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The development of a culturally tailored and contextually sensitive behavior change intervention for heterosexual Xhosa-speaking women in the Eastern Cape province, South Africa

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THE DEVELOPMENT OF A CULTURALLY TAILORED AND CONTEXTUALLY SENSITIVE BEHAVIOUR CHANGE INTERVENTION

FOR HETEROSEXUAL XHOSA-SPEAKING WOMEN IN THE EASTERN CAPE PROVINCE, SOUTH AFRICA

FEZIWE MPONDO

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The development of a culturally tailored and contextually sensitive behavior change intervention for heterosexual Xhosa-speaking women in the Eastern Cape Province, South Africa

Proefschrift

ter verkrijging van de graad van doctor aan de Universiteit Maastricht,
op gezag van de Rector Magnificus, Prof. dr. Rianne. M. Letschert
volgens het besluit van het College van Decanen, in het openbaar te verdedigen
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Feziwe Mpondo

Promotores

Prof. dr. R. A. C. Ruiter
Prof. dr. H. W. van den Borne
Prof. dr. S. P. Reddy (HSRC, University of the Western Cape, South Africa)

Beoordelingscommissie

Prof. dr. Gerjo Kok (Voorzitter)
Prof. dr. Anja Krumeich
Dr. Joanne Leerlooijer (Hogeschool Utrecht)
Dr. Karlijn Massar
Prof. dr. Sibusiso Sifunda (HSRC, Walter Sisulu University, South Africa)

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Chapter One

General Introduction

This thesis is about the development of a culturally tailored and contextually sensitive behavior change intervention, which was designed to empower heterosexual Xhosa-speaking women in the Eastern Cape province, South Africa. The rationale and interest behind this work lies in the fact that South Africa is a growing and developing democracy, at the same time the country has a population that continues to struggle with the legacy of Apartheid. The past regime caused social disruption, created structural deprivation and socio-economic oppression. Even though all genders continue to face the consequences of oppression, women alongside those consequences are also confronted with socio-cultural conditions that are generally disempowering and unsafe, which lead to adverse health outcomes. The goal for this thesis was to first use a systematic approach to understand the socio-cultural context in which rural women live. The next step was to explore the determinants of disempowerment amongst our sampled population as well as associated behaviors that may affect women's wellbeing. Then, behaviors that lead to adverse health outcomes would be targeted through the application of sound theory-based intervention methods.

This chapter provides a background on poverty as well as its prevalence globally, in sub-Saharan Africa and South Africa, respectively. It looks at the unique factors that drive and maintain rural poverty in South Africa, and how these have adverse outcomes for households in general, as well as how they have a heavy impact on women in particular. This chapter then highlights how the context of poverty creates circumstances that compromise the wellbeing of young women, thus necessitating interventions that will target the determinants of ill health. Further, the importance of using systematic approaches for developing those interventions in order to see an effect on the targeted determinants is discussed. The chapter concludes by giving a description of the rural community that was targeted for this study, and also highlights the studies that culminated from this work.

Poverty

Extreme poverty is a widespread and obstinate problem for many countries where households and individuals lack the capacity to secure necessities such as food, water, electricity, and quality health services (Millennium Development Goals Summary Report, 2015). When poverty is measured in monetary terms, as is standard world practice, the PovCalNet a primary source of international poverty estimates is used. The PovCalNet shows that about 746 million people in the world live in extreme poverty; this means that they live below $1,90 a day (World Bank Data, 2017; Castaneda et al., 2016; Poverty and Shared Prosperity-World Bank, 2016). These people mainly reside in two under-developed and developing regions of the world, namely Asia and the Pacific (327 million) and sub-Saharan Africa (383 million) (Poverty and Shared Prosperity-World Bank, 2016).

Even though World Bank data (2017) shows that extreme poverty is being reduced, it is clear that this is not happening at a fast enough pace, therefore many lives remain insecure. Nevertheless, it is notable that the Asia-Pacific region has been performing exceptionally well in reducing extreme poverty, while sub-Saharan Africa has been lagging behind. The Asia-Pacific region has managed to half its poverty rates such that in 2013 only 21.9% of its population remained under the poverty line. The significant reduction was mainly facilitated by a fast economic growth that the region experienced in past decade (from the year 2000 to 2012) (Poverty and Shared Prosperity-World Bank, 2016). Whereas estimates in the year 2013 showed that sub-Saharan Africa only reduced extreme poverty by 3% in a decade (2000-2010), and this is despite a regional economic growth of 5-6% in the past 15 years (Poverty and Shared Prosperity-World Bank, 2016; World Bank, 2017). However, not all countries in the sub-Saharan region are performing badly, when data are disaggregated, countries such as Ghana, Botswana, Burkina Faso, and Tanzania are reported to have reduced their poverty rates by 7-11% over the past decade (World Bank Data, 2017). The success in reducing poverty rates for the above-mentioned countries can be attributed to increasing economic growth and other people-centered poverty alleviation approaches that have been implemented and proved to be effective (Ortiz-Ospina & Roser, 2016; Poverty and Shared Prosperity-World Bank,

2016). Also, it is important to highlight that some of the countries that are still struggling to overcome the burden of extreme poverty are either low-income countries with little or no economic growth, while other countries are politically unstable or torn by unending wars (Baro & Deubel, 2006).

Statistics show that South Africa is also burdened by extreme poverty, despite the fact that it is classified as an upper-middle income country (Kumah & Omilola, 2014). When trends of the past two decades are analyzed, data show that poverty rates were extremely high in 1995, where 30.92% of the population lived below the poverty line. Post-1995, South Africa experienced a decade of strong economic growth, which led to the reduction of poverty by 7%; extreme poverty rates then dropped to 23.55% by the end of 2005 (Bhorat & Oosthuizen, 2012). It is in the past decade that South Africa has not really been able to reduce the rate of extreme poverty further; it remains at 20.2% (StatsSA, 2014).

Poverty is more prevalent in rural areas

In South Africa poverty affects both peri-urban and rural households, however, studies show that socio-economic deprivation is more pronounced in rural areas (StatsSA, 2014). Poverty is disproportionately rural because of enduring racial, economic, and spatial legacies. The legacies were formulated during the era of colonialism and cemented during the 40 years of the Apartheid regime, where the rural provinces were separated from the rest of South Africa through the formation of 'homelands' (Shackleton & Luckert, 2015; Daniels, Kekana & Musundwa, 2013; Butler, Rotberg, & Adams, 1978). The 'homelands' were prevented from having access to the country's productive assets. They were also prevented from pursuing active entrepreneurship, access to information was limited, and there were very few opportunities to acquire useful skills (Daniels, Kekana, & Musundwa, 2013). Further, even though the provinces had vast arable land, commercial farming was allocated to the White minority, while the Black majority was limited to subsistence farming (Shackleton & Luckert, 2015). The lack of access to means of production forced many 'homeland' residents to migrate to the cities where they worked as manual laborers in order to support their rural homes through remittances (Collinson, Tollman, & Kahn, 2007; Butler, Rotberg, & Adams, 1978).

After the collapse of Apartheid in 1994, the 'homelands' were re-incorporated into greater South Africa but there were no substantial economic policies implemented to uplift rural communities. People remained as migrant workers and the state of affairs for rural homelands in terms of productivity remained the same (Collinson, Tollman, & Kahn, 2007; Daniels, Kekana & Musundwa, 2013). To this day rural areas are marked by very little economic development or activity, a rise in supermarket culture, and glaring impoverishment. Further, rural communities remain linked to the cities or urban areas through rotating migration; however, this is also dwindling as opportunities for low-skilled laborers are becoming scarce (Daniels, Kekana, & Musundwa, 2013). Furthermore, studies show that in a similar pattern to the global community, South African rural communities are currently going through deagrarianization and only a small percentage of households remain in subsistence farming (Daniels, Kekana, & Musundwa, 2013).

The vulnerability of households and socio-economic disempowerment of women

The status of rural areas outlined above combined with the lack of viable economic prospects renders households very vulnerable. First, rural dwellers are exposed to structural deprivation, meaning that individuals live in potentially hazardous and fragile locations due to lack of infrastructure. The structural deprivation, however, impacts women more as they always assume the role of being caregivers and homemakers. In rural areas, this means women have to source wood and water, which for many traditional areas means walking long distances and carrying big loads that have a potential of being physically injurious. In addition to manual tasks, women have to ensure the general wellbeing of the children and other relatives in instances where extended families live together (Kehler, 2013).

Secondly, adequate employment in traditional homes where there is a male partner at least helps with financial stability and helps households resist stressors that come with economic or environmental changes even in the absence of development. Where employment is unstable, for any of the household heads, the home becomes vulnerable. Studies show that women have become increasingly vulnerable as they move away from the traditional nuclear family constructions and singularly become heads of

households (StatsSA, 2014). Current data show that about 50% of rural homes are female-headed households. The female household heads are reported to have low-levels of education and no skills that are required by the current economic market. Therefore, this makes it difficult for those females to secure temporary migrant or rural employment (StatsSA-Vulnerable Groups Indicator, 2014; Anand, Kothari, & Kumar, 2016; Philip & Rayhan, 2004; Shackleton & Luckert, 2015; Neves, 2013).

It is important to highlight that the South African government does try to implement policies and interventions to lift households out of extreme poverty and vulnerability. Some examples include the Expanded Public Works Programme (EPWP), small to medium micro enterprises (SMMEs), and social assistance grants, which are meant for the elderly, children as well as disabled persons (Kumah & Omilola, 2014). However, of these three programmes rural dwellers benefit the most from social grants, reports show that about 17 million people are recipients of social grants (Kumah & Omilola, 2014). Although EPWP and SMME programmes are meant to target women, as the government has recognized women as being very vulnerable, their implementation has had limitations. For example, the EPWP programme which was designed to target 40% of women, 30% of the youth and 2% of the disabled, respectively, has been shown to provide employment and respite to poverty only in the short-term (McCutcheon & Parkins, 2010). Moreover, there are no clear reporting systems on the outcomes of EPWP, especially on how these targeted groups are benefitting from the programme (Mohapi, 2016). Regarding SMMEs, the Small Enterprise Development Agency (SEDA) states that though it is known that the enterprises could boost the economy and help increase employment rates, rural underdevelopment has proved to be an impediment. Further, rural SMMEs also prove to be unsuccessful in the long run, despite women trying to be hawkers and traders in the towns and cities, because most rural women lack formal entrepreneurship education and skills (SEDA, 2016).

Outcomes of poverty on the wellbeing of women and their households

Individuals who are subjected to extreme poverty often experience adverse health outcomes. First, the physical wellbeing of individuals is affected, many people get burdened with non-communicable illnesses such as diabetes, cardiovascular diseases and weakened immune systems due to the fact that they are unable to access nutritionally balanced foods (Tsai et al., 2012; Muldoon et al., 2013; Mendenhall et al., 2012; Schatz et al., 2012). In addition, the lack of proper access to structural amenities for example clean water and functioning sanitation exposes individuals and households to diseases like cholera and typhoid fever (Bain et al., 2014).

Even though there are many other factors at play, studies show that poverty also plays an important role in determining whether children stay in school. This is especially the case for high school learners who are reported to often struggle to access resources that are necessary for their schooling. These includes things like the uniform, some children may need access to transport, as many high schools are built on the outskirts of traditional rural communities. Children, therefore, end up becoming absentees or eventually drop out as their homes become unable to meet these needs (Dieltiens & Meny-Gilbert, 2012; Shahidul & Karim, 2015). Further, the demands of impoverished households, such as food insecurity and lack of assets, often force high scholars to drop out so that they can start seeking employment to help ease the burden at home. The high number of dropouts then contributes to a society that has a high number of illiterate and uneducated individuals who also do not have requisite skills for finding meaningful employment (South African Department of Education Report, 2011; Dieltiens & Meny-Gilbert, 2012).

