 49.879 | 49.879 | 2.526 | 42.098 | 42.098 |
| 2 | .948 | 15.803 | 65.682 | | | |
| 3 | .631 | 10.521 | 76.203 | | | |
| 4 | .574 | 9.572 | 85.775 | | | |
| 5 | .504 | 8.402 | 94.177 | | | |
| 6 | .349 | 5.823 | 100.000 | | | |
| **Extraction method: Alpha factoring** | | | | | | |

Table 4.10 presents the results of the total variances explained by the indicators assessing the construct "positive perceptions". The results from the final iteration indicated the presence of one initial eigenvalue greater than 1, and one factor was extracted from the chosen items in the dataset. Based on extraction sums of squared loadings, about 42.1% of total variance in the complete dataset was accounted for by a single factor. Given that only 1 factor was extracted in the solution of the final iteration, there was no basis to examine whether there were items that demonstrated a complex structure to ensure that indicators with high loadings or correlations on more than 1 factor get eliminated.

**Table 4.11 Negative perceptions - total variances explained**

| Total variance explained | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Factor | Initial Eigenvalues | | | Extraction sums of squared loadings | | | Rotation sums of squared loadings | | |
| | Total | % of variance | Cumulative % | Total | % of variance | Cumulative % | Total | % of variance | Cumulative % |
| 1 | 1.775 | 29.579 | 29.579 | .731 | 12.187 | 12.187 | 1.219 | 20.320 | 20.320 |
| 2 | 1.348 | 22.466 | 52.045 | 1.025 | 17.090 | 29.277 | .537 | 8.957 | 29.277 |
| 3 | .902 | 15.031 | 67.076 | | | | | | |
| 4 | .833 | 13.886 | 80.962 | | | | | | |
| 5 | .697 | 11.625 | 92.587 | | | | | | |
| 6 | .445 | 7.413 | 100.000 | | | | | | |
| Extraction method: Alpha factoring | | | | | | | | | |

Table 4.11 presents the results of the total variances explained by the indicators assessing the construct “negative perceptions”. The results from the final iteration showed the presence of two initial eigenvalues greater than 1, and two factors were extracted from the selected items in the dataset. Based on the rotation sums of squared loadings, about 29.3% of total variance in the complete dataset was accounted for by two factors. Of the total 29.3% variance, factor 1 accounted for 20.3%, and factor 2 accounted for the remaining 8.9% variance in the retained dataset. Given that more than 1 factor was extracted in the solution, the pattern of factor loadings was examined to detect whether there were retained items that exhibited complex structure in line with the statistical condition that variables with high loadings or correlations on more than 1 factor must be removed from the analysis. Correspondingly, indicators that loaded significantly on only one factor via the Varimax rotation with Keiser Normalization were retained.

**Table 4.12 Resources and capacity - total variances explained**

| Total variance explained | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Factor | Initial Eigenvalues | | | Extraction sums of squared loadings | | | Rotation sums of squared loadings | | |
| | Total | % of variance | Cumulative % | Total | % of variance | Cumulative % | Total | % of variance | Cumulative % |
| 1 | 1.766 | 29.432 | 29.432 | .873 | 14.558 | 14.558 | 1.205 | 20.084 | 20.084 |
| 2 | 1.271 | 21.179 | 50.611 | .936 | 15.602 | 30.160 | .605 | 10.076 | 30.160 |
| 3 | .970 | 16.172 | 66.783 | | | | | | |
| 4 | .878 | 14.638 | 81.421 | | | | | | |
| 5 | .741 | 12.356 | 93.777 | | | | | | |
| 6 | .373 | 6.223 | 100.000 | | | | | | |
| Extraction method: Alpha factoring | | | | | | | | | |

Table 4.12 shows the results of the total variances explained by the indicators assessing the construct “resources and capacity”. Two initial eigenvalues greater than 1 were extracted hence two factors were produced from items in the dataset. Based on the rotation sums of squared loadings; approximately 30.2% of total variance in the entire dataset was accounted for by two factors. Of the total 30.2% variance, factor 1 accounted for 20.1%, and factor 2 accounted for the remaining 10.1% variance in the retained dataset. Since more than 1 factor was extracted in the solution, the pattern of factor loadings was examined to detect whether there were retained items that revealed a complex structure in line with the requirement that items with high loadings on more than 1 factor must be removed from the analysis. Indicators that loaded significantly on only one factor via the Varimax rotation with Keiser Normalization were retained.

**Table 4.13 Collaboration − total variances explained**

| Total variance explained | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Factor | Initial Eigenvalues | | | Extraction sums of squared loadings | | | Rotation sums of squared loadings | | |
| | Total | % of Variance | Cumulative % | Total | % of variance | Cumulative % | Total | % of variance | Cumulative % |
| 1 | 1.781 | 35.623 | 35.623 | 1.115 | 22.309 | 22.309 | 1.043 | 20.850 | 20.850 |
| 2 | 1.138 | 22.758 | 58.381 | .424 | 8.486 | 30.795 | .497 | 9.945 | 30.795 |
| 3 | .834 | 16.675 | 75.055 | | | | | | |
| 4 | .734 | 14.678 | 89.733 | | | | | | |
| 5 | .513 | 10.267 | 100.000 | | | | | | |
| **Extraction method: Alpha factoring** | | | | | | | | | |

Table 4.13 shows the results of the total variances explained by the indicators assessing the construct “collaboration”. Two initial eigenvalues greater than 1 were extracted hence two factors were produced from items in the dataset. Based on the rotation sums of squared loadings, about 30.8% of total variance in the entire dataset was accounted for by two factors. Of the total 30.8% variance, factor 1 accounted for 20.1%, and factor 2 accounted for the remaining 10% variance in the retained dataset. Since more than 1 factor was extracted in the solution, the pattern of factor loadings was examined to detect whether there were retained items that demonstrated a complex structure in line with the requirement that items with high loadings on more than 1 factor must be removed from the analysis. Indicators that loaded significantly on only one factor via the Varimax rotation with Keiser Normalization were retained.

**Table 4.14 System enablement − total variances explained**

| Total variance explained | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Factor | Initial Eigenvalues | | | Extraction sums of squared loadings | | | Rotation sums of squared loadings | | |
| | Total | % of variance | Cumulative % | Total | % of variance | Cumulative % | Total | % of variance | Cumulative % |
| 1 | 1.659 | 27.648 | 27.648 | 1.001 | 16.675 | 16.675 | .973 | 16.218 | 16.218 |
| 2 | 1.239 | 20.654 | 48.302 | .780 | 12.997 | 29.672 | .807 | 13.454 | 29.672 |
| 3 | .961 | 16.011 | 64.313 | | | | | | |
| 4 | .903 | 15.044 | 79.357 | | | | | | |
| 5 | .734 | 12.241 | 91.598 | | | | | | |
| 6 | .504 | 8.402 | 100.000 | | | | | | |
| **Extraction method: Alpha factoring** | | | | | | | | | |

Table 4.14 presents the results of the total variances explained by the indicators assessing the construct “system enablement”. Two initial eigenvalues greater than 1 were extracted, hence two factors were produced from items in the dataset. Based on the rotation sums of squared loadings, about 29.7% of total variance in the entire dataset was accounted for by two factors. From the complete 29.7% variance, factor 1 accounted for 16.2%, and factor 2 accounted for the remaining 13.4% variance in the retained dataset. Since more than 1 factor was extracted in the solution, the pattern of factor loadings was examined to detect whether there were retained items that revealed a complex structure in line with the requirement that items with high loadings on more than 1 factor must be removed from the analysis. Indicators that loaded significantly on only one factor via the Varimax rotation with Keiser Normalization were retained.

### 4.8.2 Factor structures

This section discusses the results on retained items with high loadings (factor score ≥ 0.5) (Watkins 2018:225). Tables 4.15 to 4.19 present the results.

**Table 4.15 Positive perceptions – factor loadings**

| Factor matrix[a] | |
|---|---|
| **Item** | **Factor 1** |
| B103. There is meaningful promotion or advocacy around the implementation of the health policy | .879 |
| B102. The level of understanding of the origins and content of the policy architecture is reasonable | .682 |
| B104. Services rendered by nurses and teachers are appreciated | .677 |
| B106. There is involvement of the community in the programme | .653 |
| B101. There is less absenteeism at school since the introduction of the school health services | .472 |
| B105. Provision of on-site treatment through primary health care mobile trucks is quite beneficial | .424 |
| Extraction method: Alpha factoring | |
| a. 1 factors extracted. 9 iterations required. | |

Table 4.15 results show that no item demonstrated complex structure hence there was no rationale to eliminate any of them from the dataset. The size of the loading, which ranged between the extreme values 0 and 1, showed the magnitude of meaningfulness of the item in assessing positive perceptions. The top three items with highest loadings were that there is meaningful promotion or advocacy around the implementation of the health policy (loading=0.879), level of understanding of the origins and content of the policy architecture is reasonable (loading=0.682) and services rendered by nurses and teachers are appreciated (loading=0.677). In addition, results indicated that there had been less absenteeism at school since the introduction of the school health services (loading=0.472), and provision of on-site treatment through primary health care mobile trucks was beneficial (loading=0.424).

These results concurred with the UNFPA (2015:17) finding that participation by the community ensured successful and effective implementation of the programme and provision of health services to the learners. Keothaile (2016:56) found that the ISH programme enhanced understanding of policy architecture and stakeholder participation, and improved learner attendance at school.

**Table 4.16 Negative perceptions – factor loadings**

| Rotated factor matrix[a] | | |
|---|---|---|
| **Item** | **Factor** | |
| | **1** | **2** |
| B204. Spot checks and supervisory visits are not conducted | .760 | -.208 |
| B205. School health services are an additional responsibility leading to increased pressure for teachers | .635 | .043 |
| B201. The school health service disturbs school lessons | .470 | .116 |
| B202. Poor road networks in rural communities make it difficult for outreach programmes | .108 | .424 |
| B203. Negative attitude by managers due to poor understanding of school health services | .008 | .415 |
| B206. Some school nurses are refused entry into schools | -.069 | .356 |
| Extraction method: Alpha factoring<br>Rotation method: Varimax with Kaiser Normalization | | |
| **a. Rotation converged in 3 iterations** | | |

Table 416 shows that no item demonstrated complex structure hence there was no rationale to remove any of them from the dataset. The size of the loading, which ranged between the extreme values 0 and 1, showed the magnitude of meaningfulness of an item in assessing negative perceptions. Items in factor 1 had highest loadings, namely spot checks and supervisory visits are not conducted (loading=0.760), school health services are an added responsibility leading to increased pressure for teachers (loading=0.635), and school health services disturb school lessons (loading=0.470).

Indicators that had lowest loadings loaded in factor 2, namely poor road networks in rural communities make it hard for outreach programme (loading=0.424), negative attitude by managers due to poor understanding of school health service (loading=0.415) and some school nurses are refused entry into schools (loading=0.356). The results concurred with UNFPA's (2015:20) and Dibakwane and Peu's (2018:2) findings that poor road networks, lack of consistent supervisory visits, negative attitude by management, lack of support from management, and staff shortages that led to more responsibilities for educators were some of the challenges of the ISHP.

**Table 4.17 Resources and capacity – factor loadings**

| Rotated factor matrix[a] | | |
|---|---|---|
| **Item** | **Factor** | |
| | **1** | **2** |
| C104. Lack of basic health knowledge among schoolteachers | .812 | .017 |
| C101. Inadequate financial, human and material resources | .685 | .057 |
| C102. Lack of clarity of roles for school managers and primary health care facility managers | .006 | .613 |
| C106. High workloads which limit the optimal implementation of the programme's activities | .258 | .340 |
| Extraction method: Alpha factoring. Rotation method: Varimax with Kaiser Normalization. | | |
| a. Rotation converged in 3 iterations | | |

Table 4.17 shows that no item demonstrated complex structure hence there was no rationale to remove any of them from the dataset. The size of the loading, which ranged between extreme values 0 and 1, suggested the degree of meaningfulness of an item in assessing resources and capacity. Items in factor 1 had the highest loadings, and these items indicated the presence of lack of basic health knowledge among schoolteachers (loading=0.812), and inadequate financial, human and material resources (loading=0.685). Factor 2 contained items that had the lowest loadings, and the items indicated the presence of lack of clarity of roles for school managers and primary health care facility managers (loading=0.613) and high workloads which limited optimal implementation of the programme's activities (loading=0.340). Dibakwane and Peu (2018:4) reported resource challenges of lack of space, absence of proper offices for school health nurses, insufficient human and material resources, high staff workloads and poor infrastructure.

**Table 4.18 Collaboration – factor loadings**

| Rotated factor matrix[a] | | |
|---|---|---|
| **Item** | **Factor** | |
| | **1** | **2** |
| C201. Lack of inter-sectoral collaboration between Departments | .700 | .049 |
| C202. Lack of consultation between school managers and primary health facility managers | .558 | .034 |
| C203. Lack the commitment to prioritize the implementation | .454 | .225 |
| C205. Unbalanced distribution of school health education and nursing staff across schools | .186 | .526 |
| C204. Ineffective communication between Department of Health and school role players | -.004 | .408 |
| Extraction method: Alpha factoring. Rotation method: Varimax with Kaiser Normalization. | | |
| a. Rotation converged in 3 iterations | | |

Table 4.18 indicates that no item revealed complex structure hence there was no rationale to remove any of them from the dataset. The size of the loading, which ranged between extreme values 0 and 1, suggested the degree of meaningfulness of an item in assessing collaboration. Items in factor 1 had highest loadings, which showed the presence of lack of inter-sectorial collaboration between departments (loading=0.70), lack of consultation between school managers and primary health facility managers (loading=0.558), and lack of commitment to prioritize implementation (loading=0.454). Indicators which loaded in factor 2 suggested unbalanced distribution of school health education and nursing staff across schools (loading=0.526) and ineffective communication between the Department of Health and school role players (loading=0.408). Dibakwane and Peu (2018:7) found lack of collaboration across departments regarding consultations, commitment to implementation of the ISHP and poor communication as barriers to the success of the programme.

**Table 4.19 System enablement – factor loadings**

| Rotated factor matrix[a] | | |
|---|---|---|
| **Item** | **Factor** | |
| | **1** | **2** |
| C302. Bad attitude and inadequate willingness by some role players the in policy implementation | .726 | .067 |
| C304. The support received from management is insufficient to efficiently execute roles and tasks | .594 | -.099 |
| C306. Lack of national policy guidelines for the implementation of Integrated School Health Policy | .237 | .175 |
| C305. Inadequate training of school managers or educators with regards to policy implementation | .045 | .818 |
| C301. Weak institutional arrangements relating to monitoring and evaluation systems | .188 | .247 |
| C303. Limited space for providing health services and no proper offices for school health nurses | -.019 | .180 |
| Extraction method: Alpha factoring. Rotation method: Varimax with Kaiser Normalization. | | |
| a. Rotation converged in 3 iterations | | |

Table 4.19 indicates that no item exhibited complex structure hence there was no basis to eliminate any item from the dataset. The sizes of loading, ranging between extreme values 0 and 1, suggest the degree of meaningfulness of an item in assessing system enablement. Items in factor 1 showed the presence of bad attitude and inadequate willingness by some role players the in policy implementation (loading=0.726) and the support received from management was insufficient to efficiently execute roles and

tasks (loading=0.594). Factor 2 contained only one item that had the highest loading, and the item showed the presence of inadequate training of school managers or educators with regard to policy implementation (loading=0.818). This concurred with Khoza's (2017:66) findings that during implementation of the ISHP, there was bad attitude and poor stakeholder cooperation. Rasesemola et al (2018:5) found that there was insufficient training and integration of stakeholder collaboration in the ISHP implementation.

## 4.9 CONFIRMATORY FACTOR ANALYSIS

This section discusses the results of the confirmatory factor analysis (CFA) of the observed items and associated latent factors on which data was collected to assess the participant teachers' perspectives on the ISHP in the selected schools in Msunduzi Municipality, KwaZulu-Natal.

The statistician did not use the Chi-square statistic to assess model goodness of fit in this study. Hooper, Coughlan and Mullen (2008:53) state that the chi-square statistic is an unreliable index because it is highly influenced by several factors, including omitted variables, sample size, deviations from normality and failure in the distribution of data to fulfil the normality condition.

Absolute and relative fit indices are deemed reliable to evaluate goodness of fit of models. In this study, RMSEA, pclose and CD values, and CFI and TLI indices were used to assess and conclude model goodness of fit (Hooper et al 2008:55). Tables 4.20 to 4.29 present the results for both standardised coefficients and model goodness-of-fit tests for all the constructs, namely positive perceptions, negative perceptions, resources and capacity, collaboration, and system enablement.

**Table 4.20 Positive perceptions - CFA standardized estimates**

| **Estimation method** | | **=ml** | **z-stat** | **P >\|z\|** | **Obs** | **=147** |
|---|---|---|---|---|---|---|
| **Log likelihood** | | **= - 1345.76** | | | | |
| | **Coeff** | **OIM Std err** | | | **[95% Conf Int]** | |
| **Measurement** | | | | | | |
| B101 ← | | | | | | |
| Positive perceptions | 0.570 | 0.064 | 8.85 | 0.000 | 0.444 | 0.697 |
| B102 ← | | | | | | |
| Positive perceptions | 0.630 | 0.059 | 10.56 | 0.000 | 0.513 | 0.747 |
| B103 ← | | | | | | |
| Positive perceptions | 0.845 | 0.041 | 20.22 | 0.000 | 0.762 | 0.926 |
| B104 ← | | | | | | |
| Positive perceptions | 0.647 | 0.058 | 11.14 | 0.000 | 0.533 | 0.760 |
| B105 ← | | | | | | |
| Positive perceptions | 0.473 | 0.072 | 6.51 | 0.000 | 0.330 | 0.615 |
| B106 ← | | | | | | |
| Positive perceptions | 0.609 | 0.061 | 9.87 | 0.000 | 0.487 | 0.729 |
| var (e.B101) | 0.674 | 0.073 | | | 0.544 | 0.835 |
| var (e.B102) | 0.601 | 0.075 | | | 0.471 | 0.769 |
| var (e.B103) | 0.286 | 0.070 | | | 0.177 | 0.464 |
| var (e.B104) | 0.581 | 0.075 | | | 0.451 | 0.748 |
| var (e.B105) | 0.775 | 0.068 | | | 0.652 | 0.923 |
| var (e.B106) | 0.629 | 0.075 | | | 0.498 | 0.795 |
| LR test of model vs. saturated: chi2 (9)=18.71, Prob>chi2=0.0278 | | | | | | |

**Construct:** Positive perceptions
**Observed items**:
B101. There is less absenteeism at school since the introduction of the school health services
B102. The level of understanding of the origins and content of the policy architecture is reasonable
B103. There is meaningful promotion or advocacy around implementation of the health policy
B104. Services rendered by nurses and teachers are appreciated
B105. Provision of on-site treatment through primary health care mobile trucks is quite beneficial
B106. There is involvement of the community in the programme

Table 4.20 indicates that all items had significant positive coefficients and therefore measured what they were intended to measure with regard to positive perceptions. Indicators that had highest association with the construct “positive perceptions” at 5 percent significance level included “B103. There is meaningful promotion or advocacy around implementation of the health policy” (coeff=0.845; z-stat=20.22; p<0.01), “B104. Services rendered by nurses and teachers are appreciated” (coeff=0.647; z-stat=11.14; p<0.01) and “B102. The level of understanding of origins and content of the policy architecture is reasonable” (coeff=0.630; z-stat=10.56; p<0.01).

The UNFPA (2015:28) reported that the ISHP generally played a significant role in at the Nzululwazi High School and surrounding community in KwaZulu-Natal ensuring that learners received broad health care services which improved their health status. Dibakwane and Peu (2018:6) found that the implementation of the ISHP resulted in low absenteeism reported and learners completed their education without illness-related absences. Table 4.21 presents the results on goodness-of-fit model.