Poverty also has a high probability of weakening individual or household resilience through challenging their ability to cope or withstand psychological stressors (Philip & Rayhan, 2004). For young children the stressors of not having adequate nutrition may lead to brain growth and development deficits, which in turn may affect important executive functioning such as attention, processing speed, language memory, and social skills (Loughan & Perna, 2012). Research also shows that there are unfavorable psychological outcomes for young adults and adults who are unable to secure

employment, such as being prone to stress and depression as well as other related mental illnesses (Lund et al., 2014; Serwinski et al., 2016).

Wellbeing is also determined by the socio-cultural context

Socio-economic and environmental factors have a huge impact on health and wellbeing of women and by extension their households but it is important to also consider the socio-cultural environment and how it impacts the wellbeing of women. Rural communities in South Africa have a history of espousing traditional cultural and patriarchal values, which were used and to a large extent are still used to dictate the running and functioning of households (Morrel et al., 2013; DePadilla et al., 2011). Traditional cultural and patriarchal practices first perpetuate the belief that males are superior to females thus promoting inequality and marginalization of women. These beliefs are used to define traits of masculinity and femininity. Meaning that society expects masculine men to be aggressive (physically and sexually), un-emotional and yet emotionally controlling (Morrel et al., 2013; Leddy et al., 2015: DePadilla et al., 2011). Whereas, women are expected to be caring, nurturing, loving timid and obedient (to their male partners) (Morrel et al., 2013; DePadilla et al., 2011). Married women are just given little control over that which affects the immediate functions of the home, while the husband takes all bigger decisions. This is applied even in cases where the husband is a migrant worker (Kehler, 2013; DePadilla et al., 2011). Single or unmarried women have an advantage of making their own decision for their households. However, their low social status within the community forces them to adhere to customs and cultural practices even those that they do not agree with.

The effect of gender inequality is clearly demonstrated in sexual relationships, those of married and unmarried women, where self-determination, decision-making, and behavior are directed by socio-cultural norms. For example, women often cannot negotiate for safe sexual behavior in a relationship. This happens alongside high HIV/AIDS infection rates as well as reports (by most male individuals) of being involved in extra sexual relationships (DePadilla et al., 2011; O'Sullivan et al., 2006). The inability to negotiate for safer sexual practices is linked to perceptions of acceptable behavior and fear of diverging from those norms (Helman & Ratele, 2016). These views are strongly

held and sustained in rural areas under the guise of preserving culture and tradition. Whereas, it can be argued that for urban women there is room for being assertive in sexual matters because they can access information more readily due to the presence of primary health care facilities as well as various sexual-health interventions that have mostly targeted peri-urban communities. Further, research shows that in urban areas patriarchy exists alongside other ideologies, which inspire women to start being critical of the beliefs they hold or how they were socialized (Eggers et al., 2015).

Intimate partner violence (IPV) is another problem that is part of the socio-cultural context of many South African women. Studies show that there is a link between gender-power disparities and women's experience of violence (Grose & Grabe, 2014; Devries et al., 2013). About 20-50% of ever-partnered adult women have reported ever experiencing physical, sexual or emotional violence (Abrahams et al, 2014; Shai & Sikweyiya, 2015; Devries et al., 2013). What sustains violence in many communities is the fact that it is often normalized, and that victims are often blamed for triggering occurences of abuse. Even though a lot of work is being done by researchers and activists in different communities, the lack of disaggregated data makes it difficult to pin-point IPV hotspots. However, since violence is highly associated with male control, it is expected that in communities where there are deep roots of patriarchy and gender inequality, IPV will also be very prevalent.

We have outlined how rural life is disadvantageous to women and how it impedes their health and wellbeing. While the wellbeing of all genders is important, women are uniquely placed as potential agents for also affecting the health of those around them because of their roles as mothers, caregivers, community members, and leaders (in some circumstances). Further, because rural women tend to value social interaction and social support, targeting them in health promotion interventions may help spread the message of wellbeing farther. Therefore, the work of this thesis is focused on the planning, development and implementation of an intervention that was designed to target the determinants and behaviors associated with disempowerment amongst young rural women.

Adolescent girls and young women who complete their schooling years benefit in many other ways besides obtaining the necessary education. For example, they are able to gain life skills that have been incorporated in various school curricula or from healthcare messages that may come through independent organizations or researchers. Whereas those who drop out of school miss these opportunities and become ill-equipped to deal with life challenges that face today's society and they also risk having children who are trapped in the same circle, if those children drop out of school as well. Primary healthcare systems may help circumvent the problem of health education in society; however, many rural communities barely have access to these services. If these are present, clinicians (nurses and doctors) are often inundated with patients who present illness and may have little time to provide healthcare or health education messages. These rural circumstances provide a unique opportunity for researchers and other organizations to partner with communities to promote wellbeing and prevent diseases. Promoting health in the community can take different forms, for instance, the community can be used as a setting where individuals are empowered for behavior change while not relying heavily on the resources of the community. Partnering with communities in health promotion can also mean that organizations only focus on providing services while targeting public policy and community-wide institutions (McLeroy et al. 2003; MacQueen, 2001). In this work, we focused on conducting health promotion through empowerment.

There are many definitions of empowerment. Here, we will use the definition of empowerment in terms of health promotion principles. According to these principles, empowerment is used in a way that acknowledges that people have power capacity and that the role of health promotion is to activate or catalyze that capacity to improve their health outcomes (Koelen & Lindström, 2005; Shearer et. al., 2012). Further, activating the power has to do with partnering with concerned individuals or group and mutually identifying constraining factors, once that is done collaborating on effecting necessary change (Shearer et al., 2012). There are a number of theories that have empowerment underpinnings. This work was centered on Self-determination theory (SDT). The theory examines motivation and behavior of human beings through the study of individual, social and environmental factors that affect the impetus to act in a particular way (Ryan

& Deci, 2000). Thus, SDT assumes that individuals have an inherent motivation to grow and improve or be in charge of their wellbeing. Further, SDT states that individuals have to act from a sense of personal commitment (i.e. appreciate the value of change) and not be driven by fear of pressure from external sources (Ryan & Deci, 2000; Stone, Deci & Ryan, 2009). SDT is premised on three psychological needs, namely, *competence*, *autonomy,* and *relatedness*. Autonomy is a fundamental human need, which allows people freedom to have agency and control over their decision-making. Competence means feeling effective in performing tasks or able to interact with factors in your immediate environment. Relatedness is defined as having a sense of belonging with others in your social environment (Ryan & Deci, 2000; Stone, Deci & Ryan, 2009). These three SDT tenets were used in the development of the intervention for this thesis.

The process of intervention planning

Careful planning of community-based interventions is very important and this can be done through using protocols that are well designed. We used the Intervention Mapping (IM) approach by Bartholomew Eldredge and colleagues (2016) as a guide for planning the intervention that was carried out for this thesis. This systematic planning framework emphasizes the importance of taking an ecological approach in exploring the problem where opinions and experiences (i.e. gathering evidence) of the target population are taken into account. The participation of the community is crucial as it determines the success of an intervention.

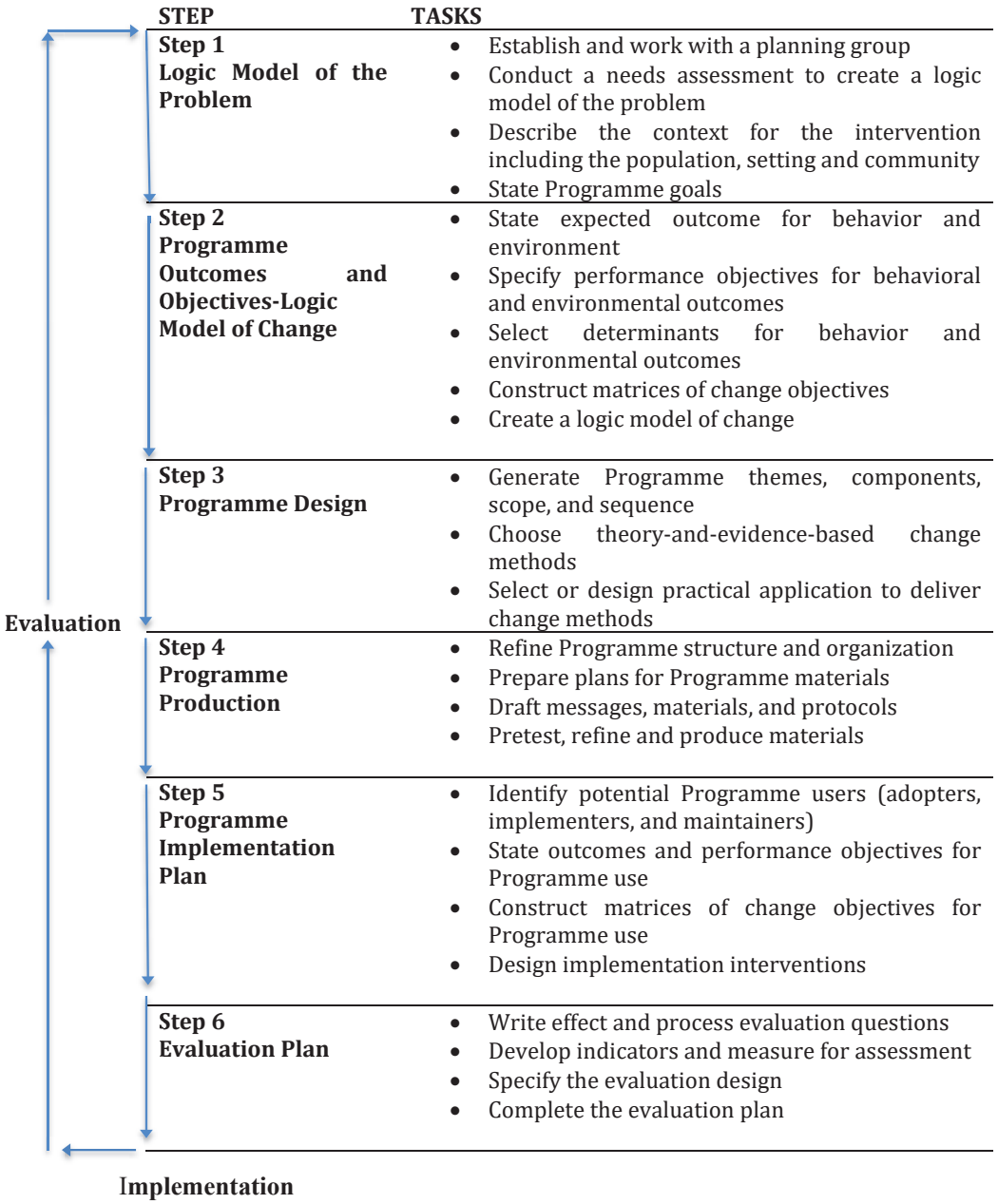

Figure 1. Intervention Mapping Steps adapted (with permission) from Bartholomew Eldredge et. al., 2016

There are six steps in the IM model (see Fig. 1) and each step has a number of tasks that are to be completed. The steps are described as follows: Step 1. Logic model of the problem, before any work can commence it is important to establish a working or planning team. In this study the team included the principal investigator, researchers and rural traditional leaders. To help the planning team organize their work at this step, the use of a logic model is recommended; the model can be the same as the template shown in Figure 1.2 (Green & Kreuter, 1999). Due to the fact that many projects start with a public health agenda, which is pre-defined by their funders, the planning team often has to start at Phase 2 of the logic model. The team then proceeds to the left of the model where they work on understanding the causal links between behavior (what people do to expose themselves to risk) and personal and environmental determinants. Personal factors include knowledge, attitudes, beliefs, values and perceptions that influence people to be exposed to risk (Kok et al., 2016). Environmental determinants are typically external factors and conditions that affect people's lives. These include socio-economic conditions (e.g. employment), structural factors such as roads and availability of healthcare systems, as well as cultural factors (e.g. gender norms, tradition and customs). Once the behaviors and determinants are mapped out, the team can outline how all these factors impact the quality of life for the target population (phase 1). In all phases of the logic model literature is used to inform answers, also, key informants from the targeted community are also consulted to get nuances of the problem.

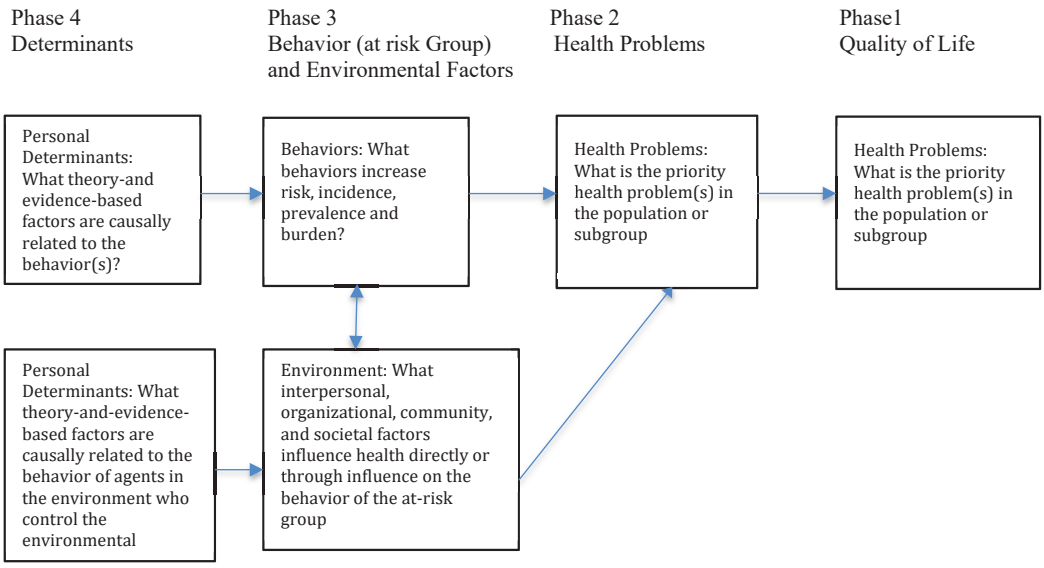

Figure 1.2 Logic Model of the Problem

Step 2: ProgrammeOutcomes and Objectives-Logic Model of Change. Once the planning teams identifies behaviors and the determinants that are understood to increase risk or vulnerability to certain diseases and thus impede good health outcomes of a particular population, they will describe what needs to change and for whom. This is achieved by using a logic model of change whose structure is similar to that of the logic model of the problem. The distinction here is that the logic of change model outlines the pathway to be followed to have an effect on the targeted problem (Bartholomew Eldredge et al., 2016). In the task of designing a logic model for change the team works from right to left using this sequence: change objectives targeting personal determinants, which in turn influence performance objectives that represent the behavioral and environmental outcomes, and that should result in more positive health outcomes. The final product of step 2 is the change matrices that describe the change objectives by combining the performance objectives and personal determinants; this should be done for the at-risk-group and the environmental agents that are targeted.

Step 3: Programme Design. Here planners select theory-based intervention methods to use based on the constructed change objective matrices. The intervention methods have to match the determinants that were identified to have an influence on the behavioral and environmental outcomes. Once this is done the methods are adapted into practical applications and these need to fulfill the theoretical conditions under which the selected methods are effective. It is also important for selected practical applications to be culturally appropriate and sensitive in order for them to have maximum effect.

Step 4: Programme Production. Step 4 involves designing protocols, Programme materials, and attending to Programme logistics (management and execution of the intervention). This stage is also used to ensure that the intervention content (messages and methods) is tailored for the context of the target population so that it has maximum impact and reach. Once the above items are in place and a Programme is integrated it can be pilot tested for implementation.

Step 5: Programme Implementation. This step involves identifying Programme users or adopters who would implement the Programme that has been designed. For research-driven intervention design, the step of implementation involves outlining criteria for selecting a community for which the Programme is designed as well as recruiting participants that will be involved in the intervention. In this step, suitable implementers who will carry out the intervention are also recruited. It is suggested that thinking about Programme implementation already starts from the very start of the process of outlining the intervention program.

Step 6: Evaluation Plan. Here planners design the evaluation paradigm for assessing or determining the programme's effectiveness in terms of Programme outcomes and implementation. To achieve this, the planning team needs to undertake the tasks of selecting appropriate stakeholders (e.g. programme management, beneficiaries, implementers and other important stakeholders). The objective of the evaluation is generally to assess whether the intervention was carried out as intended (fidelity), in full format (completeness), that it has had the intended reach, and to test whether the desired outcomes have been produced.

Study area and participants

The research for this thesis was conducted in the rural communities of the Eastern Cape (see Fig. 2). There are 6.6 million (12.5% of the national population) people who live in the Eastern Cape Province, making the province the 3rd most populated in South Africa (Eastern Cape Socio-Economic Review and Outlook, 2014). The Eastern Cape also has a high percentage of young people (70%) and of those 54% are women under the age of 34 years of age. Data also show that young people heavily participate in oscillatory migration, between provinces and between cities, as a way of seeking employment opportunities. As stated in previous sections the province is faced with a lot of socio-economic challenges, which are shown to disproportionately impede the development and the health of young people, especially that of young women. For example, the Eastern Cape has the 6th highest prevalence rate (11.6%) of HIV infection in South Africa (Shisana et al., 2014). The participants were recruited from the OR Tambo and the Amathole municipal districts of the Eastern Cape; these regions lie along the eastern seaboard of the Indian Ocean. All participants were young women between the ages of 18-35 years of age and they were isiXhosa speaking.

Figure 2. Map of the Eastern Cape showing the municipal regions where the study was conducted as well as other major towns

Outline of the dissertation

The dissertation presents both quantitative and qualitative research, and it comprised of 7 chapters including the introduction. Chapter 2 presents a mixed-methods study that explores the layers of how poverty impacts the wellbeing of young rural women (physically, socially and mentally). The findings of the qualitative study were complemented with quantitative findings of a baseline study as a way of understanding the nuances of rural livelihood.

Chapter 3 covers a qualitative study, which aimed to understand the sexual and reproductive health context for young rural women. The aim was to get a grasp on the viewpoint taken by rural homes in preparing young women for their adulthood years, in responding to the health challenge of HIV/AIDS that plagues the society. This was done with the knowledge, as literature is replete with it, that rural homes tend to be traditionally cohesive and that they mostly attach cultural values and principles in socializing young people in their society. Both chapter 2 and 3 were part of the problem definition stage, and the findings were used in the development of the intervention.

Chapter 4 and 5 use the same baseline data; these two chapters explored personal determinants, interpersonal and environmental factors that are understood to have an influence on women's exposure to adverse health outcomes. Chapter 4 focused on understanding how self-determination theory (SDT) constructs predict condom use self-efficacy amongst rural women. The research in this chapter also considered the socio-cultural context under which sexual relationships occur and how that context affects women's personal estimates to effectively use condoms. Chapter 5 explored psychosocial factors that contribute to women's exposure to or protection against intimate partner violence (IPV).

Chapter 6 describes a quantitative evaluation of a quasi-experiment intervention that was developed and implemented amongst young rural women in the Eastern Cape province to enhance psychological wellbeing and changing risky sexual behavior.

Chapter 7 comprises the general discussion of the dissertation where we reflect on the whole research project; also the methodology used is discussed, as well as the limitation of that methodology. The thesis also states the implications for future research

regarding interventions that focus on women, especially interventions that factor in the socio-cultural context of rural communities.

Chapter Two

"We can't be like them, we don't even drink clean water": A mixed-methods descriptive study of the psychological wellbeing of rural South African women

Submitted for publication

Mpondo, F., Ruiter, R.A.C., van den Borne, B., & Reddy, S.P.

Introduction

Poverty is an obstinate problem for South Africa, even though it is considered a middle-income country (United Nations, MDG Report, 2015). South African poverty statistics show that 45.5% of households are subjected to lower bound poverty. A further 24.4% of households are reported to be living in extreme poverty; they are unable to meet the minimum dollar amount ($1.25) required for daily needs (StatsSA, 2015). The main drivers of poverty in South Africa are the lack of education, skills and employment opportunities, as well as the lack of housing, water, and good road infrastructure (Kahinda et al., 2007; Rogan, 2016). All these factors stem from past political injustices, the economic climate as well as current inefficient policies (Neves and Du Toit, 2013; Savahl et al., 2015). The regions of South Africa that are severely affected by poverty are rural provinces such as Limpopo, the Eastern Cape, and Kwa-Zulu Natal. In these provinces, poverty is reported to be above 65% (StatsSA, 2015).

Households that are subjected to extreme poverty often experience adverse health outcomes. Physically many individuals are burdened with illnesses such as diabetes, cardiovascular diseases, and weakened immune systems because they lack nutritionally balanced foods (Mendenhall et al., 2017; Tsai et al., 2012; Dewing et al., 2015; Muldoon et al., 2013;). Further, the lack of proper access to clean water and functioning sanitation exposes households to diseases like cholera, dysentery and typhoid fever (Kahinda et al., 2007; Bain et al., 2014). Poverty also facilitates exposure to HIV/AIDS, individuals, young women in particular, are more likely to subject themselves to transactional sex with risky partners in order to meet basic needs (Ranganath et al., 2017). Studies show that all these factors lead to a short life expectancy and mortality (Mendenhall et al., 2017; Sartorius et al., 2013).

Being subjected to poverty also has an impact on the psychological wellbeing of individuals. Studies show that low socio-economic status, the lack of education as well as being unemployed can expose individuals to stressors, depression and other related mental illnesses (Lund et al., 2014; Funk et al., 2012; Serwinski et al., 2016; Kang et al., 2015). There has been some research conducted on this subject, but that research has mostly focused on the elderly, children, new mothers and their infants (Andersson et al., 2013; Nyirenda et al., 2013; Dewing et al., 2015; Savahl et al., 2015). Very few studies

conducted in South Africa have considered the psychological effect of poverty on rural communities, particularly young women.

Investigating the psychological wellbeing of young rural women is important, as they are usually the ones who remain behind to care for households, but most importantly, they carry health reserves for their children. Healthy mothers can ensure that the next generation is also healthy, therefore understanding factors that cause their psychological ill-health can help in designing appropriate prevention interventions. It is also important to consider the social resources that young rural women have, such as supportive networks because these have been shown to contribute to psychological wellbeing. In cases where the networks do not exist, interventions can be designed to help women establish them. Where they exist, women can be equipped to strengthen them and thereby ensure sustained psychological wellbeing.

This study focuses on young rural women with the aim of probing into psychological factors that are associated with poverty and rural livelihood. It also seeks to understand the resources and mechanisms used to cope with psychosocial pressures that are imposed by environmental circumstances. The objective was to identify modifiable risk factors and protective elements that could be used in future interventions.