**Table 4.21 Positive perceptions − CFA model goodness-of-fit tests**

| Fit statistic | Value | Description |
|---|---|---|
| **Likelihood ratio** | | |
| chi2_ms (9) | 18.706 | model vs saturated |
| p>chi2 | 0.028 | |
| chi2_bs (15) | 251.100 | baseline vs saturated |
| p>chi2 | 0.000 | |
| **Population error** | | |
| RMSEA | 0.086 | Root mean squared error of approximation |
| 90% CI, lower bound | 0.027 | |
| upper bound | 0.141 | |
| pclose | 0.128 | Probability RMSEA <=0.05 |
| **Information criteria** | | |
| AIC | 2715.521 | Akaike's information criterion |
| BIC | 2751.406 | Bayesian information criterion |
| **Baseline comparison** | | |
| CFI | 0.959 | Comparative fit index |
| TLI | 0.931 | Tucker-Lewis index |
| **Size of residuals** | | |
| SRMR | 0.051 | Standardised root mean squared residual |
| CD | 0.839 | Coefficient of determination |

Table 4.21 results of the Comparative fit index (CFI)=0.959 and Tucker-Lewis index (TLI)=0.93 confirm a good fit between construct "positive perceptions" and observed data (Steiger 2007). The computed fit statistics indicated that the model essentially fitted the data well. The coefficient of determination estimate (CD=0.8.39) closer to 1 confirmed a good fit of the model to the sample data used for model statistical estimation.

**Table 4.22 Negative perceptions − CFA standardized estimates**

| **Estimation method** | | **=ml** | **z-stat** | **P>\|z\|** | **No. of obs** | **=147** |
|---|---|---|---|---|---|---|
| **Log likelihood** | | **= - 1297.22** | | | | |
| | **Coeff** | **OIM Std err** | | | **[95% Conf Int]** | |
| **Measurement** | | | | | | |
| B201 ← | | | | | | |
| Negative perceptions | 0.409 | 0.088 | 4.62 | 0.000 | 0.235 | 0.583 |
| B202 ← | | | | | | |
| Negative perceptions | 0.032 | 0.099 | 0.33 | 0.745 | -0.162 | 0.226 |
| B203 ← | | | | | | |
| Negative perceptions | -0.028 | 0.104 | -0.27 | 0.786 | -0.232 | 0.175 |
| B204 ← | | | | | | |
| Negative perceptions | 0.746 | 0.115 | 6.48 | 0.000 | 0.521 | 0.972 |
| B205 ← | | | | | | |
| Negative perceptions | 0.705 | 0.110 | 6.40 | 0.000 | 0.489 | 0.921 |
| B206 ← | | | | | | |
| Negative perceptions | -0.079 | 0.107 | -0.74 | 0.461 | -0.290 | 0.131 |
| var (e.B201) | 0.832 | 0.072 | | | 0.701 | 0.987 |
| var (e.202) | 0.998 | 0.006 | | | 0.986 | 1.011 |
| var (e.203) | 0.999 | 0.005 | | | 0.987 | 1.010 |
| var (e.204) | 0.442 | 0.172 | | | 0.206 | 0.947 |
| var (e.205) | 0.502 | 0.155 | | | 0.273 | 0.947 |
| var (e.206) | 0.993 | 0.017 | | | 0.960 | 0.921 |
| var (Negative perceptions) | 1 | . | . | . | . | . |
| cov(e.B202, e.B203) | 0.171 | 0.080 | 2.15 | 0.032 | 0.014 | 0.328 |
| LR test of model vs saturated: chi2 (8)=14.63, Prob>chi2=0.066 | | | | | | |

**Construct:** Negative perceptions
**Observed items**:
B201. The school health services disturb school lessons
B202. Poor road networks in rural communities make it difficult for outreach programmes
B203. Negative attitude by managers due to poor understanding of school health services
B204. Spot checks and supervisory visits are not conducted
B205. School health services are an additional responsibility leading to increased pressure for teachers
B206. Some school nurses are refused entry into schools

Table 4.22 shows that only three items had significant positive coefficients and measured what they were intended to measure regarding negative perceptions. The indicators that had a significant association with the construct “negative perceptions” at 5 percent significance level were “B204. Spot checks and supervisory visits are not conducted” (coeff=0.746; z-stat=6.48; p<0.01), “B205. School health services are an additional responsibility leading to increased pressure to teachers” (coeff=0.705; z-stat=6.48; p<0.01), and “B201. The school health services disturb school lessons”

(coeff=0.409; z-stat=4.62; p<0.01). In a study in selected secondary schools in uMgungundlovu district, KwaZulu-Natal, Khoza (2017:62) found that poor road networks, lack of consistent supervisory visits and spot checks, lack of management support, and staff shortages which caused rising work pressure and responsibilities were among the primary challenges of the ISHP. Table4 4.23 presents the CFA model goodness-of-fit results for the participants' negative perceptions.

**Table 4.23 Negative perceptions – CFA model goodness-of-fit tests**

| Fit statistic | Value | Description |
|---|---|---|
| **Likelihood ratio** | | |
| chi2_ms (8) | 14.631 | model vs saturated |
| p>chi2 | 0.0067 | |
| chi2_bs (15) | 85.847 | baseline vs saturated |
| p> hi2 | 0.000 | |
| **Population error** | | |
| RMSEA | 0.075 | Root mean squared error of approximation |
| 90% CI, lower bound | 0.007 | |
| upper bound | 0.135 | |
| pclose | 0.216 | Probability RMSEA <=0.05 |
| **Information criteria** | | |
| AIC | 2620.440 | Akaike's information criterion |
| BIC | 2659.316 | Bayesian information criterion |
| **Baseline comparison** | | |
| CFI | 0.906 | Comparative fit index |
| TLI | 0.825 | Tucker-Lewis index |
| **Size of residuals** | | |
| SRMR | 0.064 | Standardised root mean squared residual |
| CD | 0.711 | Coefficient of determination |

Table 4.23 shows that the Comparative fit index (CFI)=0.906 and Tucker-Lewis index (TLI)=0.825 confirm a good fit between the construct "negative perceptions" and observed data. These statistics together with the coefficient of determination (CD=0.711) closer to 1 confirm a good fit of the model to the sample data used in the analysis.

**Table 4.24 Resources and capacity challenges – CFA standardized estimates**

| **Estimation method** | | **=ml** | **z-stat** | **P >\|z\|** | **Obs** | **=147** |
|---|---|---|---|---|---|---|
| **Log likelihood** | | **= - 1228** | | | | |
| | **Coeff** | **Std err** | | | **[95% Conf. Int]** | |
| **Measurement** | | | | | | |
| C101 ← | | | | | | |
| Resources capacity challenges | 0.857 | 0.176 | 4.86 | 0.000 | 0.511 | 1.203 |
| C102 ← | | | | | | |
| Resources capacity challenges | 0.060 | 0.094 | 0.64 | 0.522 | -0.124 | 0.245 |
| C103 ← | | | | | | |
| Resources capacity challenges | 0.010 | 0.093 | 0.12 | 0.908 | -0.173 | 0.194 |
| C104 ← | | | | | | |
| Resources capacity challenges | 0.720 | 0.151 | 4.75 | 0.000 | 0.422 | 1.017 |
| C105 ← | | | | | | |
| Resources capacity challenges | 0.071 | 0.102 | 0.70 | 0.487 | -0.129 | 0.271 |
| C106 ← | | | | | | |
| Resources capacity challenges | 0.229 | 0.089 | 2.57 | 0.010 | 0.054 | 0.404 |
| var (e.C101) | 0.264 | 0.302 | | | 0.028 | 2.485 |
| var (e.C102) | 0.996 | 0.011 | | | 0.974 | 1.019 |
| var (e.C103) | 0.999 | 0.002 | | | 0.995 | 1.003 |
| var (e.C104) | 0.481 | 0.218 | | | 0.197 | 1.171 |
| var (e.C105) | 0.994 | 0.014 | | | 0.966 | 1.023 |
| var (e.C106) | 0.947 | 0.040 | | | 0.667 | 1.031 |
| var (Resources capacity challenges) | 1 | . | . | . | . | . |
| LR test of model vs saturated: chi2 (8)=9.74, Prob>chi2=0.283 | | | | | | |

**Construct:** Resources capacity challenges
**Observed items**:
C101. Inadequate financial, human and material resources
C102. Lack of clarity of roles for school managers and primary health care facility managers
C103. Increased numbers of learners leading to constraints in capacity of staff to accomplish tasks
C104. Lack of basic health knowledge among schoolteachers
C105. Inexperienced and unqualified providers of the school health programme
C106. High workloads which limit the optimal implementation of the programme's activities

Table 4.24 shows that only three items had significant positive coefficients and measured what they were intended to measure regarding resources and capacity. The indicators that had the highest association with the respective construct at 5 percent significance level included "C101. Inadequate financial, human and material resources" (coeff=0.857; z-stat=4.86; p<0.01), "C104. Lack of basic health knowledge among schoolteachers" (coeff=0.720; z-stat=7.45; p<0.01) and "C106. High workloads which limit the optimal implementation of the programmes' activities" (coeff=0.229; z-stat=2.57; p<0.01). Rasesemola et al (2018:6) reported that inadequate human and

material resources, high staff workloads and poor infrastructure negatively affected implementation of the ISHP. Table 4.25 presents the estimates of the goodness-of-fit of the model.

**Table 4.25 Resources and capacity challenges – CFA model goodness-of-fit tests**

| Fit statistic | Value | Description |
|---|---|---|
| **Likelihood ratio** | | |
| chi2_ms (8) | 9.745 | model vs saturated |
| p>chi2 | 0.283 | |
| chi2_bs (1) | 93.508 | baseline vs saturated |
| p>chi2 | 0.000 | |
| **Population error** | | |
| RMSEA | 0.039 | Root mean squared error of approximation |
| 90% CI, lower bound | 0.000 | |
| upper bound | 0.109 | |
| pclose | 0.531 | Probability RMSEA <=0.05 |
| **Information criteria** | | |
| AIC | 2483.254 | Akaike's information criterion |
| BIC | 2522.130 | Bayesian information criterion |
| **Baseline comparison** | | |
| CFI | 0.978 | Comparative fit index |
| TLI | 0.958 | Tucker-Lewis index |
| **Size of residuals** | | |
| SRMR | 0.055 | Standardised root mean squared residual |
| CD | 0.796 | Coefficient of determination |

Comparative fit index (CFI)=0.978 and Tucker-Lewis index (TLI)=0.958 (Table 25) confirmed a good fit between the construct "resources and capacity" and the analogous observed data (Steiger 2007). Moreover, the coefficient of determination (CD=0.796) closer to 1 confirmed a good fit of the model to the sample data used in the analysis.

**Table 4.26 Collaboration challenges – CFA standardized estimates**

| **Estimation method** | | **=ml** | **z-stat** | **P >\|z\|** | **Obs** | **=147** |
|---|---|---|---|---|---|---|
| **Log likelihood** | | **= - 1098** | | | | |
| | **Coeff** | **Std err** | | | **[95% Conf Int]** | |
| **Measurement** | | | | | | |
| C201 ← | | | | | | |
| Collaboration challenges | 0.805 | 0.138 | 5.81 | 0.000 | 0.533 | 1.076 |
| C202 ← | | | | | | |
| Collaboration challenges | 0.466 | 0.098 | 4.72 | 0.000 | 0.272 | 0.660 |
| C203 ← | | | | | | |
| Collaboration challenges | 0.446 | 0.102 | 4.36 | 0.000 | 0.245 | 0.647 |
| C204 ← | | | | | | |
| Collaboration challenges | 0.162 | 0.089 | 1.81 | 0.070 | -0.013 | 0.339 |
| C205 ← | | | | | | |
| Collaboration challenges | 0.476 | 0.144 | 3.30 | 0.001 | 0.193 | 0.760 |
| var (e.C201) | 0.351 | 0.223 | | | 0.101 | 1.219 |
| var (e.C202) | 0.781 | 0.092 | | | 0.620 | 0.985 |
| var (e.C203) | 0.800 | 0.091 | | | 0.640 | 1.001 |
| var (e.C204) | 0.973 | 0.029 | | | 0.917 | 1.032 |
| var (e.C205) | 0.772 | 0.137 | | | 0.544 | 1.095 |
| var (Collaboration challenges) | 1 | . | . | . | . | . |
| LR test of model vs. saturated: chi2 (4)=6.25, Prob>chi2=0.181 | | | | | | |

**Construct:** Resources capacity challenges
**Observed items**:
C201. Lack of inter-sectoral collaboration between Departments
C202. Lack of consultation between school managers and primary health facility managers
C203. Lack the commitment to prioritize the implementation
C204. Ineffective communication between Department of Health and school role players
C205. Unbalanced distribution of school health education and nursing staff across schools

Table 4.26 indicates that five out of six items had significant positive coefficients and hence measured what they intended to measure regarding collaboration challenges. Indicators that had significant associations with the construct “collaboration challenges” at 5 percent level were “C201. Lack of inter-sectoral collaboration between Departments (coeff=0.805; z-stat=5.81; p<0.01), “C202. Lack of consultation between school managers and primary health facility managers” (coeff=0.466; z-stat=4.72; p<0.01), “C203. Lack the commitment to prioritize the implementation” (coeff=0.446; z-stat=4.36; p<0.01), and “C205. Unbalanced distribution of school health education and nursing staff across schools” (coeff=0.476; z-stat=3.30; p<0.01). In his review, Kolbe (2019:446) reported a lack of sectorial collaboration and consultations, lack of commitment to the implementation of school health programmes, and poor staffing levels as key barriers to

school health programmes. Table 4.27 presents the results on model goodness-of-fit for collaboration challenges.

**Table 4.27 Collaboration challenges – CFA model goodness of fit tests**

| Fit statistic | Value | Description |
|---|---|---|
| Likelihood ratio | | |
| chi2_ms (4) | 6.254 | model vs saturated |
| p>chi2 | 0.181 | |
| chi2_bs (10) | 66.386 | baseline vs saturated |
| p>chi2 | 0.000 | |
| Population error | | |
| RMSEA | 0.062 | Root mean squared error of approximation |
| 90% CI, lower bound | 0.007 | |
| upper bound | 0.150 | |
| pclose | 0.338 | Probability RMSEA <=0.05 |
| Information criteria | | |
| AIC | 2218.139 | Akaike's information criterion |
| BIC | 2251.033 | Bayesian information criterion |
| Baseline comparison | | |
| CFI | 0.960 | Comparative fit index |
| TLI | 0.900 | Tucker-Lewis index |
| Size of residuals | | |
| SRMR | 0.049 | Standardized root mean squared residual |
| CD | 0.844 | Coefficient of determination |

Table 4.27 indicates that the Comparative fit index (CFI)=0.960 and Tucker-Lewis index (TLI)=0.900 confirm good fit between construct "negative perceptions" and observed data. These statistics together with the coefficient of determination (CD=0.844) closer to 1 confirmed a good fit of the model to the sample data used in the study.

**Table 4.28 System enablement - CFA standardized estimates**

| **Estimation method** | | **=ml** | **z-stat** | **P >\|z\|** | **Obs** | **=147** |
|---|---|---|---|---|---|---|
| **Log likelihood** | | **= - 1330.56** | | | | |
| | **Coeff** | **OIM Std err** | | | **[95% Conf Int]** | |
| **Measurement** | | | | | | |
| B301 ← | | | | | | |
| System enablement | 0.152 | 0.098 | 1.56 | 0.119 | -0.039 | 0.345 |
| B302 ← | | | | | | |
| System enablement | 0.867 | 0.181 | 4.77 | 0.000 | 0.511 | 1.223 |
| B303 ← | | | | | | |
| System enablement | 0.008 | 0.093 | 0.09 | 0.928 | -0.175 | 0.192 |
| B304 ← | | | | | | |
| System enablement | 0.553 | 0.124 | 4.45 | 0.000 | 0.310 | 0.797 |
| B305 ← | | | | | | |
| System enablement | 0.134 | 0.094 | 1.42 | 0.155 | -0.050 | 0.318 |
| B306 ← | | | | | | |
| System enablement | 0.202 | 0.098 | 2.06 | 0.039 | 0.010 | 0.395 |
| var (e.B301) | 0.976 | 0.030 | | | 0.919 | 1.037 |
| var (e.B302) | 0.247 | 0.315 | | | 0.020 | 2.994 |
| var (e.B303) | 0.999 | 0.001 | | | 0.996 | 1.003 |
| var (e.B304) | 0.693 | 0.137 | | | 0.469 | 1.023 |
| var (e.B305) | 0.982 | 0.025 | | | 0.933 | 1.032 |
| var (e.B306) | 0.958 | 0.039 | | | 0.883 | 1.040 |
| var(System enablement) | 1 | . | | | . | . |
| cov(e.C303, e.C305) | 0.167 | 0.080 | 2.09 | 0.037 | 0.013 | 0.325 |
| LR test of model vs saturated: chi2 (8)=8.75, Prob>chi2=0.3634 | | | | | | |

**Construct:** System enablement
**Observed items**:
C301. Weak institutional arrangements relating to monitoring and evaluation systems
C302. Bad attitude and inadequate willingness by some role players the in policy implementation
C303. Limited space for providing health services and no proper offices for school health nurses
C304. The support received from management is insufficient to efficiently execute roles and tasks
C305. Inadequate training of school managers or educators with regards to policy implementation
C306. Lack of national policy guidelines for the implementation of Integrated School Health Policy

Table 4.28 shows that three out of six items measuring system enablement had significant positive coefficients thus measured what they intended to measure. The items were “C302. Bad attitude and inadequate willingness by some role players the in policy implementation” (coeff=0.746; z-stat=6.48; p<0.01), “C304. The support received from management is insufficient to efficiently execute roles and tasks (coeff=0.553; z-

stat=4.45; p<0.01), and C306. Lack of national policy guidelines for the implementation of Integrated School Health Policy (coeff=0.202; z-stat=2.1; p<0.01). Dibakwane and Peu (2018:6) found poor school and health care facility infrastructure, lack of guidelines on implementation of the ISHP, inadequate support from management, poor quality of equipment and weak monitoring systems as barriers to the provision and delivery of quality school health care services. Table 29 presents the results of the model goodness of fit.

**Table 4.29 System enablement - CFA model goodness-of-fit tests**

| Fit statistic | Value | Description |
|---|---|---|
| **Likelihood ratio** | | |
| chi2_ms (8) | 8.754 | model vs saturated |
| p>chi2 | 0.363 | |
| chi2_bs (15) | 61.076 | baseline vs saturated |
| p>chi2 | 0.000 | |
| **Population error** | | |
| RMSEA | 0.025 | Root mean squared error of approximation |
| 90% CI, lower bound | 0.000 | |
| upper bound | 0.102 | |
| pclose | 0.612 | Probability RMSEA <=0.05 |
| **Information criteria** | | |
| AIC | 2687.121 | Akaike's information criterion |
| BIC | 2725.996 | Bayesian information criterion |
| **Baseline comparison** | | |
| CFI | 0.984 | Comparative fit index |
| TLI | 0.969 | Tucker-Lewis index |
| **Size of residuals** | | |
| SRMR | 0.052 | Standardised root mean squared residual |
| CD | 0.781 | Coefficient of determination |

Table 4.29 shows that Comparative fit index (CFI)=0.984 and Tucker-Lewis index (TLI)=0.969 confirmed a good fit between construct "system enablement" and observed data. The fit statistics indicated that the model essentially fit the data well, and the coefficient of determination estimate (CD=0.781) closer to 1 confirmed a good fit of the model to the sample data used for model estimation.

## 4.10 CONCLUSION

The data analysis and interpretation, as well as the study's conclusions, were discussed in this chapter. Chapter 5 summarizes the findings, discusses the study's limits and contributions, and offers practice and research recommendations.

## ADDENDUM TO THE RESULTS

## Appendix 1: Frequencies

## A. Demographic profiles

| A101. Sex | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Male | 29 | 19.7 | 19.7 | 19.7 |
| | Female | 118 | 80.3 | 80.3 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| A102. Age group in which you fall | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | 20-29 years | 18 | 12.2 | 12.2 | 12.2 |
| | 30-39 years | 61 | 41.5 | 41.5 | 53.7 |
| | 40-49 years | 41 | 27.9 | 27.9 | 81.6 |
| | 50-55 years | 26 | 17.7 | 17.7 | 99.3 |
| | 60 years and above | 1 | .7 | .7 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| A103. Type of school at which you work | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Urban | 84 | 57.1 | 57.1 | 57.1 |
| | Rural | 63 | 42.9 | 42.9 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| A104. Frequency of visits to the school by school health nurses | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Never | 2 | 1.4 | 1.4 | 1.4 |
| | Once in three months | 74 | 50.3 | 50.3 | 51.7 |
| | Once in six months | 71 | 48.3 | 48.3 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| A105. Major health services offered in your school | | | | | |
|---|---|---|---|---|---|
| | | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| Valid | Nutritional assessments | 9 | 6.1 | 6.1 | 6.1 |
| | Visual assessments | 4 | 2.7 | 2.7 | 8.8 |
| | Speech assessments | 28 | 19.0 | 19.0 | 27.9 |
| | Hearing assessments | 53 | 36.1 | 36.1 | 63.9 |
| | Ear examination | 53 | 36.1 | 36.1 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

## B. Perceptions

### B1. Positive perceptions

| B101. There is less absenteeism at school since the introduction of the school health services | | | | | |
|---|---|---|---|---|---|
| | | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| Valid | Strongly disagree | 31 | 21.1 | 21.1 | 21.1 |
| | Disagree | 20 | 13.6 | 13.6 | 34.7 |
| | Neutral | 51 | 34.7 | 34.7 | 69.4 |
| | Agree | 26 | 17.7 | 17.7 | 87.1 |
| | Strongly agree | 19 | 12.9 | 12.9 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| B102. The level of understanding of the origins and content of the policy architecture is reasonable | | | | | |
|---|---|---|---|---|---|
| | | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| Valid | Strongly disagree | 22 | 15.0 | 15.0 | 15.0 |
| | Disagree | 23 | 15.6 | 15.6 | 30.6 |
| | Neutral | 41 | 27.9 | 27.9 | 58.5 |
| | Agree | 34 | 23.1 | 23.1 | 81.6 |
| | Strongly agree | 27 | 18.4 | 18.4 | 100.0 |
| | Total | 147 | 100.0 | 100.0 | |

| B103. There is meaningful promotion or advocacy around the implementation of the health policy | | | | | |
|---|---|---|---|---|---|
| | | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| Valid | Strongly disagree | 19 | 12.9 | 12.9 | 12.9 |
| | Disagree | 25 | 17.0 | 17.0 | 29.9 |
| | Neutral | 44 | 29.9 | 29.9 | 59.9 |
| | Agree | 31 | 21.1 | 21.1 | 81.0 |
| | Strongly agree | 28 | 19.0 | 19.0 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| B104. Services rendered by nurses and teachers are appreciated | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Strongly disagree | 20 | 13.6 | 13.6 | 13.6 |
| | Disagree | 15 | 10.2 | 10.2 | 23.8 |
| | Neutral | 41 | 27.9 | 27.9 | 51.7 |
| | Agree | 38 | 25.9 | 25.9 | 77.6 |
| | Strongly agree | 33 | 22.4 | 22.4 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| B105. Provision of on-site treatment through primary health care mobile trucks is quite beneficial | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Strongly disagree | 9 | 6.1 | 6.1 | 6.1 |
| | Disagree | 7 | 4.8 | 4.8 | 10.9 |
| | Neutral | 28 | 19.0 | 19.0 | 29.9 |
| | Agree | 43 | 29.3 | 29.3 | 59.2 |
| | Strongly agree | 60 | 40.8 | 40.8 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| B106. There is involvement of the community in the programme | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Strongly disagree | 18 | 12.2 | 12.2 | 12.2 |
| | Disagree | 19 | 12.9 | 12.9 | 25.2 |
| | Neutral | 38 | 25.9 | 25.9 | 51.0 |
| | Agree | 38 | 25.9 | 25.9 | 76.9 |
| | Strongly agree | 34 | 23.1 | 23.1 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

**B2. Negative perceptions**

| B201. The school health services disturb school lessons | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Strongly disagree | 6 | 4.1 | 4.1 | 4.1 |
| | Disagree | 8 | 5.4 | 5.4 | 9.5 |
| | Neutral | 27 | 18.4 | 18.4 | 27.9 |
| | Agree | 50 | 34.0 | 34.0 | 61.9 |
| | Strongly agree | 56 | 38.1 | 38.1 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| B202. Poor road networks in rural communities make it difficult for outreach |
|---|

| programmes | | | | | |
|---|---|---|---|---|---|
| | | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| Valid | Strongly disagree | 35 | 23.8 | 23.8 | 23.8 |
| | Disagree | 42 | 28.6 | 28.6 | 52.4 |
| | Neutral | 29 | 19.7 | 19.7 | 72.1 |
| | Agree | 22 | 15.0 | 15.0 | 87.1 |
| | Strongly agree | 19 | 12.9 | 12.9 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| B203. Negative attitude by managers due to poor understanding of school health services | | | | | |
|---|---|---|---|---|---|
| | | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| Valid | Strongly disagree | 25 | 17.0 | 17.0 | 17.0 |
| | Disagree | 42 | 28.6 | 28.6 | 45.6 |
| | Neutral | 59 | 40.1 | 40.1 | 85.7 |
| | Agree | 16 | 10.9 | 10.9 | 96.6 |
| | Strongly agree | 5 | 3.4 | 3.4 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| B204. Spot checks and supervisory visits are not conducted | | | | | |
|---|---|---|---|---|---|
| | | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| Valid | Strongly disagree | 15 | 10.2 | 10.2 | 10.2 |
| | Disagree | 19 | 12.9 | 12.9 | 23.1 |
| | Neutral | 44 | 29.9 | 29.9 | 53.1 |
| | Agree | 41 | 27.9 | 27.9 | 81.0 |
| | Strongly agree | 28 | 19.0 | 19.0 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| B205. School health services are an additional responsibility leading to increased pressure for teachers | | | | | |
|---|---|---|---|---|---|
| | | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| Valid | Strongly disagree | 15 | 10.2 | 10.2 | 10.2 |
| | Disagree | 13 | 8.8 | 8.8 | 19.0 |
| | Neutral | 52 | 35.4 | 35.4 | 54.4 |
| | Agree | 35 | 23.8 | 23.8 | 78.2 |
| | Strongly agree | 32 | 21.8 | 21.8 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| B206. Some school nurses are refused entry into schools |
|---|

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly disagree | 87 | 59.2 | 59.2 | 59.2 |
| | Disagree | 46 | 31.3 | 31.3 | 90.5 |
| | Neutral | 8 | 5.4 | 5.4 | 95.9 |
| | Agree | 4 | 2.7 | 2.7 | 98.6 |
| | Strongly agree | 2 | 1.4 | 1.4 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

**C. Challenges**

**C1. Resources and capacity**

| **C101. Inadequate financial, human and material resources** | | | | | |
|---|---|---|---|---|---|
| | | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| Valid | Strongly disagree | 11 | 7.5 | 7.5 | 7.5 |
| | Disagree | 5 | 3.4 | 3.4 | 10.9 |
| | Neutral | 46 | 31.3 | 31.3 | 42.2 |
| | Agree | 47 | 32.0 | 32.0 | 74.1 |
| | Strongly agree | 38 | 25.9 | 25.9 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| **C102. Lack of clarity of roles for school managers and primary health care facility managers** | | | | | |
|---|---|---|---|---|---|
| | | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| Valid | Strongly disagree | 9 | 6.1 | 6.1 | 6.1 |
| | Disagree | 35 | 23.8 | 23.8 | 29.9 |
| | Neutral | 63 | 42.9 | 42.9 | 72.8 |
| | Agree | 23 | 15.6 | 15.6 | 88.4 |
| | Strongly agree | 17 | 11.6 | 11.6 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| **C103. Increased numbers of learners leading to constraints in the capacity of staff to accomplish tasks** | | | | | |
|---|---|---|---|---|---|
| | | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| Valid | Strongly disagree | 7 | 4.8 | 4.8 | 4.8 |
| | Disagree | 25 | 17.0 | 17.0 | 21.8 |
| | Neutral | 50 | 34.0 | 34.0 | 55.8 |
| | Agree | 50 | 34.0 | 34.0 | 89.8 |
| | Strongly agree | 15 | 10.2 | 10.2 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| C104. Lack of basic health knowledge among schoolteachers | | | | | |
|---|---|---|---|---|---|
| | | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| Valid | Strongly disagree | 10 | 6.8 | 6.8 | 6.8 |
| | Disagree | 6 | 4.1 | 4.1 | 10.9 |
| | Neutral | 30 | 20.4 | 20.4 | 31.3 |
| | Agree | 43 | 29.3 | 29.3 | 60.5 |
| | Strongly agree | 58 | 39.5 | 39.5 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| C105. Inexperienced and unqualified providers of the school health programme | | | | | |
|---|---|---|---|---|---|
| | | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| Valid | Strongly disagree | 9 | 6.1 | 6.1 | 6.1 |
| | Disagree | 32 | 21.8 | 21.8 | 27.9 |
| | Neutral | 87 | 59.2 | 59.2 | 87.1 |
| | Agree | 19 | 12.9 | 12.9 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| C106. High workloads which limit the optimal implementation of the programme's activities | | | | | |
|---|---|---|---|---|---|
| | | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| Valid | Strongly disagree | 15 | 10.2 | 10.2 | 10.2 |
| | Disagree | 12 | 8.2 | 8.2 | 18.4 |
| | Neutral | 53 | 36.1 | 36.1 | 54.4 |
| | Agree | 50 | 34.0 | 34.0 | 88.4 |
| | Strongly agree | 17 | 11.6 | 11.6 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

**C2. Collaboration**

| C201. Lack of inter-sectoral collaboration between Departments | | | | | |
|---|---|---|---|---|---|
| | | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| Valid | Strongly disagree | 10 | 6.8 | 6.8 | 6.8 |
| | Disagree | 41 | 27.9 | 27.9 | 34.7 |
| | Neutral | 73 | 49.7 | 49.7 | 84.4 |
| | Agree | 13 | 8.8 | 8.8 | 93.2 |
| | Strongly agree | 10 | 6.8 | 6.8 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| C202. Lack of consultation between school managers and primary health facility managers | | | | | |
|---|---|---|---|---|---|
| | | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| Valid | Strongly disagree | 21 | 14.3 | 14.3 | 14.3 |
| | Disagree | 50 | 34.0 | 34.0 | 48.3 |
| | Neutral | 44 | 29.9 | 29.9 | 78.2 |
| | Agree | 22 | 15.0 | 15.0 | 93.2 |
| | Strongly agree | 10 | 6.8 | 6.8 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| C203. Lack the commitment to prioritize the implementation | | | | | |
|---|---|---|---|---|---|
| | | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| Valid | Strongly disagree | 27 | 18.4 | 18.4 | 18.4 |
| | Disagree | 49 | 33.3 | 33.3 | 51.7 |
| | Neutral | 35 | 23.8 | 23.8 | 75.5 |
| | Agree | 26 | 17.7 | 17.7 | 93.2 |
| | Strongly agree | 10 | 6.8 | 6.8 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| C204. Ineffective communication between Department of Health and school role players | | | | | |
|---|---|---|---|---|---|
| | | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| Valid | Strongly disagree | 16 | 10.9 | 10.9 | 10.9 |
| | Disagree | 28 | 19.0 | 19.0 | 29.9 |
| | Neutral | 51 | 34.7 | 34.7 | 64.6 |
| | Agree | 26 | 17.7 | 17.7 | 82.3 |
| | Strongly agree | 26 | 17.7 | 17.7 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| C205. Unbalanced distribution of school health education and nursing staff across schools | | | | | |
|---|---|---|---|---|---|
| | | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| Valid | Strongly disagree | 12 | 8.2 | 8.2 | 8.2 |
| | Disagree | 32 | 21.8 | 21.8 | 29.9 |
| | Neutral | 37 | 25.2 | 25.2 | 55.1 |
| | Agree | 40 | 27.2 | 27.2 | 82.3 |
| | Strongly agree | 26 | 17.7 | 17.7 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

**C3. System enablement**

| C301. Weak institutional arrangements relating to monitoring and evaluation systems | | | | | |
|---|---|---|---|---|---|
| | | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| Valid | Strongly disagree | 7 | 4.8 | 4.8 | 4.8 |
| | Disagree | 27 | 18.4 | 18.4 | 23.1 |
| | Neutral | 48 | 32.7 | 32.7 | 55.8 |
| | Agree | 36 | 24.5 | 24.5 | 80.3 |
| | Strongly agree | 29 | 19.7 | 19.7 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| C302. Bad attitude and inadequate willingness by some role players in policy implementation | | | | | |
|---|---|---|---|---|---|
| | | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| Valid | Strongly disagree | 11 | 7.5 | 7.5 | 7.5 |
| | Disagree | 10 | 6.8 | 6.8 | 14.3 |
| | Neutral | 32 | 21.8 | 21.8 | 36.1 |
| | Agree | 49 | 33.3 | 33.3 | 69.4 |
| | Strongly agree | 45 | 30.6 | 30.6 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| C303. Limited space for providing health services and no proper offices for school health nurses | | | | | |
|---|---|---|---|---|---|
| | | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| Valid | Strongly disagree | 6 | 4.1 | 4.1 | 4.1 |
| | Disagree | 12 | 8.2 | 8.2 | 12.2 |
| | Neutral | 31 | 21.1 | 21.1 | 33.3 |
| | Agree | 53 | 36.1 | 36.1 | 69.4 |
| | Strongly agree | 45 | 30.6 | 30.6 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| C304. The support received from management is insufficient to efficiently execute roles and tasks | | | | | |
|---|---|---|---|---|---|
| | | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| Valid | Strongly disagree | 9 | 6.1 | 6.1 | 6.1 |
| | Disagree | 6 | 4.1 | 4.1 | 10.2 |
| | Neutral | 30 | 20.4 | 20.4 | 30.6 |
| | Agree | 37 | 25.2 | 25.2 | 55.8 |
| | Strongly agree | 65 | 44.2 | 44.2 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| C305. Inadequate training of school managers or educators with regard to policy implementation | | | | | |
|---|---|---|---|---|---|
| | | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| Valid | Strongly disagree | 9 | 6.1 | 6.1 | 6.1 |
| | Disagree | 16 | 10.9 | 10.9 | 17.0 |
| | Neutral | 47 | 32.0 | 32.0 | 49.0 |
| | Agree | 38 | 25.9 | 25.9 | 74.8 |
| | Strongly agree | 37 | 25.2 | 25.2 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

| C306. Lack of national policy guidelines for the implementation of Integrated School Health Policy | | | | | |
|---|---|---|---|---|---|
| | | **Frequency** | **Percent** | **Valid Percent** | **Cumulative Percent** |
| Valid | Strongly disagree | 8 | 5.4 | 5.4 | 5.4 |
| | Disagree | 36 | 24.5 | 24.5 | 29.9 |
| | Neutral | 50 | 34.0 | 34.0 | 63.9 |
| | Agree | 39 | 26.5 | 26.5 | 90.5 |
| | Strongly agree | 14 | 9.5 | 9.5 | 100.0 |
| | **Total** | **147** | **100.0** | **100.0** | |

## Appendix 2: Scale reliability

### B. Perceptions

### B1. Positive perceptions

| Case Processing Summary | | | |
|---|---|---|---|
| | | **N** | **%** |
| Cases | Valid | 147 | 100.0 |
| | Excluded[a] | 0 | .0 |
| | **Total** | **147** | **100.0** |
| a. Listwise deletion based on all variables in the procedure. | | | |

| Reliability Statistics | | |
|---|---|---|
| **Cronbach's Alpha** | **Cronbach's Alpha Based on Standardized Items** | **N of Items** |
| .795 | .794 | 6 |

| Inter-Item Correlation Matrix | | | | | | |
|---|---|---|---|---|---|---|
| | B101. There is less absenteeism at school since the introduction of the school health services | B102. The level of understanding of the origins and content of the policy architecture is reasonable | B103. There is meaningful promotion or advocacy around the implementation of the health policy | B104. Services rendered by nurses and teachers are appreciated | B105. Provision of on-site treatment through primary health care mobile trucks is quite beneficial | B106. There is involvement of the community in the programme |
| B101. There is less absenteeism at school since the introduction of the school health services | 1.000 | .395 | .521 | .361 | .059 | .335 |
| B102. The level of understanding of the origins and content of the policy architecture is reasonable | .395 | 1.000 | .517 | .409 | .344 | .373 |
| B103. There is meaningful promotion or advocacy around the implementation of the health policy | .521 | .517 | 1.000 | .536 | .417 | .499 |

| Inter-Item Correlation Matrix | | | | | | |
|---|---|---|---|---|---|---|
| | B101. There is less absenteeism at school since the introduction of the school health services | B102. The level of understanding of the origins and content of the policy architecture is reasonable | B103. There is meaningful promotion or advocacy around the implementation of the health policy | B104. Services rendered by nurses and teachers are appreciated | B105. Provision of on-site treatment through primary health care mobile trucks is quite beneficial | B106. There is involvement of the community in the programme |
| B104. Services rendered by nurses and teachers are appreciated | .361 | .409 | .536 | 1.000 | .326 | .419 |
| B105. Provision of on-site treatment through primary health care mobile trucks is quite beneficial | .059 | .344 | .417 | .326 | 1.000 | .350 |
| B106. There is involvement of the community in the programme | .335 | .373 | .499 | .419 | .350 | 1.000 |

| Item-Total Statistics | | | | | |
|---|---|---|---|---|---|
| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
| B101. There is less absenteeism at school since the introduction of the school health services | 16.93 | 21.714 | .464 | .349 | .784 |
| B102. The level of understanding of the origins and content of the policy architecture is reasonable | 16.66 | 20.473 | .573 | .337 | .758 |
| B103. There is meaningful promotion or advocacy around the implementation of the health policy | 16.64 | 19.164 | .727 | .536 | .720 |
| B104. Services rendered by nurses and teachers are appreciated | 16.47 | 20.443 | .578 | .345 | .757 |
| B105. Provision of on-site treatment through | 15.86 | 23.118 | .404 | .275 | .795 |

| Item-Total Statistics | | | | | |
|---|---|---|---|---|---|
| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
| primary health care mobile trucks is quite beneficial | | | | | |
| B106. There is involvement of the community in the programme | 16.46 | 20.729 | .552 | .314 | .763 |

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| | | **Sum of Squares** | **Df** | **Mean Square** | **F** | **Sig** |
| Between People | | 704.880 | 146 | 4.828 | | |
| Within People | Between Items | 93.080 | 5 | 18.616 | 18.838 | .000 |
| | Residual | 721.420 | 730 | .988 | | |
| | Total | 814.500 | 735 | 1.108 | | |
| **Total** | | **1519.380** | **881** | **1.725** | | |
| Grand Mean=3.30 | | | | | | |