To this end we used the theoretical framework of subjective wellbeing, a concept that is defined as the appraisals that people make about their lives and their direction (Diener, 1985; Seligman and Csikzentmihalyi, 2000; Davern et al., 2007; Luhmann et al., 2012). Subjective wellbeing is divided into two major constructs namely affective and cognitive wellbeing (Luhmann et al., 2012). Affective wellbeing concerns moods and emotions that a person feels from day to day, depending on life situations. Studies have demonstrated that affective wellbeing is linked to emotional stability and personal traits (Luhmann et al., 2012). To understand how young women rate their affect, we considered the constructs of stress and depression (Beck and Steer, 1984; Cohen et al., 1983). This decision was based on previous studies conducted in similar contexts, which looked at socio-economic factors and how they were associated with psychological wellbeing (Hamad et al., 2008; Shavitt et al., 2016).

Cognitive wellbeing is defined as the manner in which an individual evaluates his or her life in accordance with events that have made demands or provided for their

wellbeing over a period of time. Cognitive wellbeing also has to do with how individuals appraise environmental factors to determine how they affect their prospects and future growth projections (Davern et al., 2007; Pavot, William, & Diener, 2013). Here, for cognitive wellbeing, we considered using hopelessness, ways of coping, presence of support, personal growth perspective and satisfaction with life as constructs that measure how young women appraise their lives based on surrounding environmental factors (Beck et al., 1974; Brookings and Bolton, 1988; Diener et al., 1985; Robitschek, 1988). This was based on similar studies that have used these constructs (Cheng et al., 2014; Botha and Booysen, 2013; Savahl et al., 2015). The affective and cognitive wellbeing measures were combined and operationalized under the subjective wellbeing concept in the analysis.

We used socio-demographic measures and how they were associated with the subjective wellbeing constructs to get a clear socio-economic profile of the participants. We further used focus group discussion data to understand the nuances of how poverty and psychological ill-health interact.

Methods

This study employed a mixed methods design (Creswell and Clark, 2007). Focus group discussions were conducted for a needs assessment and followed by a cross-sectional survey.

Study setting and sampling

Qualitative and quantitative data were collected from May 2011 to June 2011, and September 2012 to March 2013, respectively. All data were collected from five villages in the OR Tambo municipal district of the Eastern Cape Province, South Africa. The district is located along the Eastern seaboard of the Indian Ocean in the Eastern Cape Province. The total population of the province is 6.9 million and 78.8% of those people are Black and speak isiXhosa (REB-Provincial Review, 2016). Women between the ages of 18-35 years make up to 19.1 % of the total population (StatsSA, 2016). The province ranks second highest in poverty intensity, income lack, wealth-inequality, food insecurity (78%), and unemployment (28%) (ECSECC Community Survey, 2016). The villages

sampled in the study were purposively selected based on preliminary data gathered before the commencement of the study. Due to the fact that the villages represented the realities of many disadvantaged communities in the province.

Participants

At the outset of the study, a local development organisation was identified as a key stakeholder. This was a local development organisation called the network of Eastern Cape Royal Chief's wives: Imbumba Yoomama Bakomkhulu (IYA). The IYA network assisted with the recruitment of research participants for all study components using its community structures. The inclusion criteria for both studies were set as follows: being between 18-35 years, did not have a senior certificate (i.e. have not completed school), unemployed, not pregnant and reside in the sampled communities.

For the qualitative study, the participants who were purposively sampled were grouped according to age categories to allow ease of sharing. A total of 7 FGDs were set up: three were comprised of adolescents and young adults (18-24 years), and four groups of adult women (25-35 years). Each group had 5-15 participants in total.

For the quantitative study, 270 eligible women were recruited of which 238 completed a baseline questionnaire. The remainder did not meet the inclusion criteria due to one of the following reasons: possible relocation plans, reporting of mental illness and refusing participation.

Data collection

Qualitative study

Interview guides using literature reviews and pre-data collection discussions held by the research team. The focus group discussions were used to gain an understanding of young women's socio-economic environment; factors associated with their wellbeing regarding their physical, psychological, and reproductive health. This paper focuses on the domain of poverty and its impact on psychological wellbeing of young women. The outline of the questions in all the guides was the same.

The FGDs were conducted using semi-structured interview guides (Bernard, 2009). The interviews were conducted by a trained isiXhosa-speaking researcher who was accompanied by two English-speaking researchers who served as observers of the research process. Even though the FGDs were not held in any particular order, information gathered was used to enhance subsequent discussions. The audio-recording were first transcribed into isiXhosa and then translated into English.

Quantitative study

Data were collected by six-trained Xhosa-speaking female communinty research assistants (CRAs) who were familiarized with the study and data collection protocols. The primary questionnaire was designed in English and then translated into isiXhosa for comprehension and cultural applicability. It was subsequently back translated into English to check for accuracy, face validity, and finally pre-tested among isiXhosa-speaking women who were similar to the selected sample.

Measures and scale construction

Table1. Overview of scale measures

Measure and example item	Range	Number of items	Alpha (α)
1. Age	-	1	n/a
2. Highest school grade passed	1 (no schooling)-3 (above matric)	1	n/a
3. Marital status	1 (married)-2 (not married)	1	n/a
4. Employment	1 (more than 5day/week)-7 (unemployed)	1	n/a
5. Household income (ZAR)	0 (nothing)- 7 (R15000)	1	n/a
6. Food sufficiency measure "I am going to read a statement that people have sad about their food situation in the past 12 months"	1 (we have enough of the kinds of food we need)-3 (often we do not have of the kinds of food we need)	1	n/a
7. Food frequency measure "Think about kinds of food you consumed in the past 3 months, how often did you eat each of these foods (e.g. fruits, vegetables, rice, eggs and meat)"	0 (never)-3 (more than 3 times/week)	11	n/a
8. Ability to control stress "In the last month, how often have you felt that things were going your way"	0 (never)- 4 (very often)	5	.74
9. Avoidance coping "I went on as if nothing happened"	0(not used)-3(used a great deal)	11	.76
10. Maladaptive coping "I tried to make myself feel better by eating, drinking, smoking, using drugs or medication etc."	0(not used)-3(used a great deal)	11	.80
11.Presence of depression symptoms "Choose what describes the way you have been feeling for the following statements. "feeling worthless"; "self-punishment feelings"; "suicidal thoughts orwishes"	0 (no feelinsg)-3 (strong feelings)	21 statements	.84
12. Satisfaction with life "So far I have gotten the important things I want in life"	1 (strongly agree)-7 (strongly disagree)	5 items	.72
13. Personal growth perspective "I take charge of my life"	0 (definitely disagree)-7 (definitely agree)	7 items	.77
14. Hopelesness future perspective "I look forward to the future with hope and enthusiasm"	0 (true)-1(false)	10 items	.79
15. Hopelesness personal perspective "I might as well give up because there is nothing I can do to make things better for myself"	0 (true)-1(false)	7 items	.77
16. Presence of support "If I were sick I could easily find someone to help with my daily activities"	0 (definitely false)-1 (definitely true)	11 items	.72

Analysis

Qualitative data

A comparative analytic method-open, axial and selective re-coding based on the grounded theory was used to analyze the data (Glaser & Strauss, 1967). The steps of the method above were as follows: lead author started by writing memos as a way of organizing noteworthy meaningful units and interpreting the data. In the initial analysis phase, prominent themes began to emerge and these were categorized. The lead author held discussions with the second author, where they explored emerging categories, themes, and sub-themes. The data coding was done using NVivo qualitative data management software NVivo/QSR International Pty Ltd. 10.04 (Doncaster, Australia).

Quantitative data

Descriptive analysis were conducted with frequencies and mean scores for categorical and continuous variables. Bivariate correlation analysis was used to assess the univariate associations between the socio-economic and subjective wellbeing measures. SPSS version 20 (SPSS Inc., Chicago, IL) was used for analysis.

Ethics statement and consent from participants

Ethical approval was obtained from Walter Sisulu University Ethics and Bio-Safety Committee. All discussions were conducted in isiXhosa, were audio-recorded, and lasted 1 to 1 hour 45 minutes. Consent was sought from the participants for both components of data collection.

Results

The demographic profile of the participants

Table 2 represents the socio-demographic profile of the participants in the quantitative study, the sample contained a total of *N*= 238 (M_{age} = 25.9) isiXhosa-speaking women. The majority (68%) had at least attended secondary school while the rest did not. Regarding pooled household income, 22% of the participants reported no income, 45% reported an income of R1000 per month. Whereas only 28% reported income between R1000-R5000 per month. The majority (51%) of participants reported that their households received old-age (R1600) or child social grants (R320), whith only 5% reported part-time employment (under 3 days).

Table2. Socio-demographic profile of participants

Variables	Frequency	Percentage (%)
Highest grade passed		
No schooling	1	0.5
Primary school	8	3.7
Secondary school	164	76.3
Other	42	19.5
Marital status		
Married	25	10.6
Not married	208	89.4
Have one or more children (yes)	161	67.7
Have one or more children (no)	77	32.4
Employment status		
More than 5 days	0	0
Less than 5 days	5	2.1
Social grant	51	21.8
Stay at home	17	7.3
Ill/disabled	1	0.4
Unemployed	148	68.4
Household income		
No income	52	22.5
R1000	108	46.8
R2000-R5000	71	28.5
Houses with sanitation		
Flush toilet (yes)	24	10.3
Flush toilet (no)	210	88.4
Access to drinking water		
Piped water (in yard or dwelling)	55	23.8
Piped water (public facility)	92	39.8
Open surface water	84	36.3

Food security

The results for the general food security (see Table 3) measure showed that 49.6% of the participants did not have enough of the variety of foods they wanted to eat. About 44.5% of participants reported that the monthly purchase of food was insufficient. Moreover, 43% reported that they had concerns that food would run out before the month was over with 45% being concerned that they could not afford balanced meals.

Regarding food groups available in a home each week, more than 50% of the participants reported that they had access to main food types such as potatoes, meat and grains less than 3 times a week. It is also important to note that more than 15% reported to not have access to major food types during a period of 3-months.

Table3. Food groups availability scan

Variable	Never (n)	(%)	Less than 3 times/week (n)	(%)	More than 3 days/week (n)	(%)
Fruit juice (any kind)	70	29.4	132	55.5	28	11.8
Fruit (any kind)	40	16.8	148	62.2	37	15.5
Salad greens	108	45.5	95	39.9	19	8.0
Potatoes (fried, cooked or boiled)	39	16.4	152	63.9	36	15.1
Beans (fried, cooked or boiled)	51	21.4	144	60.5	26	10.9
Vegetables	41	17.2	141	59.2	39	16.4
Eggs and margarine	37	15.5	120	50.4	70	29.4
Meat	61	25.6	125	52.5	47	19.7
Carbohydrates (grains)	5	2.1	166	69.7	64	26.9

Psychosocial measures

With regard to the subjective wellbeing measures (see Table 4) participants reported low levels of the presence of depressive symptoms (PDS) measure (M= 0.73, SD= 0.48). Participants also showed a high ability to control stress (ACS) (M = 0.47, SD= 0.81). In both avoidance (AC) (M= 1.24, SD= 0.54) and maladaptive coping (MC) M= 1.19, SD= 0.52) the participants reported moderate levels, respectively.

Regarding the hopelessness measure, the participants showed moderate scores in both the future perspective (HFP; M=0.39; SD= 0.27) and the personal perspective (HPP; M= 0.14, SD= 0.17) respectively. The participants reported low satisfaction with life (M= 1.19, SD = .52). The presence of support (POS) measure showed high levels (M= 2.31, SD= 0.44) of perceived support. Participants reported moderate levels on the personal growth perspective (PGP; M= 2.23, SD = 0.89).