**B2. Negative perceptions**

| Case Processing Summary | | | |
|---|---|---|---|
| | | **N** | **%** |
| Cases | Valid | 147 | 100.0 |
| | Excluded[a] | 0 | .0 |
| | **Total** | **147** | **100.0** |
| a. Listwise deletion based on all variables in the procedure. | | | |

| Reliability Statistics | | |
|---|---|---|
| **Cronbach's Alpha** | **Cronbach's Alpha based on Standardised Items** | **N of Items** |
| .437 | .421 | 6 |

| Inter-Item Correlation Matrix | | | | | | |
|---|---|---|---|---|---|---|
| | B201. The school health service disturbs school lessons | B202. Poor road networks in rural communities, make it difficult for outreach programmes | B203. Negative attitude by managers due to poor understanding of school health services | B204. Spot checks and supervisory visits are not conducted | B205. School health services are an additional responsibility leading to increased pressure to teachers | B206. Some school nurses are refused entry into schools |
| B201. The school health service disturbs school lessons | 1.000 | .153 | .043 | .291 | .304 | -.032 |
| B202. Poor road networks in rural communities, make it difficult for outreach programmes | .153 | 1.000 | .171 | -.004 | .016 | .142 |
| B203. Negative attitude by managers due to poor understanding of school health services | .043 | .171 | 1.000 | -.075 | .034 | .154 |
| B204. Spot checks and supervisory visits are not conducted | .291 | -.004 | -.075 | 1.000 | .528 | -.127 |
| B205. School health services are an additional responsibility leading to increased pressure to teachers | .304 | .016 | .034 | .528 | 1.000 | .026 |
| B206. Some school nurses are refused entry into schools | -.032 | .142 | .154 | -.127 | .026 | 1.000 |

| Item-Total Statistics | | | | | |
|---|---|---|---|---|---|
| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
| B201. The school health service disturbs school lessons | 13.46 | 8.771 | .319 | .141 | .331 |
| B202. Poor road networks in rural communities, make it difficult for outreach programmes | 14.78 | 8.911 | .157 | .067 | .435 |
| B203. Negative attitude by managers due to poor understanding of school health services | 14.88 | 10.231 | .110 | .056 | .445 |
| B204. Spot checks and supervisory visits are not conducted | 14.10 | 8.613 | .261 | .322 | .362 |
| B205. School health services are an additional responsibility leading to increased pressure to teachers | 14.05 | 7.950 | .371 | .315 | .286 |
| B206. Some school nurses are refused entry into schools | 15.87 | 10.963 | .056 | .062 | .461 |

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| | | **Sum of Squares** | **Df** | **Mean Square** | **F** | **Sig** |
| Between People | | 291.000 | 146 | 1.993 | | |
| Within People | Between Items | 519.946 | 5 | 103.989 | 92.683 | .000 |
| | Residual | 819.054 | 730 | 1.122 | | |
| | Total | 1339.000 | 735 | 1.822 | | |
| **Total** | | **1630.000** | **881** | **1.850** | | |
| Grand Mean=2.90 | | | | | | |

### C. Challenges

### C1. Resources and capacity

| Case Processing Summary | | | |
|---|---|---|---|
| | | **N** | **%** |
| Cases | Valid | 147 | 100.0 |
| | Excluded[a] | 0 | .0 |
| | **Total** | **147** | **100.0** |
| a. Listwise deletion based on all variables in the procedure. | | | |

| Reliability Statistics | | |
|---|---|---|
| **Cronbach's Alpha** | **Cronbach's Alpha based on Standardized Items** | **N of Items** |
| .480 | .466 | 6 |

| Inter-Item Correlation Matrix | | | | | | |
|---|---|---|---|---|---|---|
| | C101. Inadequate financial, human and material resources | C102. Lack of clarity of roles for school managers and primary health care facility manager | C103. Increased numbers of learners leading to constraints in the capacity of staff to accomplish tasks | C104. Lack of basic health knowledge among schoolteachers | C105. Inexperienced and unqualified providers of the school health programme | C106. High workloads which limit the optimal implementation of the programme's activities |
| C101. Inadequate financial, human and material resources | 1.000 | .043 | .019 | .618 | .035 | .201 |
| C102. Lack of clarity of roles for school managers and primary health care facility managers | .043 | 1.000 | .178 | .058 | .104 | .205 |
| C103. Increased numbers of learners leading to constraints in the capacity of staff to accomplish tasks | .019 | .178 | 1.000 | -.023 | .051 | .038 |
| C104. Lack of basic health knowledge among schoolteachers | .618 | .058 | -.023 | 1.000 | .087 | .148 |
| C105. Inexperienced and unqualified providers of the school health programme | .035 | .104 | .051 | .087 | 1.000 | .141 |
| C106. High workloads which limit the optimal implementation of the programme's activities | .201 | .205 | .038 | .148 | .141 | 1.000 |

| Item-Total Statistics | | | | | |
|---|---|---|---|---|---|
| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
| C101. Inadequate financial, human and material resources | 16.29 | 7.329 | .383 | .397 | .347 |
| C102. Lack of clarity of roles for school managers and primary health care facility managers | 16.91 | 8.561 | .205 | .077 | .454 |
| C103. Increased numbers of learners leading to constraints in the capacity of staff to accomplish tasks | 16.66 | 9.363 | .086 | .036 | .513 |
| C104. Lack of basic health knowledge among schoolteachers | 16.03 | 7.307 | .355 | .389 | .363 |
| C105. Inexperienced and unqualified providers of the school health programme | 17.15 | 9.703 | .147 | .033 | .476 |
| C106. High workloads which limit the optimal implementation of the programme's activities | 16.65 | 8.036 | .268 | .093 | .419 |

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| | | **Sum of Squares** | **Df** | **Mean Square** | **F** | **Sig** |
| Between People | | 266.075 | 146 | 1.822 | | |
| Within People | Between Items | 121.017 | 5 | 24.203 | 25.539 | .000 |
| | Residual | 691.816 | 730 | .948 | | |
| | Total | 812.833 | 735 | 1.106 | | |
| Total | | 1078.908 | 881 | 1.225 | | |
| Grand Mean=3.32 | | | | | | |

**C2. Collaboration**

| Case Processing Summary | | | |
|---|---|---|---|
| | | **N** | **%** |
| Cases | Valid | 147 | 100.0 |
| | Excluded[a] | 0 | .0 |
| | **Total** | **147** | **100.0** |
| a. Listwise deletion based on all variables in the procedure. | | | |

| Reliability Statistics | | |
|---|---|---|
| **Cronbach's Alpha** | **Cronbach's Alpha based on Standardized Items** | **N of Items** |
| .509 | .522 | 5 |

| Inter-Item Correlation Matrix | | | | | |
|---|---|---|---|---|---|
| | C201. Lack of inter-sectoral collaboration between Departments | C202. Lack of consultation between school managers and primary health facility managers | C203. Lack the commitment to prioritize the implementation | C204. Ineffective communication between Department of Health and school role players | C205. Unbalanced distribution of school health education and nursing staff across schools |
| C201. Lack of inter-sectoral collaboration between Departments | 1.000 | .392 | .362 | .068 | .065 |
| C202. Lack of consultation between school managers and primary health facility managers | .392 | 1.000 | .235 | -.030 | .195 |
| C203. Lack the commitment to prioritize the implementation | .362 | .235 | 1.000 | .090 | .202 |
| C204. Ineffective communication between Department of Health and school role players | .068 | -.030 | .090 | 1.000 | .214 |
| C205. Unbalanced distribution of school health education and nursing staff across schools | .065 | .195 | .202 | .214 | 1.000 |

| Item-Total Statistics | | | | | |
|---|---|---|---|---|---|
| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
| C201. Lack of inter-sectoral collaboration between Departments | 11.64 | 8.109 | .358 | .238 | .416 |
| C202. Lack of consultation between school managers and primary health facility managers | 11.79 | 7.811 | .302 | .196 | .439 |
| C203. Lack the commitment to prioritize the implementation | 11.84 | 7.288 | .354 | .169 | .403 |
| C204. Ineffective communication between Department of Health and school role players | 11.33 | 8.427 | .137 | .061 | .549 |
| C205. Unbalanced distribution of school health education and nursing staff across schools | 11.20 | 7.547 | .283 | .112 | .452 |

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| | | **Sum of Squares** | **df** | **Mean Square** | **F** | **Sig** |
| Between People | | 318.473 | 146 | 2.181 | | |
| Within People | Between Items | 46.536 | 4 | 11.634 | 10.870 | .000 |
| | Residual | 625.064 | 584 | 1.070 | | |
| | Total | 671.600 | 588 | 1.142 | | |
| **Total** | | **990.073** | **734** | **1.349** | | |
| Grand Mean=2.89 | | | | | | |

**C3. System enablement**

| Case Processing Summary | | | |
|---|---|---|---|
| | | **N** | **%** |
| Cases | Valid | 147 | 100.0 |
| | Excluded[a] | 0 | .0 |
| | **Total** | **147** | **100.0** |
| a. Listwise deletion based on all variables in the procedure. | | | |

| Reliability Statistics | | |
|---|---|---|
| **Cronbach's Alpha** | **Cronbach's Alpha based on Standardized Items** | **N of Items** |
| .443 | .437 | 6 |

| Inter-Item Correlation Matrix | | | | | | |
|---|---|---|---|---|---|---|
| | C301. Weak institutional arrangements relating to monitoring and evaluation systems | C302. Bad attitude and inadequate willingness by some role players the in policy implementation | C303. Limited space for providing health services and no proper offices for school health nurses | C304. The support received from management is insufficient to efficiently execute roles and tasks | C305. Inadequate training of school managers or educators with regards to policy implementation | C306. Lack of national policy guidelines for the implementation of Integrated School Health Policy |
| C301. Weak institutional arrangements relating to monitoring and evaluation systems | 1.000 | .124 | .028 | .064 | .223 | .112 |
| C302. Bad attitude and inadequate willingness by some role players the in policy implementation | .124 | 1.000 | .013 | .484 | .116 | .171 |
| C303. Limited space for providing health services and no proper offices for school health nurses | .028 | .013 | 1.000 | -.031 | .167 | .029 |
| C304. The support received from management is insufficient to efficiently execute roles and tasks | .064 | .484 | -.031 | 1.000 | .021 | .108 |
| C305. Inadequate training of school managers or educators with regards to policy implementation | .223 | .116 | .167 | .021 | 1.000 | .090 |
| C306. Lack of national policy guidelines for the implementation of Integrated School Health Policy | .112 | .171 | .029 | .108 | .090 | 1.000 |

| Item-Total Statistics |
|---|

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|---|
| C301. Weak institutional arrangements relating to monitoring and evaluation systems | 18.14 | 9.479 | .205 | .066 | .405 |
| C302. Bad attitude and inadequate willingness by some role players the in policy implementation | 17.78 | 8.340 | .358 | .261 | .307 |
| C303. Limited space for providing health services and no proper offices for school health nurses | 17.69 | 10.502 | .073 | .030 | .475 |
| C304. The support received from management is insufficient to efficiently execute roles and tasks | 17.53 | 9.073 | .249 | .237 | .378 |
| C305. Inadequate training of school managers or educators with regards to policy implementation | 17.97 | 9.246 | .227 | .087 | .392 |
| C306. Lack of national policy guidelines for the implementation of Integrated School Health Policy | 18.40 | 9.845 | .189 | .042 | .413 |

| ANOVA | | | | | | |
|---|---|---|---|---|---|---|
| | | Sum of Squares | df | Mean Square | F | Sig |
| Between People | | 296.791 | 146 | 2.033 | | |
| Within People | Between Items | 74.645 | 5 | 14.929 | 13.180 | .000 |
| | Residual | 826.855 | 730 | 1.133 | | |
| | Total | 901.500 | 735 | 1.227 | | |
| **Total** | | **1198.291** | **881** | **1.360** | | |
| Grand Mean=3.58 | | | | | | |

**Overall set of items**

| Case Processing Summary | | | |
|---|---|---|---|
| | | **N** | **%** |
| Cases | Valid | 147 | 100.0 |
| | Excluded[a] | 0 | .0 |
| | **Total** | **147** | **100.0** |
| a. Listwise deletion based on all variables in the procedure. | | | |

| Reliability Statistics | |
|---|---|
| **Cronbach's Alpha** | **N of Items** |
| .836 | 29 |

| Item-Total Statistics | | | | |
|---|---|---|---|---|
| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
| B101. There is less absenteeism at school since the introduction of the school health services | 90.24 | 182.104 | .407 | .830 |
| B102. The level of understanding of the origins and content of the policy architecture is reasonable | 89.98 | 178.705 | .502 | .826 |
| B103. There is meaningful promotion or advocacy around the implementation of the health policy | 89.96 | 175.944 | .599 | .822 |
| B104. Services rendered by nurses and teachers are appreciated | 89.79 | 180.346 | .454 | .828 |
| B105. Provision of on-site treatment through primary health care mobile trucks is quite beneficial | 89.18 | 179.206 | .561 | .824 |
| B106. There is involvement of the community in the programme | 89.78 | 181.805 | .412 | .829 |
| B201. The school health service disturbs school lessons | 89.16 | 183.133 | .470 | .828 |
| B202. Poor road networks in rural communities, make it difficult for outreach programmes | 90.48 | 189.676 | .176 | .839 |
| B203. Negative attitude by managers due to poor understanding of school health services | 90.57 | 193.849 | .111 | .839 |
| B204. Spot checks and supervisory visits are not conducted | 89.80 | 178.191 | .563 | .824 |
| B205. School health services are an additional responsibility leading to increased pressure to teachers | 89.74 | 177.700 | .582 | .823 |
| B206. Some school nurses are refused entry into schools | 91.56 | 195.330 | .084 | .838 |
| C101. Inadequate financial, human and material resources | 89.47 | 179.251 | .578 | .824 |
| C102. Lack of clarity of roles for | 90.10 | 189.826 | .242 | .835 |

| Item-Total Statistics | | | | |
|---|---|---|---|---|
| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
| school managers and primary health care facility managers | | | | |
| C103. Increased numbers of learners leading to constraints in the capacity of staff to accomplish tasks | 89.84 | 194.558 | .084 | .840 |
| C104. Lack of basic health knowledge among schoolteachers | 89.22 | 177.610 | .608 | .823 |
| C105. Inexperienced and unqualified providers of the school health programme | 90.33 | 192.744 | .227 | .835 |
| C106. High workloads which limit the optimal implementation of the programme's activities | 89.84 | 188.521 | .271 | .834 |
| C201. Lack of inter-sectoral collaboration between Departments | 90.31 | 189.490 | .294 | .833 |
| C202. Lack of consultation between school managers and primary health facility managers | 90.46 | 189.606 | .234 | .835 |
| C203. Lack the commitment to prioritize the implementation | 90.51 | 190.745 | .181 | .837 |
| C204. Ineffective communication between Department of Health and school role players | 90.00 | 185.685 | .322 | .833 |
| C205. Unbalanced distribution of school health education and nursing staff across schools | 89.88 | 189.588 | .207 | .837 |
| C301. Weak institutional arrangements relating to monitoring and evaluation systems | 89.76 | 187.388 | .299 | .833 |
| C302. Bad attitude and inadequate willingness by some role players the in policy implementation | 89.39 | 177.227 | .613 | .822 |
| C303. Limited space for providing health services and no proper offices for school health nurses | 89.31 | 194.093 | .089 | .840 |
| C304. The support received from management is insufficient to efficiently execute roles and tasks | 89.15 | 180.690 | .506 | .826 |
| C305. Inadequate training of school managers or educators with regards to policy implementation | 89.59 | 188.668 | .250 | .835 |
| C306. Lack of national policy guidelines for the implementation of Integrated School Health Policy | 90.02 | 191.637 | .180 | .837 |

**Exploratory Factor Analysis**

**B. Perceptions**

**B1. Positive perceptions**

| Warnings |
|---|
| Only one factor was extracted. Factor plots cannot be produced. |

| Correlation Matrix[a] |
|---|
| |
| a. Determinant=.181 |

| KMO and Bartlett's Test | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .809 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 244.552 |
| | Df | 15 |
| | Sig. | .000 |

| Commonalities | | |
|---|---|---|
| | **Initial** | **Extraction** |
| B101. There is less absenteeism at school since the introduction of the school health services | .349 | .223 |
| B102. The level of understanding of the origins and content of the policy architecture is reasonable | .337 | .465 |
| B103. There is meaningful promotion or advocacy around the implementation of the health policy | .536 | .773 |
| B104. Services rendered by nurses and teachers are appreciated | .345 | .458 |
| B105. Provision of on-site treatment through primary health care mobile trucks is quite beneficial | .275 | .180 |
| B106. There is involvement of the community in the programme | .314 | .427 |
| Extraction Method: Alpha Factoring. | | |

**B2. Negative perceptions**

| Correlation Matrix[a] |
|---|
| |
| a. Determinant=.558 |

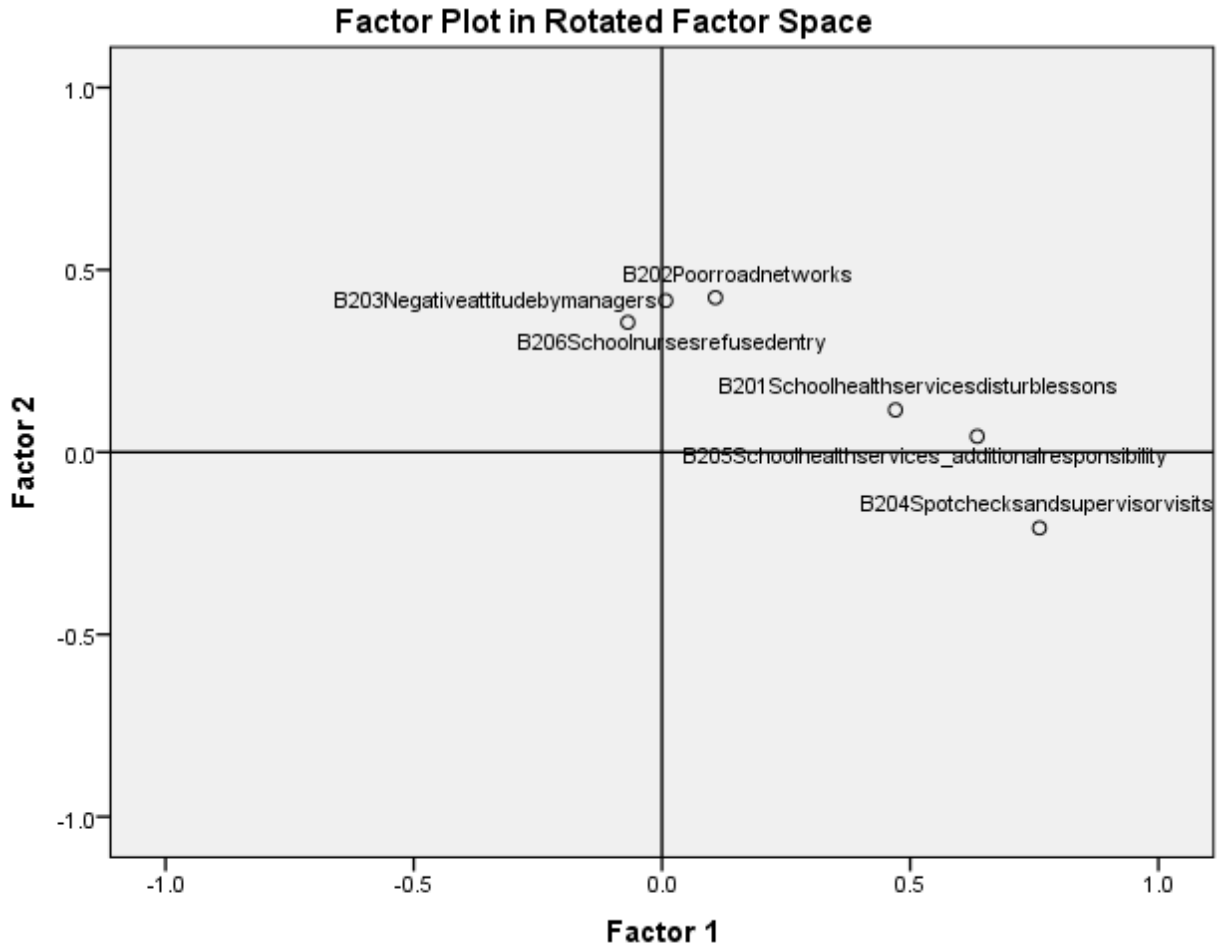
| KMO and Bartlett's Test | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .575 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 83.608 |
| | Df | 15 |
| | Sig. | .000 |

| Commonalities | | |
|---|---|---|
| | **Initial** | **Extraction** |
| B201. The school health service disturbs school lessons | .141 | .235 |
| B202. Poor road networks in rural communities, make it difficult for outreach programmes | .067 | .191 |
| B203. Negative attitude by managers due to poor understanding of school health services | .056 | .173 |
| B204. Spot checks and supervisory visits are not conducted | .322 | .622 |
| B205. School health services are an additional responsibility leading to increased pressure to teachers | .315 | .405 |
| B206. Some school nurses are refused entry into schools | .062 | .131 |
| Extraction Method: Alpha Factoring. | | |

| Factor Matrix[a] | | |
|---|---|---|
| | **Factor** | |
| | **1** | **2** |
| B202. Poor road networks in rural communities, make it difficult for outreach programmes | .404 | -.167 |
| B201. The school health service disturbs school lessons | .374 | .308 |
| B203. Negative attitude by managers due to poor understanding of school health services | .338 | -.242 |
| B204. Spot checks and supervisory visits are not conducted | .288 | .734 |
| B205. School health services are an additional responsibility leading to increased pressure to teachers | .414 | .483 |
| B206. Some school nurses are refused entry into schools | .244 | -.268 |
| Extraction Method: Alpha Factoring. | | |
| a. 2 factors extracted. 12 iterations required. | | |

| Rotated Factor Matrix[a] | | |
|---|---|---|
| | Factor | |
| | 1 | 2 |
| B204. Spot checks and supervisory visits are not conducted | .760 | -.208 |
| B205. School health services are an additional responsibility leading to increased pressure to teachers | .635 | .043 |
| B201. The school health service disturbs school lessons | .470 | .116 |
| B202. Poor road networks in rural communities, make it difficult for outreach programmes | .108 | .424 |
| B203. Negative attitude by managers due to poor understanding of school health services | .008 | .415 |
| B206. Some school nurses are refused entry into schools | -.069 | .356 |
| Extraction Method: Alpha Factoring.<br>Rotation Method: Varimax with Kaiser Normalization. | | |
| a. Rotation converged in 3 iterations. | | |

| Factor Transformation Matrix | | |
|---|---|---|
| **Factor** | **1** | **2** |
| 1 | .598 | .802 |
| 2 | .802 | -.598 |
| Extraction Method: Alpha Factoring.<br>Rotation Method: Varimax with Kaiser Normalization. | | |