Table4: Correlation of socio-economic characteristics and psychosocial indicators of subjective wellbeing among rural women in the Eastern Cape, South Africa (*N= 238*)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. FI	-													
2. HI	-.19[b]	-												
3. Grade	-.12	.19[b]	-											
4.HC3	.11	.18[b]	.18[b]	-										
5. ACS	-.11	-.01	.02	-.11	-									
6. PGP	-.16[a]	.09	.15[a]	-.03	29[b]	-								
7. PDS	.16[a]	.07	-.00	.19[b]	-.13[a]	36[b]	-							
8. AC	.08	.05	-.12	.06	.07	.07	.11	-						
9. MC	.09	-.01	-.09	. 07	.19[b]	.07	.19[b]	.18[b]	-					
10. SWL	-.13[a]	.15[a]	.07	-.03	.19[b]	-.14[a]	38[b]	-.03	.15[a]	-				
11.HFP	.17[b]	-.02	.05	.25[b]	-.14[a]	.35[b]	-.24[b]	.32[b]	-.03	.05	-			
12.HPP	-.05	.04	-.06	-.01	-.07	.08	-.10	.27[b]	.01	-.06	-.07	-		
13.POS	-.15[a]	-.06	-.12	-.09	.19[b]	-.11	.21[b]	-.27[b]	.02	.09	.07	-.07	-	
Mean	2.64	1.16	2.83	4.26	2.05	1.71	2.23	.73	1.24	1.19	3.83	.39	.14	-
SD	.93	.96	2.13	2.51	.81	.84	.89	.48	.54	.52	1.52	.27	.17	.44

Note: FI = Food insecurity; HI = Household Income; Grade = Highest grade completed; HC3= Lack of water availability; ACS= Ability to control stress; PGP = Personal growth perspective; PDS Presence of depressive symptoms; AC= Avoidance coping; MC = Maladaptive coping; SWL= Satisfaction with life; HFP = Hopelessness future perspective; HPP= Hopelessness personal perspective; POS = Presence of support. [a]P < .05; [b]P < .01

Bivariate Correlations

Table 4 presents inter-item correlations, means and standard deviations (SD) for the socio-economic and psychosocial wellbeing measures. For effect sizes the following was used: weak .1<r<.23, moderate: .24 <r<.36 , and strong: $r \geq .37$. Food insecurity (FI) was negatively associated with personal growth perspective (PGP), satisfaction with life (SWL), and the presence of support (POS). The presence of depressive symptoms (PDS) and hopelessness future perspective (HFP) showed positive associations with the FI measure. All the associations were weak.

Lack of water availability (HC3) was positively associated with the presence of depressive symptoms (PDS) and hopelessness future perspective (HFP). The HFP measure showed a moderate association.

The socio-economic measures used in this study namely household income and highest grade passed showed positive associations with personal growth perspective (PGP), and satisfaction with life (SWL), respectively. All the associations were weak. No other significant associations were found.

Findings from the qualitative data

This component of the paper presents the findings from the discussions held with adolescents, young adults and adult women. It describes how their experiences of poverty affects their wellbeing. The emerging themes were organized as follows:

(1) Socio-economic status with two sub-themes (a) the role played by lack of employment, social-grants and agriculture on subjective wellbeing, (b) structural challenges and food insecurity that threaten wellbeing in rural communities;

(2) Psychological wellbeing with three sub-themes: (a) life events that cause stress, (b) symptoms of stress, health seeking and coping mechanisms, and (c) social support

Socio-economic status

The role played by lack of employment, social-grants and agriculture on subjective wellbeing

All of the women who participated in the FGDs were either unemployed or under-employed meaning that they worked for less than 3-days a week. The same applied to those adolescents and young adults whose fathers were not migrant workers.

"There is no money these days sisi, my husband works nearby [Elangeni forest], we do not have money and yet we have to keep some for him, we also need to take care of the children and we need to take care of the extended family as well**". (Adult woman, Libode)**

The above findings align with what participants reported in the quantitative component, where a majority of participants were unemployed (62%), and only 5% reported to have part-time employment.

The young women in FGDs indicated that since South Africa does not have general social security for those who are unemployed, they had to rely on other forms of grants. These grants included those for disability, children and the elderly. However, they also explained that those grants were insufficient and were hardly able to support all family members. The most substantial of the grants, in rand terms was the elderly grant, which is R1600 per month.

"My husband is in Johannesburg as well, but he is not employed at the moment we have to share the grant money with him to support him. I will be getting some grant money and R250 from that money must go to him so that he can get some of the things he needs". **(Adult woman, Mqanduli)**

The social grant money that the women reported to receive (in data above) partially explains the observation in the quantitative data where 73.2% of women report pooled household incomes that range between R1000-R5000 per month. This is despite the fact that many report being underemployed. Even though these amounts are very small they possibly indicate that social grants play an important role in alleviating poverty. The low but significant pooled household income observed in the quantitative data could also be due to the fact that some women in FGDs explained that they also engaged in small business enterprise projects. These include chicken husbandry, selling agricultural produce and other similar projects that generate extra income. Even though not all women who reported having small businesses claimed success, those who did used their profits to help extended families.

"I sell, I am not working, I have children who depend on me, and I am able to take them to school with this money, I sell chickens; I slaughter them and sell them to people who are employed, I am also doing some sewing". **(Adult woman, Mqanduli)**

"You plant one hectare, however, in winter, we struggle to get water and that makes it difficult to plant your garden, most of our crops do not survive the winter season**." (Adult woman, Libode)**

The young women who did not have small business indicated that a lack of financial stability made them feel very insecure and vulnerable. The finding that most young women reported that their families no longer relied on agricultural activities for food security was not expected, as this is known to be the backbone of rural communities. However, they further explained that this shift was firstly caused by the struggle to obtain farming implements (i.e. tools, ways of securing the gardens, pesticides). They also shared that water was scarce in winter and that after harvesting they lacked suitable storage facilities. All these things were explained as discouraging.

Structural challenges and food insecurity that threaten wellbeing in rural communities

"We drink water from the river, secondly, our lives are more hard, you would find that old people live alone or with small kids […], we do not drink clean water, in terms of health we are not like them (people living in urban areas)". **(Adult woman, Mqanduli)**

The research participants stated that they felt excluded from the rest of South Africa. They explained that they did not have access to infrastructure and other resources that people who live in urban areas had. One group went further to state that rural livelihood was vastly different, strenuous and at times dangerous compared to the life of an urban dweller. In explaining rural challenges, they highlighted that most of them still had to fetch water from the river, which in many cases was quite a distance from the homesteads. They also reported that often the water was not safe to drink, and in comparison, most urban people had access to cleaner water.

The quantitative data also reflect that indeed the majority of rural community dwellers lack access to clean and safe drinking water. In this study, only 24% reported having piped water within their dwellings, while 74% were using public taps or open surface water.

"We only eat things like meat once a month when we get grant money, we will eat meat again in a month's time from grandma's grant money […], I was trying to explain that we can't eat what we want to eat, we have to eat what is available because we do not have money to buy these things". **(Adult woman, Mqanduli)**

Another factor that the women shared was that in rural areas it is difficult to access nutritious food. Many women used an example of the number of times they were able to eat meat in a month because this indicated that at least you lived above the poverty line.

The FGD discussions on food security confirm the results shown by the quantitative data where about 50% of rural women were found to be food insecure. This means that they struggled to obtain food in socially acceptable ways, were concerned about food lasting each month and were mostly unable to secure a constant supply of nutritionally balanced food.

Psychological wellbeing

Life events that cause stress

"when you have problems; for example, when you need to take a child to school and you are not able to because of other challenges that you have. So such problems affect me and cause me to feel stress, especially if I am not able to solve that problem". **(Adult woman, Mqanduli)**

"There was a point where I didn't get along with my parents because of my child. In the beginning my child's father used to support me, then midway through he stopped supporting the child, because he started being busy with other people and so I had to start relying on the grant and I can no longer ask my parents when my child runs out of things". (**Young adult, Libode**)

The participants explained that living in under-resourced communities is very demanding and causes them to constantly worry about providing the most basic needs for their families. The young adult women felt that the pressure experienced by their mothers spilled over to them. This was specifically the case when younger siblings could not get basic school needs. Young women shared that this made them feel somehow responsible, as though they should help to provide. Adult women reported that financial troubles caused conflict between all family members; from partners to parents and children. The adolescents shared that parents who consume alcohol while living in poverty made matters worse.

Symptoms of stress, health seeking and coping mechanisms

Regarding stress and mental ill-health it emerged that rural young women mostly described the physical symptoms and experiences they associated with stress. Mainly, young women described 'feeling a painful vein on the side of the neck'. Some described having constant back pain, as well as headaches. In addition, they explained feeling the need to be alone from other people when life problems weighed on them.

In terms of health seeking, most of the women in the discussions shared that when they experienced the symptoms described above, they would not necessarily seek medical care; especially since they felt that many of the symptoms were short-lived. Instead, many believed in sharing their distresses with trusted relatives and friends. They believed that talking about their problems helped alleviate burdens. Clinical care was seen as necessary in cases bereavement as symptoms would not abate.

In the quantitative study women reported low to moderate levels of depressive symptoms (PDS), avoidance coping (AC), and maladaptive coping (MC). They also reported an ability to cope with stress (ACS). These results align with qualitative data and suggest that indeed the participants use their support networks to counter threatening environmental factors resulting in low mental ill-health indicators.

Social support

"Family has its place in your life and it is nice when you are together because you can help each other wherever there is a need especially since money is hard to come by these days". **(Adult woman, Libode)**

"I am married and I am enjoying married life the reason is that when I have problems at home as I am the only one that is still surviving of the children, I can share my problems with my husband, he has now become a brother to me. My brothers passed away and my mother is on crutches, my sister's children are dependent on me, we are not getting a grant for them. Therefore, when we have money, say my husband gets a job, we take what we have and share it with my extended family, and help sort out their problems, so I find having a partner very helpful". **(Adult woman, Mqanduli)**

Young women valued the support received from relatives and friends. Moreover, the relatives were considered as helpful in times of prolonged socio-economic stress in that they helped alleviate financial burdens for other members of the family. The participants indicated that often 'there are certain things in life you just cannot do without family members', which suggests that the extendedd family was viewed as a stable

source of support. Their husbands were more likely to be employed and in most cases they were willing to take the burden of the extended family.

In line with the qualitative findings in the quantitative results women reported less hopelessness and high social support. Whereas they reported low life satisfaction (SWL) and moderate positive growth perspective (PGP), which could mean that women are aware that personal socio-economic wellbeing determines positive psycho-social well-being.

Discussion

Findings from the two studies, which used different methods enabled a layered understanding of how poverty and lack of infrastructure affected the psychological wellbeing of rural women who live in the Eastern Cape province. This was done first through describing socio-demographic and psychosocial measures. Bivariate correlation analyses were conducted to determine significant associations between psychosocial variables. Qualitative data were used to corroborate the results reported in quantitative data. Further, both forms of data were used to get a nuanced perspective on poverty and the mental wellbeing of rural women.

This study comprised of women who were 18-35 years of age. The age group selected in both studies includes young women (18-24 years) who are considered the most vulnerable cohort in South Africa due to their exposure to structural as well as socio-economic disadvantages (Shisana et al., 2008).

The descriptive socio-demographic data and qualitative discussions of rural women on their socio-economic status are consistent with reports and other studies, which show that poverty and unemployment are prevalent in the Eastern Cape (Kehler, 2013; DEDEAT, 2013). Our analyses also show that social grants are important for supporting families. A majority of the women also found small businesses to be an effective way of escaping extreme poverty. This is significant because studies show that pursuing small businesses, even for a short period of time, helps families absorb financial shocks as well as other socio-economic stressors (Reid and Vogel, 2006; Shackleton and Luckert, 2015). The findings from the focus group discussions demonstrated that women find agricultural activities to be burdensome, especially when families do not have extra sources of income in addition to the lack of agricultural instruments. This contributes to a

shift in sources of income whereby agriculture is no longer considered as a way of alleviating poverty by many rural dwellers.