### C. Challenges

### C1. Resources and capacity

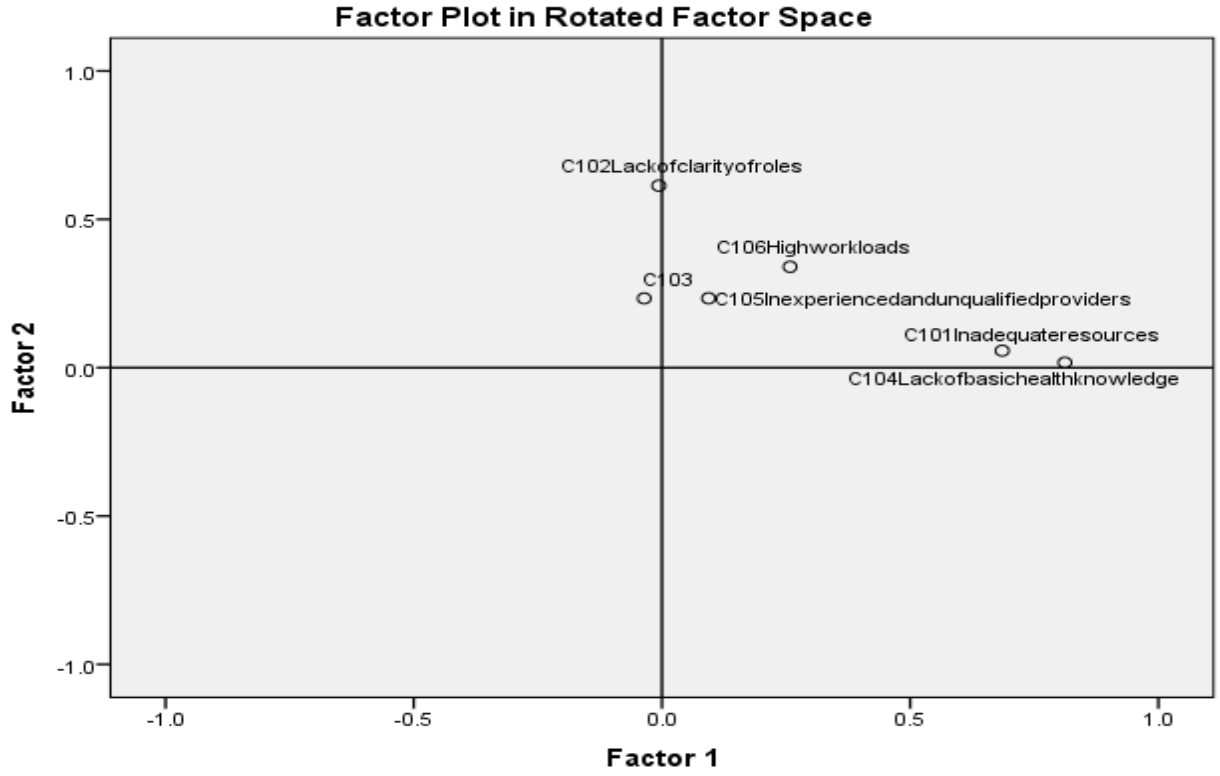
| Correlation Matrix[a] |
|---|
| |
| a. Determinant=.529 |

| KMO and Bartlett's Test | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .536 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 91.069 |
| | df | 15 |
| | Sig. | .000 |

| Commonalities | | |
|---|---|---|
| | **Initial** | **Extraction** |
| C101. Inadequate financial, human and material resources | .397 | .473 |
| C102. Lack of clarity of roles for school managers and primary health care facility managers | .077 | .376 |
| C103. Increased numbers of learners leading to constraints in the capacity of staff to accomplish tasks | .036 | .056 |
| C104. Lack of basic health knowledge among schoolteachers | .389 | .659 |
| C105. Inexperienced and unqualified providers of the school health programme | .033 | .063 |
| C106. High workloads which limit the optimal implementation of the programme's activities | .093 | .182 |
| Extraction Method: Alpha Factoring. | | |

| Factor Matrix[a] | | |
|---|---|---|
| | **Factor** | |
| | 1 | 2 |
| C102. Lack of clarity of roles for school managers and primary health care facility managers | .533 | -.303 |
| C106. High workloads which limit the optimal implementation of the programme's activities | .422 | .061 |
| C105. Inexperienced and unqualified providers of the school health programme | .250 | -.032 |
| C103. Increased numbers of learners leading to constraints in the capacity of staff to accomplish tasks | .187 | -.145 |
| C104. Lack of basic health knowledge among schoolteachers | .409 | .701 |
| C101. Inadequate financial, human and material resources | .383 | .572 |
| Extraction Method: Alpha Factoring. | | |
| a. 2 factors extracted. 21 iterations required. | | |

| Factor Transformation Matrix | | |
|---|---|---|
| **Factor** | **1** | **2** |
| 1 | .485 | .874 |
| 2 | .874 | -.485 |
| Extraction Method: Alpha Factoring.<br>Rotation Method: Varimax with Kaiser Normalization. | | |




**C2. Collaboration**

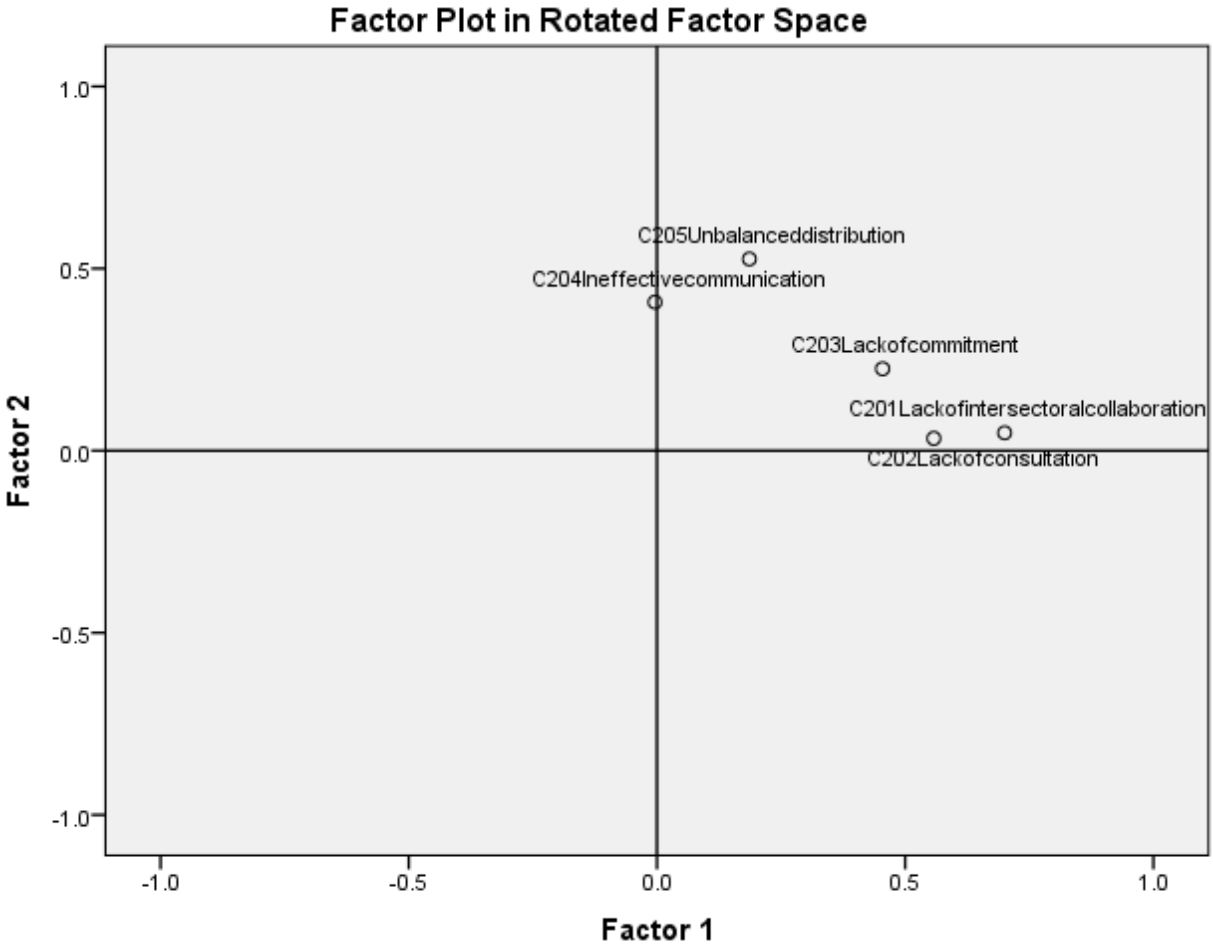
| Correlation Matrix[a] |
|---|
| |
| a. Determinant=.637 |

| KMO and Bartlett's Test | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .577 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 64.806 |
| | Df | 10 |
| | Sig. | .000 |

| Commonalities | | |
|---|---|---|
| | **Initial** | **Extraction** |
| C201. Lack of inter-sectoral collaboration between Departments | .238 | .493 |
| C202. Lack of consultation between school managers and primary health facility managers | .196 | .312 |
| C203. Lack the commitment to prioritize the implementation | .169 | .257 |
| C204. Ineffective communication between Department of Health and school role players | .061 | .166 |
| C205. Unbalanced distribution of school health education and nursing staff across schools | .112 | .312 |
| Extraction Method: Alpha Factoring. | | |

| Factor Matrix[a] | | |
|---|---|---|
| | Factor | |
| | 1 | 2 |
| C201. Lack of inter-sectoral collaboration between Departments | .620 | -.330 |
| C203. Lack the commitment to prioritize the implementation | .505 | -.050 |
| C202. Lack of consultation between school managers and primary health facility managers | .491 | -.267 |
| C205. Unbalanced distribution of school health education and nursing staff across schools | .437 | .348 |
| C204. Ineffective communication between Department of Health and school role players | .213 | .348 |
| Extraction Method: Alpha Factoring. | | |
| a. 2 factors extracted. 12 iterations required. | | |

| Rotated Factor Matrix[a] | | |
|---|---|---|
| | Factor | |
| | 1 | 2 |
| C201. Lack of inter-sectoral collaboration between Departments | .700 | .049 |
| C202. Lack of consultation between school managers and primary health facility managers | .558 | .034 |
| C203. Lack the commitment to prioritize the implementation | .454 | .225 |
| C205. Unbalanced distribution of school health education and nursing staff across schools | .186 | .526 |
| C204. Ineffective communication between Department of Health and school role players | -.004 | .408 |
| Extraction Method: Alpha Factoring.<br>Rotation Method: Varimax with Kaiser Normalization. | | |
| a. Rotation converged in 3 iterations. | | |




**C3. System enablement**

| Correlation Matrix[a] |
|---|
| |
| a. Determinant=.660 |

| KMO and Bartlett's Test | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .550 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 59.483 |
| | Df | 15 |
| | Sig. | .000 |

| Commonalities | | |
|---|---|---|
| | Initial | Extraction |
| C301. Weak institutional arrangements relating to monitoring and evaluation systems | .066 | .096 |
| C302. Bad attitude and inadequate willingness by some role players the in policy implementation | .261 | .531 |
| C303. Limited space for providing health services and no proper offices for school health nurses | .030 | .033 |
| C304. The support received from management is insufficient to efficiently execute roles and tasks | .237 | .362 |
| C305. Inadequate training of school managers or educators with regards to policy implementation | .087 | .671 |
| C306. Lack of national policy guidelines for the implementation of Integrated School Health Policy | .042 | .087 |
| Extraction Method: Alpha Factoring. | | |

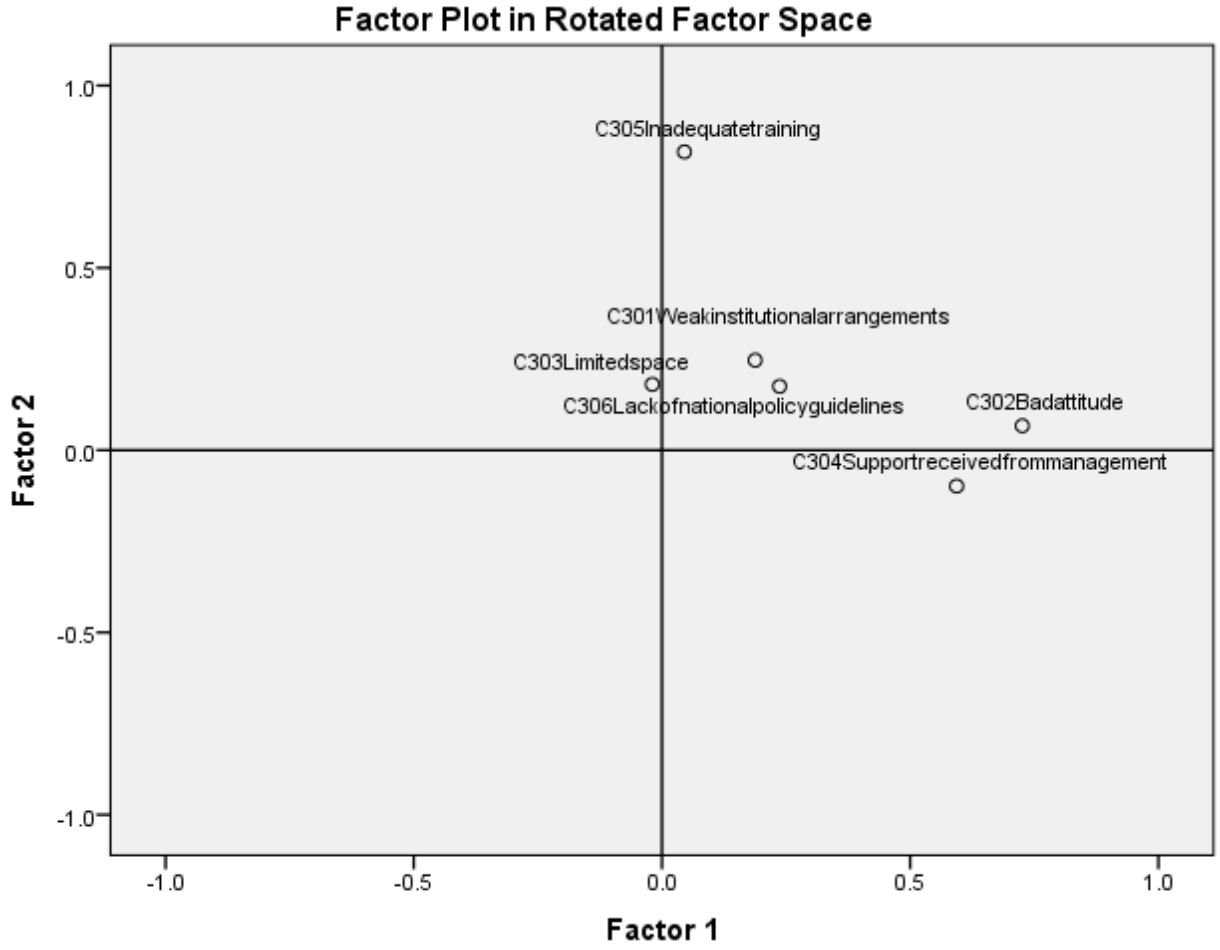
| Factor Matrix[a] | | |
|---|---|---|
| | Factor | |
| | 1 | 2 |
| C305. Inadequate training of school managers or educators with regards to policy implementation | .612 | -.544 |
| C302. Bad attitude and inadequate willingness by some role players the in policy implementation | .559 | .468 |
| C301. Weak institutional arrangements relating to monitoring and evaluation systems | .307 | -.040 |
| C306. Lack of national policy guidelines for the implementation of Integrated School Health Policy | .291 | .045 |
| C304. The support received from management is insufficient to efficiently execute roles and tasks | .348 | .491 |
| C303. Limited space for providing health services and no proper offices for school health nurses | .114 | -.141 |
| Extraction Method: Alpha Factoring. | | |
| a. 2 factors extracted. 23 iterations required. | | |

| Factor Transformation Matrix | | |
|---|---|---|
| Factor | 1 | 2 |
| 1 | .704 | .710 |
| 2 | .710 | -.704 |
| Extraction Method: Alpha Factoring.<br>Rotation Method: Varimax with Kaiser Normalization. | | |

| Commonalities | | |
|---|---|---|
| | Initial | Extraction |
| B101. There is less absenteeism at school since the introduction of the | .487 | .501 |

| | | |
|---|---|---|
| school health services | | |
| B102. The level of understanding of the origins and content of the policy architecture is reasonable | .530 | .507 |
| B103. There is meaningful promotion or advocacy around the implementation of the health policy | .654 | .663 |
| B104. Services rendered by nurses and teachers are appreciated | .458 | .475 |
| B105. Provision of on-site treatment through primary health care mobile trucks is quite beneficial | .728 | .788 |
| B106. There is involvement of the community in the programme | .506 | .461 |
| B201. The school health service disturbs school lessons | .521 | .543 |
| B202. Poor road networks in rural communities, make it difficult for outreach programmes | .383 | .488 |
| B203. Negative attitude by managers due to poor understanding of school health services | .286 | .550 |
| B204. Spot checks and supervisory visits are not conducted | .647 | .740 |
| B205. School health services are an additional responsibility leading to increased pressure to teachers | .552 | .529 |
| B206. Some school nurses are refused entry into schools | .401 | .607 |
| C101. Inadequate financial, human and material resources | .579 | .528 |
| C102. Lack of clarity of roles for school managers and primary health care facility managers | .328 | .402 |
| C103. Increased numbers of learners leading to constraints in the capacity of staff to accomplish tasks | .289 | .312 |
| C104. Lack of basic health knowledge among schoolteachers | .706 | .687 |
| C105. Inexperienced and unqualified providers of the school health programme | .353 | .333 |
| C106. High workloads which limit the optimal implementation of the programme's activities | .289 | .271 |
| C201. Lack of inter-sectoral collaboration between Departments | .374 | .416 |
| C202. Lack of consultation between school managers and primary health facility managers | .310 | .350 |
| C203. Lack the commitment to prioritize the implementation | .302 | .429 |
| C204. Ineffective communication between Department of Health and school role players | .554 | .834 |
| C205. Unbalanced distribution of school health education and nursing staff across schools | .248 | .178 |
| C301. Weak institutional arrangements relating to monitoring and evaluation systems | .353 | .409 |
| C302. Bad attitude and inadequate willingness by some role players the in policy implementation | .697 | .697 |
| C303. Limited space for providing health services and no proper offices for school health nurses | .233 | .342 |
| C304. The support received from management is insufficient to efficiently execute roles and tasks | .664 | .617 |
| C305. Inadequate training of school managers or educators with regards to policy implementation | .367 | .368 |
| C306. Lack of national policy guidelines for the implementation of Integrated School Health Policy | .304 | .676 |

| Extraction Method: Alpha Factoring. |
|---|




**Overall set of items**

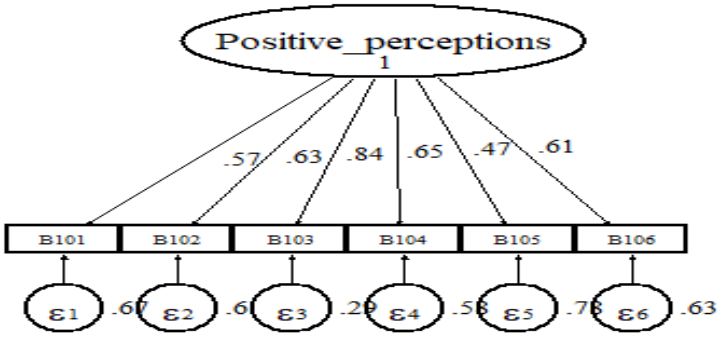
| KMO and Bartlett's Test | | |
|---|---|---|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .795 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 1564.723 |
| | df | 406 |
| | Sig. | .000 |

| Total Variance Explained | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Factor | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 6.448 | 22.236 | 22.236 | 5.996 | 20.675 | 20.675 | 4.037 | 13.922 | 13.922 |

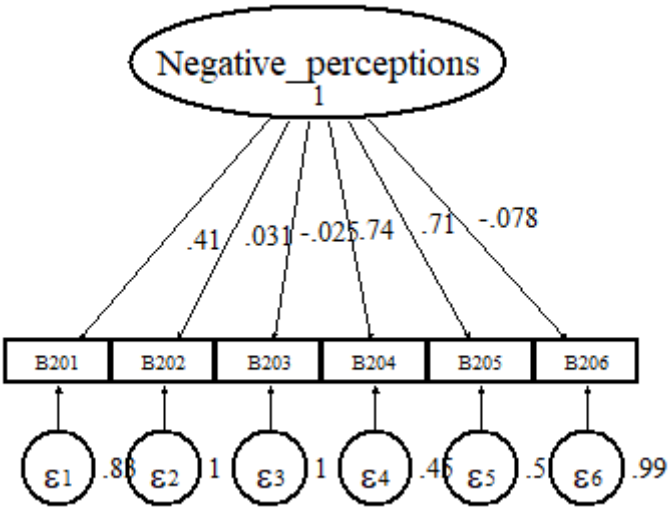
| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2 | 3.009 | 10.376 | 32.611 | 2.492 | 8.594 | 29.270 | 3.160 | 10.896 | 24.818 |
| 3 | 2.063 | 7.112 | 39.724 | 1.559 | 5.377 | 34.647 | 1.601 | 5.520 | 30.338 |
| 4 | 1.762 | 6.075 | 45.798 | 1.307 | 4.506 | 39.153 | 1.566 | 5.400 | 35.738 |
| 5 | 1.316 | 4.538 | 50.336 | .788 | 2.718 | 41.872 | 1.086 | 3.744 | 39.481 |
| 6 | 1.214 | 4.186 | 54.522 | .686 | 2.365 | 44.236 | .979 | 3.376 | 42.858 |
| 7 | 1.172 | 4.042 | 58.564 | .653 | 2.250 | 46.487 | .783 | 2.701 | 45.559 |
| 8 | 1.131 | 3.899 | 62.463 | .597 | 2.058 | 48.545 | .765 | 2.638 | 48.197 |
| 9 | 1.014 | 3.498 | 65.961 | .623 | 2.148 | 50.693 | .724 | 2.496 | 50.693 |
| 10 | .982 | 3.386 | 69.347 | | | | | | |
| 11 | .907 | 3.127 | 72.474 | | | | | | |
| 12 | .822 | 2.835 | 75.309 | | | | | | |
| 13 | .714 | 2.461 | 77.770 | | | | | | |
| 14 | .681 | 2.347 | 80.117 | | | | | | |
| 15 | .623 | 2.149 | 82.266 | | | | | | |
| 16 | .604 | 2.083 | 84.349 | | | | | | |
| 17 | .558 | 1.926 | 86.275 | | | | | | |
| 18 | .522 | 1.798 | 88.073 | | | | | | |
| 19 | .502 | 1.730 | 89.803 | | | | | | |
| 20 | .446 | 1.538 | 91.341 | | | | | | |
| 21 | .391 | 1.349 | 92.690 | | | | | | |
| 22 | .353 | 1.218 | 93.908 | | | | | | |
| 23 | .319 | 1.100 | 95.009 | | | | | | |
| 24 | .311 | 1.074 | 96.083 | | | | | | |
| 25 | .298 | 1.027 | 97.109 | | | | | | |
| 26 | .262 | .904 | 98.013 | | | | | | |
| 27 | .234 | .806 | 98.819 | | | | | | |
| 28 | .183 | .632 | 99.452 | | | | | | |
| 29 | .159 | .548 | 100.000 | | | | | | |
| Extraction Method: Alpha Factoring. | | | | | | | | | |

**Confirmatory Factor Analysis**

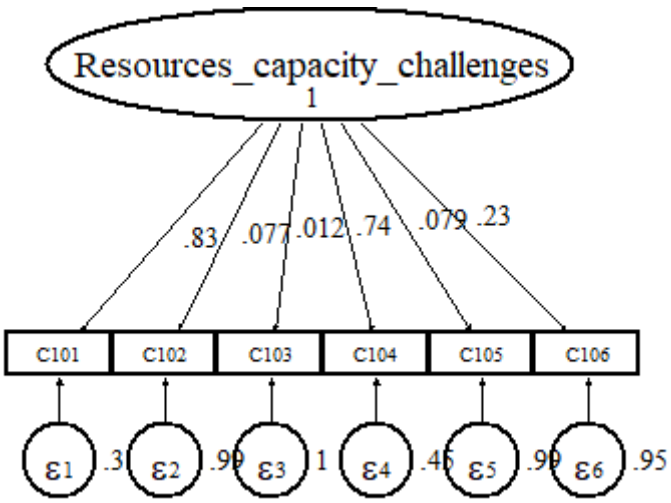
B1: Positive perceptions



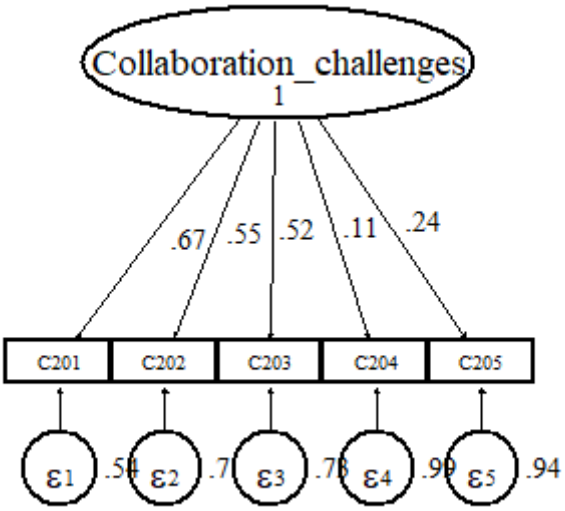

B2: Negative perceptions



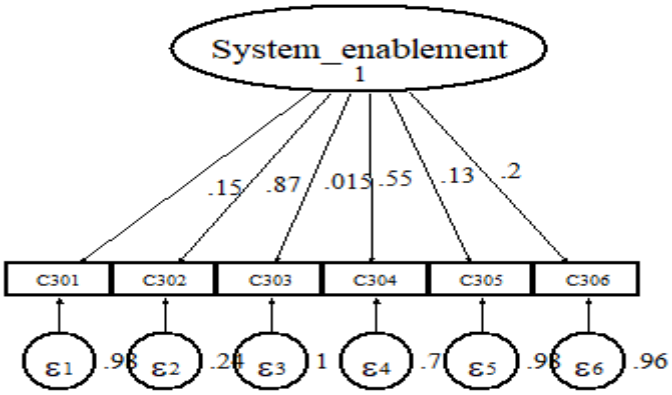

C1: Resources and capacity challenges



C2. Collaboration challenges




C3. System enablement challenges



# CHAPTER 5

# FINDINGS, LIMITATIONS AND RECOMMENDATIONS

## 5.1 INTRODUCTION

This chapter summarizes the study's findings and limitations, as well as recommendations for practice and future research.

## 5.2 PURPOSE OF THE STUDY

The purpose of the study was to describe the perspectives of schoolteachers on the current school health policy in public schools in Msunduzi Municipality, KwaZulu-Natal with the aim of recommending possible ways to improve the school health policy.

To achieve the purpose, the objectives of the study were to:

- Describe teachers' perspectives on the Integrated School Health Policy of Msunduzi Municipality.
- Identify teachers' challenges in the implementation of school health services.
- Make recommendations to improve school health services at Msunduzi Municipality.

## 5.3 RESEARCH DESIGN AND METHODOLOGY

A research design is the general strategy for answering a research topic, as well as the guidelines for ensuring the study's integrity (Abutabenjeh & Jaradat 2018:242; Polit & Beck 2012:724). For the study, the researcher chose a quantitative, non-experimental, descriptive strategy. Quantitative investigations are systematic, follow a set of methods, and collect empirical data (evidence), so the results are grounded in reality (Polit & Beck 2012:724). This design was deemed appropriate for the study by the researcher. The researcher thought this approach was adequate for gaining a thorough understanding of the situation and accurately describing the viewpoints of the participating teachers on the ISHP in the schools.

The study was conducted in the selected primary schools' natural setting. Data was collected from 147 teachers at the selected schools, using a structured self-administered questionnaire. The questionnaire consisted of closed questions and was divided into three sections:

- Section A: Demographic profile
- Section B: Perceptions
  B1: Positive
  B2: Negative
- Section C: Challenges
  C1: Resources and capacity
  C2: Collaboration
  C3: System enablement

Abutabenjeh and Jaradat (2018:242) describe a research design as a general plan regarding how a researcher attempts to answer research questions. A quantitative, non-experimental, descriptive cross-sectional research design was used in this study. The study was undertaken in a natural setting of primary schools, and the design used is suitable in gathering knowledge in situations where one would not be able to do experimental designs (Singh 2016:104). The research design used also ensured that data collection was done at one particular point in time and data was collected from relevant participants to address research objectives(Singh 2016:104).

Based on research objectives, a quantitative method was used in this research study (Appelbaum et al 2018:12; Saunders, Lewis & Thornhill 2012:172). The relevant population (Bacon-Shone 2015:34) considered in the study were the seven thousand two hundred (N=7200) teachers at public ordinary primary schools employed by the Department of Education within Msunduzi Municipality and teaching Grades 1 to 7 in uMgungundlovu district in KwaZulu-Natal province. The primary schools targeted are those where school health services are provided to learners through the integrated school health programme (ISHP) collaboratively rolled out by Department of Health, and Department of Basic Education through relevant structures and levels.

A sampling random sampling approach (Abutabenjeh & Jaradat 2018:243) was used in light of the rationale that the method involves selecting sample elements randomly for

inclusion in the sample, with each element having an equal chance of selection (Collis & Husse 2014). In addition, given the known size of the population of targeted teachers, simple random sampling was used given that it ensures speed, easiness and cost-effectiveness during data collection (Gray, Grove & Sutherland 2018).

Ethical issues that were addressed during sampling include representativity of the population studied, minimum bias in selecting elements and sampling adequacy. From the 7200 teachers across schools in the district, a minimum of one hundred and thirty-six (n=136) teachers were required to be sampled at 95% confidence interval and 5% margin of error with 10% response distribution. From the primary data collection conducted using a structured questionnaire, a sample of one hundred and forty-seven (n=147) teachers participated in the survey. Gray et al (2017:511) describe data collection as the identification of participants and precise, systematic gathering of data relevant to the research objectives and research questions. A structured self-administered questionnaire based on a Likert scale was used in light of the rationale that Likert-scale questions are less invasive compared to unstructured questions (Abutabenjeh & Jaradat 2018:243; Taber et al 2020:11).

Ethical considerations were observed during data collection (Singh 2016:219). An ethical approval was obtained from the Higher Degrees committee of the University of South Africa, Department of Health Studies (HSHDC/940/2019) before commencing the study (see Annexure A). Permission was obtained from KZN provincial research committee as well as the local government authorities to conduct research in the local schools (see Annexure B), and a research protocol was made available to local government authorities. The researcher contacted the schools' principals and head of departments to request permission to conduct the study at their schools and on which days convenient for them to be visited. Research ethical practices observed during data collection include informed consent (see Annexure C) obtained from participants during the conduct of the study (Singh 2016:220), ensuring anonymity of the participants (Lenkokile 2016:60), privacy and confidentiality of participants' information and data collected (Singh 2016:220), autonomy to voluntarily participate in the study, justice in terms of fairness to all respondents, and beneficence and non-maleficence (Engwa 2015:180-181).

Data capturing, cleaning and processing were conducted using the CSPro, and exported to SPSS version 26 for statistical analysis using exploratory factor analysis to determine factor structures, and confirmatory factor analysis to validate hypothesised relations between observed variables and analogous latent constructs using Stata. Exploratory factor analysis determines the dimensionality of variables for which latent variables are unobserved constructs (Watkins 2018:219), and confirmatory factor analysis verifies factor structures or tests the hypothesis that a relationship between observed variables and their latent construct(s) exists (Suhr & Shay 2009:3).

## 5.4 SUMMARY AND INTERPRETATION OF RESEARCH FINDINGS

Main findings obtained from data analysis conducted include frequencies of teachers' demographic profiles, descriptive statistics of responses, scale reliability and sampling adequacy of data, total variances explained and construct validity, and relationships of observed items and latent factors based on confirmatory factor analysis estimates.

## 5.5 FINDINGS

The findings are described briefly according to the sections of the questionnaire.

### 5.5.1 Section A: Respondents' biographical profile

Of the respondents, 80% (n=118) were females, and 20% (n=39) were males; 41.5% (n=61) were 30-39 years old; 27.9% (n=41) were 40-49; 17.7% (n=26) were 50-55; 12.2% (n=18) were 20-29, and 0.7% (n=1) were 60 years old; 57.1% (n=84) worked in urban schools and 42.9% (n=63) worked in rural schools.

Demographic profiles of respondents were presented in a frequency distribution table. Frequencies are organised tabulations or graphical representations of the numbers and percentages of cases in each group on a measurement scale in the data (Manikandan 2011:54). Demographic variables presented are teachers' sex, age groups, type of school at which teachers work, visits to schools by school health nurses and health services offered. 80% (n=118) of teachers were females, 42% (n=61) were aged 30-39 years and 57% (n=84) of teachers work at rural schools.

Regarding visits by school health nurses to schools, 50% (n=74) of the teachers reported that school health nurses visit schools once in every three months, and 48% (n=17) reported that school health nurses visit the schools once in six months. The Integrated School Health Policy (ISHP2021:9) states that infrequent visits by nurses to schools are a result of insufficient staff (DOH & DOBE 2012:9). As a result, the policy indicates that follow-ups are seldom conducted, “as nurses generally visit schools once a year”. Equal shares equal to 36% (n=53) of teachers reported that hearing assessments and ear examinations are the key health services offered at schools, consistent with Govender et al (2018:53) who found that hearing assessments and ear examinations are integral elements of school health services for screening learners for abnormal tympanometry. The results are consistent with Mahomed-Asmail, Swanepoel and Eikelboom (2016:29) who found that hearing loss by South African urban school children need follow-ups.

### 5.5.2 General responses on measurement items

Regarding school health nurse visits to the schools, 50.3% (n=74) of the respondents, indicated once in three months; 48.3% (n=71) indicated once in six months, and 1.4% (n=2) indicated never.

### 5.5.3 Section B: Respondents’ perceptions

Regarding school health nurse visits to the schools, 50.3% (n=74) of the respondents, indicated once in three months; 48.3% (n=71) indicated once in six months, and 1.4% (n=2) indicated never.

Regarding main health services offered at their schools, 6.1% (n=9) indicated ear examinations; 2.7% (n=4) indicated visual assessments; 19.0% (n=28) indicated speech assessments; 36.1% (n=53) indicated hearing assessments, and 36.1% (n=53) indicated ear examinations.

Regarding their positive perceptions, the respondents indicated that there was less absenteeism at school since the introduction of the school health services; there was reasonable understanding of the content of the policy; there is meaningful promotion of or advocacy for implementation of school health policy; the services rendered by nurses

and teachers are appreciated, and there is involvement of the community in the programme.

The arithmetic means equal to nearly 3 for five out of six items measuring positive perceptions show that respondents were generally neutral regarding whether there was less absenteeism at school since the introduction of the school health services (mean=2.88), the level of understanding of the origins and content of the policy architecture is reasonable (mean=3.14), there is meaningful promotion or advocacy around implementation of health policy (mean=3.16), services rendered by nurses and teachers are appreciated (mean=3.33) and there is involvement of the community in the programme.

Descriptive statistics were used to assess teachers' responses under each construct. According to Kaur, Stoltzfus and Yellapu (2018:60), descriptive statistics summarize data in an organised manner. Mean statistics presented relate to positive and negative perceptions, and challenges faced in the ISHP implementation, namely resources and capacity, collaboration, and system enablement. Likert scale of response options were 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree.

Positive perceptions arithmetic means equal to nearly 3 for most items suggest that the respondents generally remained neutral regarding whether there is less absenteeism at school since the introduction of the school health services (mean=2.88, whether the level of understanding of the content of the policy architectureis reasonable (mean=3.14), presence of meaningful promotion or advocacy around implementation of health policy (mean=3.16), appreciation of services rendered by nurses and teachers (mean=3.33) and community involvement in the programme (mean=3.35). These results conform to Keothaile (2016:52) who reports that health care services provided by care givers to learners with health problems were appreciated. Keothaile (2016:51) and Dibakwane and Peu (2018:4) further reported that there was appreciation of services of school health nurses and increased health benefits to learners.

Regarding their negative perceptions, the respondents indicated that poor road networks in rural communities made it difficult for outreach programmes; negative attitudes by managers due to poor understanding of school health services; supervisory

visits and spot checks were not conducted, and school health services were an extra responsibility leading to increased pressure for teachers.

Negative perceptions mean statistics equal to 3 for most items show that participants remained neutral on whether poor road networks in rural communities make it difficult for outreach programmes (mean=2.65), managers' negative attitude due to poor understanding of school health services (mean=2.55), supervisory visits and spot checks are not conducted (mean=3.33), and school health services are an additional responsibility leading to increased pressure to teachers (mean 3.38). These findings are consistent with Dibakwane and Peu (2018:2) who found that poor road networks, lack of consistent supervisory visits, lack of support from management and additional tasks to educators were challenges on successful ISH programme implementation.

### 5.5.4 Section C: Challenges

This section covered resources and capacity, collaboration, and system enablement challenges.

Regarding resources and capacity challenges, respondents indicated that there were inadequate financial, human and material resources; increased numbers of learners led to constraints in the capacity of staff to accomplish tasks; high workloads which limited optimal implementation of the programme's activities; a lack of clarity of roles for school managers and primary health care facility managers, and a lack of basic health knowledge among schoolteachers. Resources and capacity challenges arithmetic means nearly equal to 3 for the majority of items show that respondents generally agreed that there are inadequate financial, human and material resources (mean=3.65) and lack of basic health knowledge among schoolteachers (mean=3.90). Similar findings were reported by Shaibu and Phaladze (2010:201) and Keothaile (2016:53) who reported parallel results relating to resource challenges which include lack of space, absence of offices for school health nurses, insufficient human resources and high staff workloads.