Further, the qualitative analysis indicates that infrastructure, especially the availability of clean piped water is a huge barrier. The lack of clean water also impedes functional day-to-day healthy living. Studies show that access to clean water is a long-standing problem for rural communities and it affects millions of people (Bulled, 2015; Reid and Vogel, 2006). Rural dwellers possibly need more water than urban dwellers, for example, people have to cultivate fields, do house-chores and provide water for their livestock or small stock. Furthermore, the responsibility of these activities are put on the shoulders of women, meaning that women have to carry an extra burden. The problem is further compounded by extreme weather changes that make it difficult for people to have access to water. Moreover, the bivariate analyses showed that the lack of piped water is associated with the presence of depressive symptoms and hopelessness. This finding needs be investigated further.

The quantitative analyses also showed that the majority of the participants reported that their households were food insecure; they lacked access to nutritionally balanced food. This too can be attributed to having limited socio-economic resources. Despite the fact that the women in our sample reported low levels of negative affect and high rates of ACS, the bivariate correlations showed that food insecurity was positively associated with the presence of depressive symptoms (PDS) and hopelessness (HFP). This association suggests that sustained food insecurity may have a serious psychological impact in the long-term. This finding is constistent with other studies that show that the inability to secure nutritious food in socially acceptable ways has been linked to distress, especially depression, and this has been reported as being more pronounced among women (Dewing et al., 2015; Tsai et al., 2012).

This study confirms findings elsewhere that rural dwellers, the majority of whom are women continue to be geographically and socio-economically isolated from urban communities (Kehler, 2013). A positive factor is that rural women in this study showed resilience, even though they reported stress they did not seem to allow it to lead to depression, and they seemed to endeavor to find ways around their structural limitations to at least escape abject poverty. On the other hand, resilience can be viewed as being

disadvantageous to the women as policy makers might assume that immediate structural upliftment is not desperately needed. Thus, causing women to be further exposed to the risk of ill-health in the long-term. From a health promotion perspective, there is a need for interventions that would help women with basic coping and problem-solving skills so that other psychosocial resources such as friends and family are not strained.

Some limitations to this study include the sample used in the quantitative component of the analysis was small and thus may not fully represent the wider rural population. However, the use of the qualitative data enabled us to understand the nuances of rural livelihood and wellbeing for young women or lack thereof.

Aside from the limitations the two studies conducted here highlight that even though young women live under very challenging rural circumstances they are also resilient, and much of this resilience is owed to the strong social support systems. Rural families seem to be able to support each other emotionally and they seem to be able to provide practical help for those in need, especially with regards to absorbing shocks that come with being unemployed. However, this study also shows that there is an urgent need for government intervention to meet the infrastructural needs of rural communities so that they are not so vulnerable and not so left behind urban globalization and development.

Chapter Three

Understanding the role played by parents, culture and the school curriculum in socializing young women on sexual health issues in rural South African communities

Under review

Mpondo, F., Ruiter, R. A. C., Schaafsma, D., van den Borne, B., & S.P. Reddy

Introduction

The decline in South Africa's HIV infection rates especially among young women is encouraging. However, a national behavior survey still shows that 5% of 15-24 year old females report early sexual debut that is having sex before the age of 14 years (Shisana et al., 2014). Although this rate is considerably higher in male peers (11.7%), it is still a marker for risky behavior later in life, especially in the South African context where the same survey shows a clear indication of age mixing in sexual relationships. The HIV incidence rates for 15-19 year old females are at 5.6%, which is 2.3 times higher than male peers. A similar pattern is also observed between 20-24 year old females (17.4%) and 24-29 year old males (17.3%) suggesting that young women are infected by men outside their age cohort (Shisana et al., 2014). Age mixing poses a threat to young women because the same partners may be involved in sexual networks with older women, and they may also be in concurrent relationships that involve HIV transmission (Shisana et al., 2014; Maughan-Brown et al., 2014). In addition, a quarter of 15-24 year old South African women report inconsistent condom use with sexual partners and 5% of these women report being involved in concurrent partnerships (Shisana et al., 2014). Furthermore, South Africa is still faced with a high prevalence of teenage pregnancy (12%), exposing these young women to more adverse health outcomes (StatsSA, 2011).

The sexual health risk factors highlighted here affect young people at a very sensitive time, when they are transitioning from adolescence into early adulthood. The developmental period involves physical and neurocognitive changes, which in turn also significantly influence psychological health and sexual behavior. Therefore, it is important to ensure that adolescents and early adults are equipped with decision making skills that will enable them to protect themselves so that they can lead healthier lives (Sawyer et al., 2012). Studies conducted in the United States of America and in sub-Saharan Africa show that good sexual health education has a positive impact on the reproductive health of adolescents. For example, it may lead to the delaying of sexual debut and a lower number of sexual partners later (Stidham-Hall et al., 2012; DiClemente et al., 2001; Phetla et al., 2008). However, the benefits are also strongly linked to the

timing of the initial parent-child conversation, the frequency, and the content of the talks (Phetla et al., 2008; Rosenthal and Feldman, 1999).

Sexual health communication that is provided by the parents is considered very important. It is not only complimentary to the knowledge that adolescents may receive from school but it is also considered important because parents see their children daily and are better placed to reinforce important lessons (Sidze et al., 2015). In addition, parents get an opportunity to pass their beliefs and values with regard to sexual matters. They are able to provide a nurturing and supportive environment while simultaneously monitoring the behavior of their children (Coetzee et al., 2014; Markham et al., 2010). While studies show that good parent-child communication is important, the same research indicates that this is not yet the norm in South Africa (Phetla et al., 2008; Halpern-Felsher et al., 2004). This suggests a need to conduct research that will help us further understand the determinants of this poor communication and how these can be targeted in developing behavior change interventions (Coetzee et al., 2014; Halpern-Felsher et al., 2011; Namisi et al., 2015).

Among Black South African families, the lack of communication has been attributed to the fact that parents have always viewed overt sex talk as inappropriate and therefore impermissible. This is similar to the experiences of families in other African countries. Therefore, instead of using direct speak, Black South African families would comunicate through the use of local referents. In other cases the help of extended family members such as uncles and aunts would be enlisted (Delius & Glaser, 2002; Lambert & Wood 2005; Nambambi & Mufune, 2011; Kajula et al., 2016). Often sexual health messages were relayed during traditional ceremonies known as the rite of passage. Studies also show that the Indian communities followed similar cultural practices (Phetla et al., 2008; Namisi et al., 2015; Eaton et al., 2003; Lambert & Wood 2005). The social and cultural aspects that influence this lack of communication in Black South African families, especially among those in rural areas, are not very well understood.

This study followed a qualitative research approach to investigate *what*, *when* and *how* parent-child sexual health communication happens in rural settings. Firstly, the manner in which parents transfer sexual health information in a home setting was investigated. Secondly, the study sought to understand the use of cultural traditions in

socializing young women on sexual matters. Further, this study investigated whether young women regarded the sexual health education received from school adequate for equipping them with appropriate knowledge to enact healthy behaviors. This was done through conducting focus group discussions with adolescent girls, young and adult women.

Methods

Study setting

This study was conducted between May 2011 and June 2011 in five villages, which collectively form the OR Tambo district in the Eastern Cape province, South Africa. The OR Tambo district is located along the eastern seaboard of the Indian Ocean in the Eastern Cape Province. The total population of the province is 6.2 million and 78.8% of those people are Black and speak isiXhosa (StatsSA, 2014), and 11% are women between the ages of 15-35 years (DEDEAT, 2013). The province ranks second highest in food insecurity, income lack and wealth-inequality, and unemployment. The villages sampled in the study were selected using data gathered during stakeholder meetings as well as literature reviews conducted prior to the commencement of the study. The data showed that these villages reflect the social challenges faced by the rest of the province and that households which are headed by females suffer the most from these social challenges (DEDEAT, 2013). Further, the Eastern Cape has high prevalence rate of HIV infection (11.6%) as is true for the rest of South Africa, highlighting a need for effective behavior change interventions (Shisana et al., 2014).

Participants

A purposive sampling method was used with the aim of getting a subset of young women who represented the profile of the rural communities outlined above. Women were recruited to participate in the study through a local tribal authority and development organization, the network of Royal Chief's wives: Imbumba Yoomama Bakomkhulu (IYA). IYA members recruited the reseach participants for the study by using the word of mouth as well as networks within community structures. The research team then contacted women who indicated their interest and avialability to prepare for conducting

the focus group discussions. Participants were invited if they were 18-35 years of age, had a qualification below the South African Senior Certificate and lived in the designated area.The groups were organized according to age categories to allow ease of sharing information; we anticipated that older women would dominate conversations if age groups were mixed. This is mainly because in rural communities elders are always accorded respect by younger people. Therefore, a total of 7 FGDs with a total of 55 participants were set up. Three of the groups comprised adolescents and young adults (18-24 years; n=30), and four groups adult women (25-35 years; n=25). Each group had 5-15 participants in total. The research team agreed that the number of FGDs held here were sufficient as research also shows that the average number for adequate data analysis is four to five (Carlsen & Glenton, 2011). All groups included a combination of those young women who had children as well as those that did not.

Data collection and analysis

The FGDs were conducted using semi-structured interview guides (Bernard, 2009). The FGDs were part of a needs assessment step for a planned intervention that was to be developed later. The needs assessment sought to gain an in-depth understanding of social factors that affected the health of young rural women. Therefore, experiences of women's physical, mental, sexual, and reproductive health issues were explored. The interview guides were developed based on literature review conducted earlier as well as discussions held by the research team. The research team included the principal investigator, lead researcher, and two other Xhosa speaking researchers. The outline of the questions in all the guides was the same, however some questions were adapted to each age group.

This paper reports on the domains of sexual and reproductive health communication from the needs assessment. A Xhosa-speaking researcher trained in qualitative research conducted the FGDs, she was accompanied by two English-speaking researchers who were observers and who took notes. After each FGD a meeting took place between the research team and the principal investigator with the purpose of evaluating and improving the process. Even though the focus group discussions were not

held in any particular order, data gathered from preceding FGDs informed subsequent ones. At the beginning of every discussion verbal consent was sought from the participants. Ethics approval was obtained from Walter Sisulu University Ethics and Bio-safety Committee. All discussions were conducted in isiXhosa, were audio-recorded, and lasted 1 to 1 hour 45 minutes.

The audio-recorded FGDs were first transcribed into isiXhosa and then translated into English. A comparative analytic method-open, axial and selective coding based in the grounded theory was used to analyze the data (Glaser & Strauss, 1967). The lead author started by reading each transcript and writing data summaries or memos as a way of organizing noteworthy meaning units and interpreting the data. In the initial analysis phase, prominent themes began to emerge and these were categorized. The lead author first held discussions with the 2nd and 3rd author, respectively, where they sat and engaged on emerging categories, themes, and sub-themes. Subsequently meetings of similar format were held with the rest of the co-authors to check and verify the analysis process. The data coding was done using NVivo qualitative data management software (NVivo/QSR International Pty Ltd. 10.04, Doncaster, Australia).