Regarding collaboration challenges, the respondents indicated a lack of inter-sectoral collaboration between Departments; a lack of consultation between school managers and primary health facility managers; a lack of commitment to prioritise the

implementation; ineffective communication between the Department of Health and school role players, and an unbalanced distribution of school health education and nursing staff across schools. Collaboration challenges mean statistics nearly equal to 3 for all measurement items suggest that teachers remained neutral regarding lack of inter-sectoral collaboration between Departments (mean=2.81), lack of consultation between school managers and primary health facility managers (mean=2.66), lack the commitment to prioritize the implementation (mean=2.61), ineffective communication between Department of Health and school role players (mean=3.12) and unbalanced distribution of school health education and nursing staff across schools (mean=3.24). These findings conform to Rasesemola, Matshoge and Ramukumba (2019:6) who found lack of collaboration and consultations, limited commitment and low staff levels as part of key challenges on implementation of the ISH programme.

Regarding systems enablement challenges, the respondents indicated bad attitudes and inadequate willingness by some role players involved in policy implementation; limited space for providing health services and no proper offices for school health nurses; insufficient support received from management is to efficiently execute roles and tasks, and inadequate training of school managers or educators on policy implementation. System enablement arithmetic means equal to 4 for most items show that participants generally agreed that there is bad attitude and inadequate willingness by some role players involved in policy implementation (mean=3.73), limited space for providing health services and no proper offices for school health nurses (mean=3.81), the support received from management is insufficient to efficiently execute roles and tasks (mean=3.97), and there is inadequate training of school managers or educators with regards to policy implementation (mean=3.53). Dibakwane and Peu (2018:6) similarly found poor schools and health care facilities infrastructure as barriers to the provision and delivery of school health care services.

### 5.5.5 Scale reliability and sampling adequacy

Suhr and Shay (2009:1) describe reliability as the degree of accuracy and precision of a measurement instrument. The Cronbach's alpha coefficient value (α=0.836) for twenty-nine items was above the minimum acceptable 0.7 threshold (Cronbach 1951:311), thus showing that all items measured the broad unidimensional construct sought to be assessed in the research study regarding teachers' perceptions and challenges

experienced in the implementation of the ISH programme at schools. The sampling adequacy test was done using the Keiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (MSA) criterion (Watkins 2018:226; Kaiser 1974). The overall KMO-MSA value equal to 0.795 above the minimum acceptable 0.600 score (Chan & Idris 2017) confirm sampling adequacy. Watkins (2018:226) states that overall KMO values equal to at least 0.7 are desired (Lloret et al 2017; Hoelzle & Meyer 2013), while values less than 0.50 are generally regarded as unacceptable (Hair et al 2010).

Determinants and Bartlett's test of sphericity statistics rejected the null hypothesis that the data for items was not suitable for detection of factor structure. Determinants of positive perceptions (0.181), negative perceptions (83.608), resources and capacity (91.069), collaboration (64.806) and system enablement (59.483), and Bartlett's chi-squares of positive perceptions (244.552), negative perceptions (83.608), resources and capacity (91.069), collaboration (64.806) and system enablement (59.483) with p-values for all constructs' corresponding chi-square values were less than 0.001. The rejected null hypothesis of the Barlett's test at 5 percent significance level states that the observed correlation matrix is an identity matrix, hence variables are unrelated and not suitable for structure detection (Field 2013:674). Given that determinants of correlation matrices for all dimensions were greater than 0.00001, no multicollinearity problem existed in the data, hence no items had to be eliminated (Field 2013: 686).

### 5.5.6 Total variances explained and factor loadings of constructs' items

Following validation of suitability of data for factor analysis, exploratory factor analysis was conducted to determine factor structures (Laher 2010:2). Factor structures were used to ensure that no items load profoundly on more than one factor (Watkins 2018:225; Tabachnick & Fidell 2014:480; Stevens 2012:345). Total variances explained were as follows: positive perceptions (42%), negative perceptions (23.9%), resources and capacity (30.2%), collaboration (30.8%) and system enablement (29.7%).

Factor loadings were used to retain items with high loadings (≥0.5). Watkins (2018:225), Tabachnick and Fidell (2014:480) and Stevens (2012:331), deemed to have had significance in assessing the teachers' perspectives on the integrated school health (ISH) policy across schools in Msunduzi Municipality in KwaZulu-Natal. Positive perceptions items with highest loadings are that there is meaningful promotion or

advocacy around the implementation of the health policy (loading=0.879), level of understanding of the origin and content of the policy architecture is reasonable and services rendered by nurses and teachers are appreciated (loading=0.677). These findings are consistent with Keothaile (2016:56) and the UNFPA (2015:17) who found that participation by the community ensured successful and effective implementation of the programme and provision of health services to learners. Kolbe (2019:452) found that the ISHP enhanced understanding of the policy architecture and stakeholder participation, and thus improved learner attendance at school. Kolbe (2019) also found that schools materially influence both health and education, and substantially determine the future well-being and economic productivity of populations. Modern school health programmes include 10 interactive components: health education; physical education ,health services, health promotion , social services, community involvement, physical activity; nutritional environment and counselling services.

Negative perceptions items with highest loadings are those which indicated that spot checks and supervisory visits are not conducted (loading=0.760), school health services are an added responsibility leading to increased pressure to teachers (loading=0.635), and school health service disturbs school lessons (loading=0.470). The findings are consistent with Dibakwane and Peu (2018:2) and UNFPA (2015:20) who found that poor road networks, lack of consistent supervisory visits, lack of support from management, and staff shortages led to more responsibilities to educators.

Resources and capacity challenges items which had highest loadings items indicate presence of lack of basic health knowledge among schoolteachers (loading=0.812), and inadequate financial, human and material resources (loading=0.685). These results conform to findings reported by Sarkin-Kebbi and Bakwai (2016:10) in which resource constraints and poor capacity were cited as major obstacles in the effective delivery of health services. Dibakwane and Peu (2018:4) reported similar challenges which include lack of space, absence of offices for school health nurses, insufficient human and material resources, high staff workloads and poor infrastructure facilities.

Collaboration challenges items which had highest loadings show that there was lack of inter-sectoral collaboration among departments (loading=0.7), lack of consultation between school managers and primary health facility managers (loading=0.558), unbalanced distribution of school health education and nursing staff across schools

(loading=0.526), lack of commitment to prioritise implementation (loading=0.454) and ineffective communication between Department of Health and school role players (loading=0.408). Dibakwane and Peu (2018:7) also found lack of collaboration among departments regarding consultations, commitment for ISH programme implementation and poor communication as barriers of the success of the ISH programme.

System enablement challenges items with high loadings are those which indicate that there was inadequate training of school managers or educators with regards to policy implementation (loading=0.818), bad attitude and inadequate willingness by some role players in policy implementation (loading=0.726) and the support received from management was insufficient to efficiently execute roles and tasks (loading=0.594). These findings reported in this study are consistent with results found by Khoza (2017:66) which similarly show that during implementation of the ISHP, there was bad attitude and poor stakeholder cooperation. Rasesemola, Matshoge and Ramukumba (2018:5) found that there was insufficient training and integration of stakeholders.

### 5.5.7 Relationships between latent constructs and observed items

Estimates from CFA were used to validate relations between observed items and their associated latent factors assessing teachers' perspectives on the integrated school health (ISH) policy across schools in Msunduzi Municipality, KwaZulu-Natal. The CFI and TLI fit indices were used to evaluate the goodness of fit of the models (Parry 2019; Kenny 2014; Hooper, Coughlan & Mullen 2008).

Positive perceptions estimates show that indicators which had highest association with the construct "positive perceptions" at 5 percent significance level are those which suggest that "there is meaningful promotion or advocacy around implementation of the health policy" (coeff=0.845; z-stat=20.22", "services given by nurses and teachers are appreciated" (coeff=0.647; z-stat=11.14) and "the level of understanding of origins and content of the policy architecture is reasonable" (coeff=0.630; z-stat=10.56; $p<0.01$). These results are consistent with findings by UNFPA (2015:28) which reports that the ISH programme played a great role in ensuring that learners received broad health services which improved health status. Dibakwane and Peu (2018:6) also found that due to the implementation of the ISHP, low absenteeism was reported and learners completed their education without illness-related absences.

Negative perceptions estimates show that items with significant positive coefficients at 5 percent significance level include those which indicate that “spot checks and supervisory visits are not conducted” (coeff=0.746; z-stat=6.48), “school health services are an additional responsibility leading to increased pressure to teachers” (coeff=0.705; z-stat=6.48), and “school health services disturb school lessons” (coeff=0.409; z-stat=4.62). These findings are confirmed by Khoza (2017:62) and Sarkin-Kebbi and Bakwai (2016:11) who found poor road networks, lack of consistent supervisory visits and spot checks, lack of management support, and staff shortages which caused work pressure and more responsibilities as the key challenges of the ISH programme.

Resources and capacity challenges estimates show that items had significant positive coefficients on their latent variable are those which show that there was “inadequate financial, human and material resources” (coeff=0.857; z-stat=4.86), “lack of basic health knowledge among schoolteachers” (coeff=0.720; z-stat=7.45) and “high workloads which limit the optimal implementation of the programmes’ activities” (coeff=0.229; z-stat=2.57). Rasesemola, Matshoge and Ramukumba (2018:6) and Shaibu and Phaladze (2010:201) reported similar findings which include inadequate human and material resources, high staff workloads and poor infrastructure.

Collaboration challenges standardized estimates show that most items had significant positive coefficients on their latent construct. Items which had significant associations are those which noted “lack of inter-sectoral collaboration among Departments (coeff=0.805; z-stat=5.81), “lack of consultation between school managers and primary health facility managers” (coeff=0.466; z-stat=4.72; “lack of commitment to prioritize implementation” (coeff=0.446; z-stat=4.36), and “unbalanced distribution of school health education and nursing staff across schools” (coeff=0.476; z-stat=3.30). Kolbe (2017:446) found lack of sectoral collaboration and consultations, lack of stakeholder commitment and poor staffing levels as key barriers of ISH programme.

System enablement items which had significant positive coefficients are those which suggest that there was “bad attitude and inadequate willingness by some role players in policy implementation” (coeff=0.746; z-stat=6.48; $p<0.01$), “support received from management is insufficient to efficiently execute roles and tasks (coeff=0.553; z-

stat=4.45), and “lack of national policy guidelines for implementation of Integrated School Health Policy (coeff=0.202; z-stat=2.1).

These findings conform to Dibakwane and Peu (2018:6) and Sarkin-Kebbi and Bakwai (2016:10) who similarly found poor schools and health care facilities infrastructure, lack of guidelines on implantation of the ISH policy, inadequate support from management, poor quality of equipment and weak monitoring systems as barriers to the provision of school health services.

## 5.6 CONCLUSIONS

The study found that the respondents were knowledgeable about the ISHP and displayed a positive attitude and behaviour towards school health services and their importance.

From the results it can be concluded that the respondents believed that if the identified weaknesses and challenges were addressed, learners’ health, well-being and educational outcomes would be significantly improved. Moreover, collaboration between the DOH, DOBE and DOSD, local bodies and communities would play a role in improving the health, educational, nutritional and employment situation in the country. This would significantly contribute to health and economic recovery from the Covid pandemic.

## 5.7 CONTRIBUTION OF THE STUDY

The findings from this study will contribute to the body of knowledge on the implementation of the Integrated School Health Policy.

The main contribution of the study was the identification of the respondent teachers’ positive and negative perceptions of and challenges to the effective delivery of school health services as part of the ISHP in selected schools in Msunduzi Municipality in KwaZulu-Natal. The study should raise awareness of the ISHP thereby promoting/encouraging school health services and raising school and community awareness of the policy and programme. The findings should help in identifying areas that need emphasis in effective implementation/management by addressing

stakeholders involvement, cooperation and collaboration. This, in turn, should lead to improved effectiveness and implementation of the programme. The study revealed the importance of the "buy in" of all stakeholders and their full commitment and collaboration.

## 5.8 LIMITATIONS OF THE STUDY

This study was limited by time and financial constraints. The study was conducted with 147 teachers in primary schools in one municipality and district in KwaZulu-Natal therefore the findings cannot be generalised to other districts or to other provinces. Moreover, only teachers' perceptions and experiences were examined therefore more studies would be needed on the perceptions and experiences of school health nurses, school principals, and district health service managers.

The findings obtained in this research study cannot be generalised to all since the sample size used was quite small for national representivity. The study was only conducted in one province out of nine provinces in South Africa. In addition, out of ten districts in KZN province, the study was conducted in only district, making the results not generalisable to all schools in South Africa and also in KZN. Data used was self-reported and based on teachers' perceptions, which could be deemed to remain valid only at the time during which survey data was collected from the participants.

This study analysed teachers' perspectives on integrated school health (ISH) policy across schools in Msunduzi Municipality, KwaZulu-Natal province. Construct validity and scale reliability tests were conducted to determine the suitability of data for factor analysis, and assess the scale reliability of the research instrument's items. Based on Keiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (MSA), most items were retained. The same items were retained in factor analysis performed via the Varimax rotation. Results from exploratory factor analysis are the total variances explained and factor structures, and confirmatory factor analysis was finally conducted.

## 5.9 RECOMMENDATIONS

Based on the findings, the researcher makes the following recommendations for practice and further research.

### 5.9.1 Department of Health (DOH)

The researcher recommends that the Department of Health (DOH) and Department of Basic Education (DOBE) and Department of Social Development (DOSD) promote interdepartmental and inter-sectoral cooperation, performance and communication.

The Department of Health (DOH) should:

- Ensure that guidelines and protocols are provided and discussed with school principals and teachers to ensure that they understand their roles in the ISHP.
- Strengthen inter-sectoral collaboration between departments, schools, health care facilities and all stakeholders
- Ensure the provision of the national guidelines on the ISHP to all schools and health care facilities.
- Ensure the provision of national guidelines on the role and function of school health nurses and distribution of the guidelines to PHC facilities and schools.
- Allocate sufficient budgets for districts to procure resources, including vehicles, stationery, and necessary medical supplies
- Motivate for vacancies to employ more school health nurses and school health teams per municipality
- Ensure monthly provincial performance reports on district level to promote provision of services and
- Ensure the provision of timetables at district level indicating the number of school health visits to ensure sufficient coverage.
- Ensure regular meetings and reports between district and PHC managers to identify shortages, bottlenecks and challenges in order to strengthen the programme.
- Spot checks and audits in schools and school health team offices should be conducted quarterly for quality assurance and identification of any issues that were missed in reports.
- PHC unit managers should ensure that the school health teams allocated to their respective clinics have a school visit register to the times and dates of visits.
- PHC managers should have detailed weekly reports on all activities and obstacles or problems identified.

### 5.9.2 Department of Basic Education (DOBE)

The Department of Basic Education (DOBE) should:

- Ensure the provision of material resources, including national guides outlining the roles of schools in the ISHP.

- Highlight the school health programme at provincial level as an important part of school-based policies.
- Ensure the provision of policy guidelines stating the roles of school staff in the implementation of school health to promote and increase teamwork between teachers and school health teams.
- Ensure district level communication with school principals and heads of departments emphasising that school health is an integral part of policy in basic education.
- Communicate with principals and heads of departments that they should be prepared to allocate times to have school health visits at regular intervals as outlined in the policy.
- Help schools identify a space allocated specifically for the school health team to minimise delays during visits and disruption in the normal school curriculum.
- Arrange regular school level meetings to discuss school health policies to familiarise the teachers with the ISHP and increase awareness of their role in implementing the ISHP.
- Allocate school health champions per Grade to lead the implementation of the ISHP. The team of champions should oversee the running of the programme and help attend to the needs of the nurses coming for school health visits.

### 5.9.3 Further research

The researcher recommends that further research be conducted on the following topics:

- School principals' and teachers' perspectives on the Integrated School Health Policy in urban schools.
- Teachers'/school health nurses' challenges in the implementation of school health services.
- Parents' understanding and views on the ISHP.
- An examination of the requirement of parental informed consent for school health services and its effect on the ISHP.

## 5.10 CONCLUDING REMARKS

This study examined primary schoolteachers' perspectives on the Integrated School Health Policy at selected schools in Msunduzi Municipality, KwaZulu-Natal. The public health benefit of the ISHP and school health services can be achieved if parents have knowledge and positive attitudes towards the programme.

The study was a journey of discovery for the researcher who was encouraged by the participants' willingness and sharing.

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# ANNEXURES

**ANNEXURE A: Ethical Clearance from the Department of Health Studies, UNISA**

UNISA university of south africa

**RESEARCH ETHICS COMMITTEE: DEPARTMENT OF HEALTH STUDIES**
**REC-012714-039 (NHERC)**

03 December 2019

Dear Nelisiwe Nothile Buthelezi

**HSHDC/940/2019**

Student: Nelisiwe Nothile Buthelezi

Student No: 47978716

Supervisor: Prof TE Masango

Qualification: PhD

**Decision: Approval**

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**Name:** Nelisiwe Nothile Buthelezi

**Proposal:** School health nursing at Msunduzi Municipality in Kwazulu-Natal: Teachers' perspectives

**Qualification:** MA

**Risk Level:** Low risk

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Thank you for the application for research ethics approval from the Research Ethics Committee: Department of Health Studies, for the above mentioned research. Final approval is granted from 03 December 2019 to 03 December 2022.

*The application was reviewed in compliance with the Unisa Policy on Research Ethics by the Research Ethics Committee: Department of Health Studies on 03/12/2019.*

*The proposed research may now commence with the proviso that:*

1) *The researcher/s will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.*

2) *Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study, as well as changes in the methodology, should be communicated in writing to the Research Ethics Review Committee, Department*

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*of Health Studies. An amended application could be requested if there are substantial changes from the existing proposal, especially if those changes affect any of the study-related risks for the research participants.*

3) *The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study.*

4) *You are required to submit an annual report by 30 January of each year that indicates that the study is active. Reports should be submitted to the administrator HSREC@unisa.ac.za. Should the reports not be forthcoming the ethical permission might be revoked until such time as the reports are presented.*

*Note:*
*The reference numbers [top middle and right corner of this communiqué] should be clearly indicated on all forms of communication [e.g. Webmail, E-mail messages, letters] with the intended research participants, as well as with the Research Ethics Committee: Department of Health Studies.*

Kind regards,

**Prof JM Mathibe-Neke**
**CHAIRPERSON**
**mathijm@unisa.ac.za**

**Prof A Phillips**
**DEAN OF COLLEGE OF HUMAN SCIENCES**



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**ANNEXURE B: Requesting permission to conduct research in the KwaZulu-Natal Department of Health institutions**

Nelisiwe Buthelezi
0820755144

Dr Nzama
Kwa-Zulu Natal Department of Education
Private Bag X9137
Pietermaritzburg
3200

Dear Dr Nzama

**THE PROPOSED UNIVERSITY OF SOUTH AFRICA (UNISA) STUDY SCHOOL HEALTH NURSING AT MSUNDUZI MUNICIPALITY IN KWAZULU-NATAL: TEACHERS' PERSPECTIVES AND NOMINATION OF SITES**

My name is Nelisiwe Buthelezi; I am currently enrolled in the UNISA. I am doing a Master of Arts Degree in Nursing. I have initiated a non-funded academic study evaluating the teachers' perspective on the current Integrated School Health Policy.

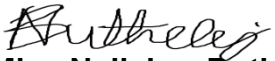
I am applying for the Msunduzi Municipality to be my main area of focus for the study here in Pietermaritzburg. The research proposal has been developed by me with the assistance of my supervising Professor TE Masango. The study population has been identified as teachers currently permanently employed by the Department of Education for a year and more between the ages of 20 and 55. The study site has not been identified precisely.

Should permission be granted by the Department of Education randomly selected schools within the Municipality will be selected. Written communication to the department will be forwarded to update about such procedure. The proposed date of commencement of the data collection for the study will be between the 10th January 2021–31st October 2021.

The evaluations will inform future planning and implementation of the ISHP and benefit the Department of Health in the long term. It is against this background that I as a student in the UNISA would like to share the information on the outcome of the study to the relevant stakeholders. Your support for engaging with the nominated study area will be highly appreciated.