Results

The results reported here delineate the discussions of participants, namely the adolescents, young adults and adult women on how they experienced the transition period from adolescents to young adulthood. The emerging themes were organized as follows:

i. The expected role of a mother
ii. Talks between adolescents, young adults and their mothers
iii. Adult women expect adolescents to be empowered by sexual education received in school
iv. How adult women received sexual health information in the past and how that influenced their behavior
v. How the experiences of being a current adolescent inform sexual behavior

The expected role of a mother

An understanding of the family set up for the teenagers and young adults had to be established at the outset (i.e., presence of father and mother). Most adolescents and young adults reported that mothers were always the active parents. For some girls fathers lived elsewhere as migrant workers, while for most participants the fathers were just absent. In the discussions adolescents and young women intimated that they see their mothers as playing an important role in their lives. According to the young women (adolescents and young adults) a mother is expected to prepare her daughter for the different life stages, and equip her with life skills to deal with potentially difficult situations.

'[…] She [mother] is the one who guides me, who knows me, when she tells me what I will meet in life and when I need something, she shows me that she is the parent and she teaches me how I will need to stand up for myself when I am older'. (Adolescents and young adults group, Ntabankulu)

In the discussions adolescents and young adults described the kind of "talks" they received from their parents, as well as the exact period in which these occurred. They mainly explained that their mothers did not really start talking until they started menarche. Most girls and young women explained that they were the ones who reported what was happening with their bodies. Only then were they given some information on the reason for bodily changes. A minority of the adolescents reported that their mothers spoke about the stages of development prior to menarche. Some girls gave account of also learning things from talking to or overhearing their older sisters.

'Yes I told my mother that I am now at that stage [menstruating] and she told me what was happening and that I am old now and I should not sleep with boys'. **(Adolescents and young adults, Ntabankulu)**

'No one taught me but I used to hear my sisters talk and would not really pay attention, I mean I was not told at home, I just heard my sisters say something like this happens when you are older and they also never told me what to do when it happens, I stayed like that and when the time came I went to her [mother] and told her this was happening and she said that you have become older'. **(Adolescents and young adults, Ntabankulu)**

The reports of adolescents and young women on sexual information received from their mothers indicates that when it comes to emotional issues that come with being at this stage of development are not really addressed. The adolescents expressed a strong

desire for mothers to allow conversations about boys, while the young adults intimated that they desire open relationships with their parents. However, most young women shared that this was not possible as parents were quick to dismiss or scold them.

"It is very important for a child to listen but it is equally important for the parents to listen to their children". (Young adults group, Ngqeleni)

"I think that maybe, if I just fell pregnant I would not be able to tell my mother like that because maybe she would scold me". (Young adults group, Ngqeleni)

Talks between adolescents, young adults and their mothers

The adolescent and young adults further described the talks with their mothers as often being one-sided- the parent did the talking and the daughter was expected to just follow instructions. In addition, the young women intimated that their mothers would often use words or terms such as 'you have grown old now', 'do not enter the kraal', and 'don't sit on a chair or next to men'. All these terms according to the young women had both literal (i.e., they were expected to adhere to these instructions) and hidden meanings. For example, a kraal is an enclosure for cattle located within an African rural homestead. The hidden meaning to this dictum could be that adolescents were forbidden from having penetrative sex. Further, the young women explained that elders in previous generations used dictums as part of Intonjane (a custom that marks passage into adulthood) to give instructions of how one should behave as a young woman. The adolescents and young adults also communicated that they interpreted the dictums based on their own understanding, their mothers did not clearly explain the meaning behind these idioms.

'She [her mother] said that now you have become older and that I should not enter the kraal, she said when you menstruate don't enter the kraal, don't drink milk and don't take Amasi [curdled milk]'. **(Adolescents and young adults, Ntabankulu)**

The discussions by participants on the use of dictums in place of sexual health education suggest a cultural shift. Where traditions such as Intonjane are often used to address young married women's reproductive health problems (e.g., inability to conceive children) instead of helping them transition to adulthood. Therefore this may leave young women confused and unable to reconcile the challenges of their environment and the expectations that the parents have. At the same time the lack of links between cultural

values and modern life may leave young women vulnerable to risky behaviors and susceptible to abuse by men.

'Yes like my aunts had it done now at an older age because they were sick and needed it'. **(Adolescents and young adults, Ntabankulu)**

The participants intimated that when it comes to addressing risky behaviors parents focused on avoiding pregnancy and did not address other relationship dynamics such as partner choice, decision making, and contraceptive choices. Further, the participants shared that the mothers were giving mixed messages because even though they prefaced their instruction with 'do not have sex' they also seemed to acknowledge that adolescents may become sexually active and therefore felt that they should warn against unintended consequences (i.e., pregnancy).

'That when you sleep with a boy without using a condom or without taking contraceptives you will fall pregnant'. **(Adolescents and young adults, Ntabankulu)**

Adult women expect adolescents to be empowered by sexual education received in school

Themes emerged from the discussions of adult women (25-35 years of age) that indicated a link between being young parents to early adolescents and how they were socialized as teenagers. This input was important, as it gave an indication of how much had changed or remained stagnant over time in terms of rural sexual health communication. Adult women mainly explained that current adolescents have easy access to reproductive and sexual health information as compared to what they (adult women) received as adolescents.

'They get these lessons form school, there is also this thing of ABC, these kids get educated in school, we also try to help them, but I see they do not care because I at least can see that they are growing up during the time where clinics are closer, everything comes easier'. **(Adult woman, Ngqeleni)**

Since adult women had perceptions that adolescents receive adequate sex education in school, it was important to confirm this notion. In sharing the content of their sexual health education adolescents and young adults confirmed that they did receive sexual education in school as part of their Life Orientation subject. However, we noted that some schools gave basic information with varying content on the topics such as menstruation, HIV/AIDs and sexually transmitted infections (STIs), as well as condom

use. Interestingly, the adolescents intimated that messages from school also emphasized the importance of avoiding being in relationships with boys thus echoing messages given at home.

"I have learned about condoms at grade 8 […] where we were told about it and that it is important to use it during sexual activities cause it can protect you from pregnancy and HIV, and STIs". **(Adolescents and young adults, Ntabankulu)**

*" We were told that STI are infections you get, like having a discharge, you get infected by sleeping with your boyfriend without using a condom. HIV/AIDS is also contracted by sleeping with your boyfriend without using a condom. You also get infected when you share needles". (**Adolescents and young adults, Libode**)*

How adult women received sexual health information in the past and how that influenced their behavior

We further drew from themes that emerged from the FGDs of adult women, where they reflected on their experiences of sexual health socialization. The adult women (in the 25-35 year FGDs) explained that when they were adolescents topics about sex were considered to be taboo. Many adult women intimated that they had to rely on peers for information, though often misguided, in order to have some understanding of what was happening to their bodies (e.g., menarche), the same applied to dealing with boy issues.

"*Honestly, for us, for me during those days when I first menstruated […] no one talked about those things [menstruation or sex], about contraceptives [pills, needles or condoms], no one even spoke about those things*". **(Adult woman, Ngqeleni)**

"Eeeh! Because when you are girls you chat and talk you see but that teaching you will not get at home". **(Adult woman, Ngqeleni)**

Further, primary health services were inaccessible at the time due past political spatial organization of rural communities which led to women having to travel long distances to get any healthcare. The lack of access to these facilities really disempowered the teenagers of the time as they could have received some information and advice from the nurses as an alternative source. Even though the adult women reported that they felt they lacked sexual health knowledge and skills as teenagers, they also shared that being sexually active was the norm, even in the absence of any contraception options. What the then teenagers also considered important was to hide the relationships from their parents to avoid any punishment.

"Eh, the thing is that in those days you see, for me to have my first child, what would happen, if you had a boyfriend […] what you would do, if there is a church [service] somewhere, or here in the rural community, you would pretend as if you have gone there and then leave with your boyfriend and go to his house and make sure you leave his house when it is still dark [early morning]". **(Adult woman, Ngqeleni)**

The discussions of adult women show that there has been a shift in terms of the information that the current adolescents receive, compared to what adult women did. However, their discussion also indicate that the fact that sexual health talks were impermissable in homes did not necessarily mean teenagers will abstain from being sexually active.

How the experiences of being an adolescent inform sexual behavior

The current adolescents shared how their own socialization experiences shaped their sexual behavior. Adolescents and young adults intimated that even though at home they are given instructions to avoid boys and abstaining from sex, peers influenced their sexual behavior. Their discussions indicated that the majority of young women understood that they live in a time and culture where being sexually active is the norm, and is completely acceptable. Further the young women shared that that it was up to an individual to decide when it was time to have sex and whatever was said at home did not matter much.

'No one listens to her these days [mother's instruction of abstinence] they just tell her in your times things were done a certain way, back then you used to wait [to have sex], what can I say'. **(Adolescents and young adults, Ntabankulu)**

Most of the young and adult women who participated in the study further explained that they regarded the messages of abstinence as pointless. This indicated that the opinions of peers were valued since following what peers did was perceived as being good for ones reputation.

'What are people [friends] going to say if I tell them that I do not have a boyfriend […] if they say wait at home, people look at you funny, you look like you are behind'. **(Adolescents and young adults, Ntabankulu)**

Since the adolescents and young adults intimated thet perceived it as a norm to be sexually active as a teenager their attitudes towards safe sexual behavior also emerged. , They expressed that they thought condom use was important, and also seemed to have an attitude that favoured condom use. However, all the young women explained that

whether one used condoms or not was up to the boyfriend. This response shows that many young women may not feel necessarily empowered or self-efficacious to use condoms. Using medical contraceptives would be an alternative to using condoms even though these forms do not protect against diseases (STIs and HIV/AIDS) at least pregnancy would be prevented. However, the young women seemed to have negative attitudes towards the use of these as well. When asked to explain their reasons, they shared that they have experienced and learned from peers that medical contraceptives have many side effects and therefore were not the best choice. It also seemed that in the rural communities it was important to have a body that peers approve of ('your body should not shake'), this indicates that you take care of yourself as a young woman.

'I was afraid, the other thing is, they [friends] told us that needle contraceptives are not the same, sometimes when you use a contraceptive it will not agree with you. They say you will have water…here [pointing at her private parts] or you will menstruate without stopping or your body will not be firm'. **(Adolescents and young adults, Ntabankulu)**

Discussion

This study aimed to gain an understanding of how adolescents, young and adult women from rural communities of the Eastern Cape received information concerning sexual health issues. The study also sought to understand how cultural practices and or school sexual health education programmes influenced the socialization of young women on sexual issues. Further, the study drew from the experiences of young women to understand how socialization informed adolescents' sexual behavior.

The findings show that it is mostly mothers who take the role of parenting, who also mainly carry out communication about sexual matters. Whereas the fathers are reported by participants to be mostly absent. This indicates that mothers have a big burden to carry, and this is a factor that may have serious implications on the wellbeing of the adolescents. Concerning the timing of the initial parent-child sexual health talk, adolescents and young adults intimated that mothers waited for them to report menarche and then gave the talk. All the young women intimated that very few sexual health conversations took place after the initial talk. These findings are consistent with other studies in sub-Saharan Africa, which show that communication about sexual matters in

low socio-economic communities tends to be poor especially with girl children (Delius & Glaser, 2002; Bastien, 2011). Adolescents and young adults also shared that they hold their mothers in high esteem, and that they expect them to give guidance through life issues. However, adolescents and young women also reported that it was not easy to talk to their mothers about emotional issues, and that it wouldn't be easy to report things such as pregnancies as they would be scolded. This may be due to the perception that as parents, mothers have to be strict and harsh to influence good behavior (Juma et al., 2015). However, when parents and children are not closely connected and when warmth is not expressed in family relationships, opportunities are often missed. Open conversations can help parents cultivate trust between children and their parents and provide an opportunity to teach adolescents and young adults how to handle romantic relationships (Beckett et al., 2010; Wamoyi et al., 2015).