Please contact me Nelisiwe Buthelezi at 47978716@mylife.unisa.ac.za (0820755144) for further clarity on the matter.

Kind regards



**Miss Nelisiwe Buthelezi**
**MA Nursing Student**
**Date: 12/12/2020**

**ANNEXURE C: Permission granted to conduct research in the KwaZulu-Natal Department of Health institutions**

KWAZULU-NATAL PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

OFFICE OF THE HEAD OF DEPARTMENT

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Tel: 033 3921062 / 033-3921051
Email: Phindile.duma@kzndoe.gov.za
Buyi.ntuli@kzndoe.gov.za

**Enquiries:** Phindile Duma/Buyi Ntuli **Ref.**:2/4/8/7050

Miss Nelisiwe Nothile Buthelezi
114 Mnsinsi Road
Imbali Unit One
**PIETERMARITZBURG**
3219

Dear Ms Buthelezi

**PERMISSION TO CONDUCT RESEARCH IN THE KZN DoE INSTITUTIONS**

Your application to conduct research entitled: **"SCHOOL HEALTH NURSING AT MSUNDUZI MUNICIPALITY IN KWAZULU-NATAL TEACHERS' PERSPECTIVE:** in the KwaZulu-Natal Department of Education Institutions has been approved. The conditions of the approval are as follows:

1. The researcher will make all the arrangements concerning the research and interviews.
2. The researcher must ensure that Educator and learning programmes are not interrupted.
3. Interviews are not conducted during the time of writing examinations in schools.
4. Learners, Educators, Schools and Institutions are not identifiable in any way from the results of the research.
5. A copy of this letter is submitted to District Managers, Principals and Heads of Institutions where the Intended research and interviews are to be conducted.
6. The period of investigation is limited to the period from 19 November 2020 to 10TH March 2023.
7. Your research and interviews will be limited to the schools you have proposed and approved by the Head of Department. Please note that Principals, Educators, Departmental Officials and Learners are under no obligation to participate or assist you in your investigation.
8. Should you wish to extend the period of your survey at the school(s), please contact Miss Phindile Duma/Mrs Buyi Ntuli at the contact numbers above.
9. Upon completion of the research, a brief summary of the findings, recommendations or a full report/dissertation/thesis must be submitted to the research office of the Department. Please address it to The Office of the HOD, Private Bag X9137, Pietermaritzburg, 3200.
10. Please note that your research and interviews will be limited to schools and institutions in KwaZulu-Natal Department of Education.

**Dr. EV Nzama**
**Head of Department: Education**
**Date: 19 November 2020**

GROWING KWAZULU-NATAL TOGETHER

## ANNEXURE D: Participant information sheet

UNISA university of south africa

**PARTICIPANT INFORMATION SHEET**

Ethics clearance reference number: REC-012714-039 HSHDC940/2019
Research permission reference number: 2/4/8/7050

01/02/2021

SCHOOL HEALTH NURSING AT MSUNDUZI MUNICIPALITY IN KWAZULU-NATAL: TEACHERS' PERSPECTIVES

**Dear Prospective Participant**

**SCHOOL HEALTH NURSING AT MSUNDUZI MUNICIPALITY IN KWAZULU-NATAL: TEACHERS' PERSPECTIVES**

My name is Nelisiwe Buthelezi and I am doing research with Prof T.E. Masango, a professor, in the Department of Health Studies towards a Master of Arts in Nursing at the University of South Africa. We are inviting you to participate in a study entitled STUDY SCHOOL HEALTH NURSING AT MSUNDUZI MUNICIPALITY IN KWAZULU-NATAL: TEACHERS' PERSPECTIVES

**WHAT IS THE PURPOSE OF THE STUDY?**

I am conducting this research to find out the view point of the teachers of Msunduzi Municipality on the Integrated School Health Policy. With the aim to suggest policy changes, to improve the school health services.

**WHY AM I BEING INVITED TO PARTICIPATE?**

Why did you choose this particular person/group as participants?
I got the School contact details from the Department of Education Head office. This school was randomly selected from a group of other schools within the Msunduzi Municipality. I have chosen teachers because you are one of the key stake holders in the implementation of the Integrated School Health Policy(ISHP). The number of study participants targeted for this study to be a success is 250.

**WHAT IS THE NATURE OF MY PARTICIPATION IN THIS STUDY?**

You will be asked to fill out a simple questionnaire after signing consent to participate in the study. The study involves a questionnaire with structured questions. No personal information such as your name and ID number is required. You will be asked to select the most appropriate answer too you from 1-5 per question. 1 being strongly disagree and 5 being strongly agree. The expected time it will take for you to fill out the form is 15 minutes in your free time. The completed questionnaire will be collected after two days.

**CAN I WITHDRAW FROM THIS STUDY EVEN AFTER HAVING AGREED TO PARTICIPATE?**

Participation in the study is voluntary there is no penalty or loss of benefit for non-participation.
Participating in this study is voluntary and you are under no obligation to consent to participation. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. You are free to withdraw at any time and without giving a reason.

**WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?**

There is no incentive for participating in this study. Participating in this study will give you a chance to voice your opinion and contribute to the improvement of the Integrated School Health Policy long term.

**ARE THEIR ANY NEGATIVE CONSEQUENCES FOR ME IF I PARTICIPATE IN THE RESEARCH PROJECT?**

University of South Africa
Preller Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

Participating in this study will require you to use up 15 minutes of your time answering this questionnaire. No potential harm is foreseen in choosing to participate in this study Include any risk that may come from others identifying the person's participation in the research. The questionnaire will not have any identifiers that can be linked back to you individually. You will all be given a numbered questionnaire. That will make it difficult to trace back to you.

**WILL THE INFORMATION THAT I CONVEY TO THE RESEARCHER AND MY IDENTITY BE KEPT CONFIDENTIAL?**

Your name will not be recorded anywhere on the questionnaire and no one will be able to connect you to the answers you give. Your answers will be given a code number or a pseudonym and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings

The statician and external coder will have access to the data and they will be signing a confidentiality agreement to maintain confidentiality. Your answers may be reviewed by people responsible for making sure that research is done properly, including the statician, external coder, and members of the Research Ethics Review Committee. Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records.

Your anonymous data may be used for other purposes, such as a research report, journal articles and/or conference proceedings. Your privacy will be protected in any publication of the information e.g. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

**HOW WILL THE RESEARCHER(S) PROTECT THE SECURITY OF DATA?**

Hard copies of your answers will be stored by the researcher for a period of five years in a locked cupboard in her home electronic information will be stored on a password protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. Hard copies will be shredded and/or electronic copies will be permanently deleted from the hard drive of the computer through the use of a relevant software programme.

**WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICIPATING IN THIS STUDY?**

There will be no pay incentive that you will receive during and after participation in this study. You will not incur any costs to you financially for participating in this study.

**HAS THE STUDY RECEIVED ETHICS APPROVAL**

This study has received written approval from the Research Ethics Review Committee of the College of Agriculture and Environmental Sciences, Unisa. A copy of the approval letter can be obtained from the researcher if you so wish.

**HOW WILL I BE INFORMED OF THE FINDINGS/RESULTS OF THE RESEARCH?**

If you would like to be informed of the final research findings or should you require any further information or want to contact the researcher about any aspect of this study, please contact **Nelisiwe Buthelezi** on **082 0755 144** or email at 47978716@mylife.unisa.ac.za. The findings are accessible for 5 years.

Should you have concerns about the way in which the research has been conducted, you may contact **Prof T.E. Masango** on **012 429 3386** or email at Masante@unisa.ac.za Contact the research ethics chairperson of the CAES General Ethics Review Committee, **Prof EL Kempen** on **011-471-2241** or kempeel@unisa.ac.za if you have any ethical concerns.

Thank you for taking time to read this information sheet and for participating in this study.

Nelisiwe Buthelezi

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www.unisa.ac.za

## ANNEXURE E: Consent to participate in this research

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**CONSENT TO PARTICIPATE IN THIS STUDY**

Ethics clearance reference number: REC-012714-039 HSHDC940/2019
Research permission reference number: 2/4/8/7050

01/02/2021

SCHOOL HEALTH NURSING AT MSUNDUZI MUNICIPALITY IN KWAZULU-NATAL: TEACHERS' PERSPECTIVES

I, _____ (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read (or had explained to me) and understood the study as explained in the information sheet.

I have had sufficient opportunity to ask questions and am prepared to participate in the study.

I understand that my participation is voluntary and that I am free to withdraw at any time without penalty (if applicable).

I am aware that the findings of this study will be processed into a research report, journal publications and/or conference proceedings, but that my participation will be kept confidential unless otherwise specified.

I agree to the recording of the questionnaire

I have received a signed copy of the informed consent agreement.

Participant Name & Surname..... (Please print)

Participant Signature.....Date.....

Researcher's Name & Surname..... (Please print)

Researcher's signature.....Date.....

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## ANNEXURE F: Research questionnaire

UNISA university of south africa

College of Human Sciences
School of Social Sciences
Department of Health Sciences

**RESEARCH QUESTIONNAIRE**

Dear Research Participant

This structured self-administered questionnaire aims to obtain information relating to teachers' perspectives on the integrated school health policy of Msunduzi municipality in KwaZulu-Natal. Your input will significantly contribute to the development of suggestions or recommendations for policy change to improve the provision of school health services.

Please note that your participation in completing this questionnaire is entirely voluntary, and the anonymity of your identity is strictly observed and guaranteed. In addition, no part of your personal information as a participant will be disclosed to anyone, and all the information you provide will remain strictly confidential. Your integrity will not be compromised in any way whatsoever, and you are completely guaranteed of your right to withdraw from participating in this study at any point in time, should you feel so.

If you do not want to participate in the study, neither complete nor return the questionnaire. If you decide to participate, the questionnaire should take you about twenty minutes to complete. Please answer **ALL** questions as per instructions given. Try to honestly complete questions at the time you are most unlikely to be disturbed, and avoid spending too long on a question. There are no costs associated with completing the questionnaire other than your time.

**Upon completing the questionnaire, please return it to me in an envelope or via my email as soon as you can, and no later than 20 February 2021.**

If you have any queries or would like further information about this study, please contact me during office hours on 0820755144 or email: 47978716@mylife.unisa.ac.za. Should you have questions regarding ethical aspects of the study, please contact my supervisor, Prof TE Masango, during office hours at 012 429 3386 or e-mail: masante@unisa.ac.za.

I, the researcher, appreciate your commitment in completing this questionnaire and your contribution to the successful completion of the study. Should you need to know findings of the study, a copy of my completed research report can be made available to you upon request.

Ms. Nelisiwe Nothile Buthelezi
**Researcher**

Professor TE Masango
**Supervisor**

| **SECTION A: DEMOGRAPHIC INFORMATION** | | | |
|---|---|---|---|
| This section aims to obtain information on your general demographic profile. Please indicate your response by placing an **X** on the relevant code corresponding to your chosen answer. | | | |
| **Qn. #** | **Question** | **Response** | **Code** |
| A101 | Sex (gender) | Male<br>Female | 1<br>2 |
| A102 | Age group in which your age falls under | 20-29 years<br>30-39 years<br>40-49 years<br>50-59 years<br>60 years and above | 1<br>2<br>3<br>4<br>5 |
| A103 | Type of school at which you work | A Urban<br>B Rural | 1<br>2 |
| A104 | Estimated frequency of visits to the school by school health nurses | Never<br>Weekly<br>Monthly<br>Once in three months<br>Once in six months | 1<br>2<br>3<br>4<br>5 |
| A104 | Please select and indicate **one** major health service offered in your school | Nutritional assessments<br>Visual assessments<br>Speech assessments<br>Hearing assessments<br>Ear examination<br>TB screening<br>Oral health<br>Immunization<br>Sexual and reproductive health<br>Medical male circumcision<br>STIs and HIV counselling<br>Alcohol, smoking and diet | 1<br>2<br>3<br>4<br>5<br>6<br>7<br>8<br>9<br>10<br>11<br>12 |

## SECTION B: PERCEPTIONS

Questions in this section aim to explore teachers' perceptions on teachers' perspectives on the integrated school health policy. Subsection B1 explores positive perceptions, while subsection B2 explores negative perceptions. Please show your answer to each question based on the 5-point Likert scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Uncertain, 4 = Agree, and 5 = Strongly Agree. **Example**: Teamwork. If you consider **"Agree"** as your best answer, then you place an X in the box labelled 4 as shown herein below.

| 1 | 2 | 3 | X | 5 |
|---|---|---|---|---|

### SUBSECTION B1: POSITIVE PERSPECTIVES

| Code | Question | Response | | | | |
|---|---|---|---|---|---|---|
| | | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
| B101 | There is less absenteeism at school since the introduction of the school health services | 1 | 2 | 3 | 4 | 5 |
| B102 | The level of understanding of the origins and content of the policy architecture is reasonable | 1 | 2 | 3 | 4 | 5 |
| B103 | There is meaningful promotion or advocacy around the implementation of the health policy | 1 | 2 | 3 | 4 | 5 |
| B104 | Services rendered by nurses and teachers are appreciated | 1 | 2 | 3 | 4 | 5 |
| B105 | Provision of on-site treatment through primary health care mobile trucks is quite beneficial | 1 | 2 | 3 | 4 | 5 |
| B106 | There is involvement of the community in the programme | 1 | 2 | 3 | 4 | 5 |

### SUBSECTION B2: NEGATIVE PERSPECTIVESS

| Code | Question | Response | | | | |
|---|---|---|---|---|---|---|
| | | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
| B201 | The school health service disturbs school lessons | 1 | 2 | 3 | 4 | 5 |
| B202 | Poor road networks in rural communities, make it difficult for outreach programmes | 1 | 2 | 3 | 4 | 5 |
| B203 | Negative attitude by managers due to poor understanding of school health services | 1 | 2 | 3 | 4 | 5 |
| B204 | Spot checks and supervisory visits are not conducted | 1 | 2 | 3 | 4 | 5 |
| B205 | School health services are an additional responsibility leading to increased pressure to teachers | 1 | 2 | 3 | 4 | 5 |
| B206 | Some school nurses are refused entry into schools | 1 | 2 | 3 | 4 | 5 |

### SECTION C: CHALLENGES

Questions in this section aim to explore the challenges facing teachers in implementation of school health services. The challenges are grouped in subsections; namely: subsection C1: Resources and Capacity; subsection C2: Collaboration; and subsection C3: System Enablement. Please show your answer to each question based on the 5-point Likert scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Uncertain, 4 = Agree, and 5 = Strongly Agree.
**Example**: Time constraints. If you consider **"Agree"** as your best answer, then you place an X in the box labelled 4 as shown herein below.

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| | | | X | |

**SUBSECTION C1: RESOURCES AND CAPACITY**

| Code | Question | Response | | | | |
|---|---|---|---|---|---|---|
| | | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
| C101 | Inadequate financial, human and material resources | 1 | 2 | 3 | 4 | 5 |
| C102 | Lack of clarity of roles for school managers and primary health care facility managers | 1 | 2 | 3 | 4 | 5 |
| C103 | Increased numbers of learners leading to constraints in the capacity of staff to accomplish tasks | 1 | 2 | 3 | 4 | 5 |
| C104 | Lack of basic health knowledge among school teachers | 1 | 2 | 3 | 4 | 5 |
| C105 | Inexperienced and unqualified providers of the school health programme | 1 | 2 | 3 | 4 | 5 |
| C106 | High workloads which limit the optimal implementation of the programme's activities | 1 | 2 | 3 | 4 | 5 |

**SUBSECTION C2: COLLABORATION**

| Code | Question | Response | | | | |
|---|---|---|---|---|---|---|
| | | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree |
| C201 | Lack of inter-sectoral collaboration between Departments | 1 | 2 | 3 | 4 | 5 |
| C202 | Lack of consultation between school managers and primary health facility managers | 1 | 2 | 3 | 4 | 5 |
| C203 | Lack the commitment to prioritize the implementation | 1 | 2 | 3 | 4 | 5 |
| C204 | Ineffective communication between Department of Health and school role players | 1 | 2 | 3 | 4 | 5 |
| C205 | Unbalanced distribution of school health education and nursing staff across schools | 1 | 2 | 3 | 4 | 5 |

| SUBSECTION C3: SYSTEM ENABLEMENT | | | | | | | |
|---|---|---|---|---|---|---|---|
| Code | Question | Response | | | | | |
| | | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | |
| C301 | Weak institutional arrangements relating to monitoring and evaluation systems | 1 | 2 | 3 | 4 | 5 | |
| C302 | Bad attitude and inadequate willingness by some role players the in policy implementation | 1 | 2 | 3 | 4 | 5 | |
| C303 | Limited space for providing health services and no proper offices for school health nurses | 1 | 2 | 3 | 4 | 5 | |
| C304 | The support received from management is insufficient to efficiently execute roles and tasks | 1 | 2 | 3 | 4 | 5 | |
| C305 | Inadequate training of school managers or educators with regards to policy implementation | 1 | 2 | 3 | 4 | 5 | |
| C306 | Lack of national policy guidelines for the implementation of integrated school health policy | 1 | 2 | 3 | 4 | 5 | |

**Thank you for your time and participation**

## ANNEXURE G: Letter from the statistician

**Testimonial: Provision of statistical data analysis and reporting services**

**TO WHOM IT MAY CONCERN**

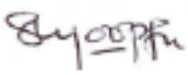
This serves to confirm that I, Elvis M Ganyaupfu, provided statistical data analysis and reporting services as an independent Statistician consultant in an academic research study conducted as per the details provided herein below:

Principal Investigator: Mrs Gifty Adu
Contact Mobile: +27 73 522 4499
Email: 67125018@mylifeunisaac.onmicrosoft.com
Student Number: 67125018
University and Department: University of South Africa; Department of Health Studies
Thesis Title: Patient Safety Practices of Nurses in Private Health Setting within Gauteng Province, South Africa
Degree: PhD in Nursing
Project Supervisor: Dr SM Zuma
Email: ezumas@unisa.ac.za
Department: Health Studies

Based on the dichotomous nature of the most variables in the primary survey data collected and statistical theory, the appropriate statistical methods selected and used in conducting statistical data analysis using Statistical Package for Social Sciences (SPSS) software include frequencies, modes, construct validity tests and exploratory factor analysis (EFA) in which total variances explained and factor structures were produced for group items under each construct on which primary data was collected.

I kindly take this opportunity to wish Gifty success in her future endeavours.

With sincere thanks and regards.

Signed: 

Date: 31st October 2021

**ANNEXURE H: Letter from the language editor**

Cell/Mobile: 073 782 3923

53 Glover Avenue
Doringkloof
0157 Centurion

28 January 2022

**TO WHOM IT MAY CONCERN**

I hereby certify that I edited the language and content of Nelisiwe Buthelezi's master's dissertation, **School health nursing at Msunduzi Municipality in KwaZulu-Natal: teachers' perspectives**.

*IM Cooper*

Iauma M Cooper
192-290-4

**ANNEXURE I: Turnitin originality report**

# Digital Receipt

This receipt acknowledges that Turnitin received your paper. Below you will find the receipt information regarding your submission.

The first page of your submissions is displayed below.

| | |
|---|---|
| Submission author: | Nelisiwe Nothile Buthelezi |
| Assignment title: | Revision 2 |
| Submission title: | 3rd revision |
| File name: | 47978716_Nelisiwe_Buthelezi_Turnit_copy.docx |
| File size: | 3.18M |
| Page count: | 180 |
| Word count: | 38,587 |
| Character count: | 225,946 |
| Submission date: | 08-Feb-2022 05:16PM (UTC+0200) |
| Submission ID: | 1757734897 |

SCHOOL HEALTH NURSING AT [illegible] MUNICIPALITY IN KWAZULU-NATAL: TEACHERS' PERSPECTIVES

by

NELISIWE BUTHELEZI

submitted in accordance with the requirements

for the degree of

MASTER OF ARTS

in the subject

NURSING SCIENCE

at the

UNIVERSITY OF SOUTH AFRICA

SUPERVISOR: PROF TE MASHAMBA

January 2022

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