The adolescents described the content of their talks with the parents as being one-sided and instructive rather than being educational. It also seemed like the parents focused on sexual abstinence and pregnancy avoidance. Very few adolescents and young adults shared that they were instructed to abstain from sex because of HIV infection risks or until they were in stable relationships. While discouraging pregnancy for physical and socio-economic wellbeing of the adolescents is important, HIV prevention is equally if not more important since it leads to more adverse outcomes. This is particularly important for young women as they are disproportionately affected by HIV/AIDS (Zembe et al., 2012).

Further, in their discussions adolescents and young adults also explained that when parents tried to teach about safe sexual behavior, they often used idioms. These idioms seemed to have traditional symbolisms which were not well explained and thus not very well understood. It may be that mothers were not having the conversations with adolescents because of embarrassment or because of their own socialization (Coetzee et al., 2014; Juma et al., 2015). However, the fact that parents still found it important to relay messages of sexual health through dictums is important. Ethnographic studies conducted in South African urban and rural communities show that sexual health communication was mainly carried out in organized peer groups (Wood et al., 2002; Delius & Glaser, 2002). Peer groups were viewed as important structures where girls and

boys would teach each other about sexuality whilst relying on the guidance of older relatives (Reid & Walker, 2005; Delius & Glaser, 2002). In addition, among amaXhosa and Basotho nations boys received formal teaching in initiation schools and girls received teachings through Intonjane when they approached menarche (Khau, 2012). During Intonjane the girl would be placed in a secluded room for about 8 days to a month. In this time she would be expected to follow certain restrictions, which included not consuming dairy and meat, not sitting on a chair, not being in the company of males. Intonjane was also restricted from physically entering a kraal. The older women in the family (aunts) would take time to teach about responsibilities of being a woman, fertility, and marriage. For example, a future mother was to avoid dairy products as they are linked to her fertility (Cloete, 2015). She would also be taught sexual responsibility, the importance of obedience, and understanding boundaries. Older women also linked not entering a kraal physically to preserving virginity. In the past livestock was a measure of a man's wealth and being a virgin was also valorised as it added to the wealth of the girl's father (Rice, 2014). Adolescents explained that Intonjane is no longer practiced for young women but instead it is done for older married women with fertility issues. The reason may be that the custom is now seen as being out-dated, but it may also be that socio-economic factors do not allow as it is a costly exercise. Although the custom was also grounded on perpetuating gender inequalities, which enforced patriarchy and promoted women being treated as commodities it was also to prepare women for the next stages of their life, it may be important to invite older women to participate as stakeholders who would share their knowledge-capital in interventions that seek to empower young women. Our FGD discussions indicate that early stages of parent-child relationships do not promote active decision-making (autonomy) and as a result adolescents are more likely to source wrong information elsewhere. They may then use this wrong information to enact risky sexual behaviors.

Another possible reason behind parents giving limited information to adolescents may be the fact that they have the perception that adolescents get educated on these issues in school, as older women in the focus group discussion also asserted. The adolescents shared that indeed they receive sexual health education in schools, however the content does not seem to be uniform across the board. Further, many young women

intimated that teachers often echo what is said at home without addressing any issues the teenagers may be facing or about how safe sexual behavior could be enacted. These results are similar to findings elsewhere, where the Life Orientation subject has been shown as being inadequate for empowering adolescents (Smith et al., 2013; Khau, 2012). Even though teachers may be focused on fulfilling a mandate given by the department of education, the effects will be limited due to the variation in how the content is delivered. This is because sexual health is seen as a small component of a bigger life-orientation subject. Also, teachers are not specifically trained to deliver the subject (DePalma & Francis, 2014). Literature shows that the education policy also gives autonomy to teachers on how the sexual health topic is delivered, meaning that information is provided on what teachers perceive as appropriate. Moreover, teachers often feel they have to be sensitive to social dynamics (e.g., culture and religion) and may thus avoid giving too much detail for fear of upsetting social structures (Department of Education, 2008; Landor et al., 2011; Khau, 2012; DePalma & Francis, 2014).

Notwithstanding, the negative characteristics of cultural customs, the findings indicate that there may be cross-cultural confusion where parents are not able to bridge the gap between traditional value systems and using them to complement what adolescents learn in school. The cross-cultural confusion possibly indicates that young women remain disempowered or stuck in a cycle of disadvantage, which may further expose them to risky behaviors.

On the note of behavior it seems that adolescents and young adults perceive being sexually active as the norm. The discussions indicated that at some point many adolescents just decide to have sex because peers see it as the thing to do. However, these statements were not accompanied by how practicing safety measures would be important once that decision is made. Older women shared similar statements about their time as adolescents, the difference however, is that for them no sexual health education was provided in school. Again, this points back to the fact that the sexual health education seems at home and in school to delivered to adolescents without considering the prevailing norms, beliefs and behaviors. This was indicated by the statements made by adolescents that they know how serious HIV/AIDS infection risk is, and that condom use

is important, but still think that it is up to the boyfriend to decide whether or not a condom will be used.

In conclusion, the manner in which rural adolescents and young women are socialized remains very limited. This is because parents and schools only focus on promoting the avoidance of pregnancy and HIV/AIDS to the neglect of other factors that influence risky sexual behavior. The cultural practices that were used in the past to socialize adolescents are only now relayed as idioms when giving young women instructions to not be sexually active. Suggesting an inability to adapt cultural practices such that they are congruent to modern times, and that the empowering aspects of those practices are still promoted. This may have to do with injustices of the past that may have left parents uneducated and therefore unable to understand the challenges that face younger generations. The is also a strong indication that a majority of adolescents will be sexually active without being equipped with skills to protect themselves or to deal with consequences..

Therefore this suggests that it would be important to firstly design interventions that will increase the awareness of parents towards the sexual behavior of adolescents. It may be important to also equip parents to be better communicators on sexual matters. This may help teenagers transition into adulthood smoothly but it would also be important to allow teenagers to have agency in the process. It also seems that there is a need to have an in-depth analysis of the school sexual health curriculum as well as the delivery methods to ensure that they are efficient in equipping teenagers who are still in school. It may also be important to design interventions that are grounded in theory because these have been shown to be more effective in facilitating behavior change. For example, parents and teachers could be equipped to empower adolescents through using the self-determination theory (SDT) framework. The SDT theory is grounded on three psychological needs namely autonomy, competence and relatedness and these have to be met to instil lasting behavior change.

Some limitations of this study include the fact that the FGD participants were recruited through IYA, the selection may have been biased towards those that approve of tribal leadership and therefore the views expressed in the discussions may not be representative of all adolescents, young adults and adult women living in rural

communities. Further, due to the fact that this sexual health domain was part of a broader needs analysis study, which covered overall health of young women, sexual communication may not have been discussed exhaustively. However, to ensure that topics were covered extensively, debriefing sessions were held by the research team after each FGD session.

Chapter Four

Self-determination and gender-power relations as predictors of condom use self-efficacy among South African women

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Mpondo, F., Ruiter, R. A. C., van den Borne, B., & S.P. Reddy

Introduction

Studies show a high awareness of HIV/AIDS being a deadly disease among the South African population. However, the same population also shows a lack of accurate knowledge about sexual transmission and ability to reject misconceptions about the infection (Shisana et al., 2014). Also, consistent condom use remains sub-optimal, particularly for women (25.2%)(Shisana et al., 2014; Smith et al., 2014). While many South African individuals report being in stable relationships, many (mostly men) also report being in extra sexual partnerships (Kalichman et al., 2013; Shisana et al., 2014; Steffenson et al., 2011). Although condom use with extra partners may prevent infection, the risk of primary partners remains heightened due to persistent inconsistent condom use in all types of relationships (Darbes et al., 2014; Kalichman et al., 2013; Maticka-Tyndale, 2012).

Studies among South African and African American women show that condom use self-efficacy is a particularly important predictor of actual condom use; low self-efficacy is associated with increased unprotected sexual acts (Cain et al., 2013; Crosby et al., 2013; Jama Shai et al., 2010; Onoya et al., 2011; Peltzer & Makusa, 2014). Self-efficacy is important for acting not only on rational decision-making regarding safe sexual practices but also in risky situations such as substance use or when there are trust issues. Due to its demonstrated importance, self-efficacy has been a target of various health education and sexual risk-reduction interventions (Black et al., 2014; Davis et al., 2014).

This study focuses on the role of condom use self-efficacy in decision-making by Black women in rural South African communities. This is relevant because of the overall HIV prevalence rate at 13.3 percent in 2012 and young South African women being disproportionately affected by HIV/AIDS (Jewkes et al., 2010; Shisana et al., 2010, 2014; Zembe et al., 2012).

As a theoretical construct, self-efficacy is part of social cognitive theory (Bandura, 1982, 1997; Bandura & McClelland, 1977) and is defined as holding the belief that one is able to accomplish tasks and goals set before them in different circumstances. Efficacious individuals welcome challenging tasks as motivating factors, while

individuals with inefficacious beliefs dwell on their deficiencies when faced with difficulty. Therefore, in order for an individual to successfully negotiate with a partner for condom use, they have to believe in their own ability to use a condom effectively even in complex situations (Black et al., 2014).

Persistently low levels of condom use (approximately 36% of the South Africans used condoms at last time sex in 2012; Shisana et al., 2014) suggest that significant predictors such as self-efficacy in sexual risk behavior research need to be studied in depth to explain broader social and emotional issues associated with these low levels (Jama Shai et al., 2010; Volkmann et al., 2014). Social issues refer to gender relations and cultural norms regarding monogamy and concurrency, while emotional issues refer to relationship characteristics such as partner choice, length of relationship, trust and definition of love (Bandali, 2014).

In our study, self-determination theory (SDT; Ryan & Deci, 2000) and gender–power constructs are examined as possible frameworks that can provide insight into these issues. SDT examines motivation and behavior of human beings through the study of individual, social, and environmental factors that affect the impetus to act in a particular way in given situations and how in turn personality and psychological development are affected (Ryan & Deci, 2000). Motivation differentiates between individuals who act from a sense of personal commitment toward certain behaviors and those whose behavior is driven by fear of pressure from external sources.

Self-determination is premised on three psychological needs, namely, competence, autonomy, and relatedness, which are the focus of study. We investigate to what extent these needs predict self-efficacy to use condoms. Self-efficacy and SDT as constructs are well aligned. The former measures the presence of motivation for behavior change, whereas the latter measures the drivers and inhibitors of that motivation (quality), done through investigating whether the three psychological needs are met (Patrick & Williams, 2012).

In terms of the three psychological needs, autonomy is often described as a fundamental human need; it provides an environment that enables freedom, agency, initiative, and control over decision-making without any burden from external pressures (Ryan & Deci, 2006). Affect and coping measures have been shown to be indicators of

autonomy in individuals (Ratelle et al., 2013; Van Gundy, 2002). Less autonomous individuals tend to manage internal and external stress demands poorly, have an increased risk of depression, and thus feel less satisfied with their lives, while autonomy promotes less maladaptive coping (MC) and increased mental wellbeing (Knee & Zuckerman, 1998; Olesen et al., 2015; Reis et al., 2000; Van Gundy, 2002).

Autonomy in sexual contexts provides women the opportunity to protect their own health, while oppressive cultural norms diminish that right (Knee & Neighbors, 2002; Sanders-Phillips, 2002). The autonomy need assists us in understanding how condom use self-efficacy can be sustained through measuring how autonomous individuals feel in their personal and social environment. Autonomy has also been shown to be an important predictor of health-promoting behaviors as it determines whether decisions and beliefs are internalized and therefore will be sustained in the long term (Deci & Ryan, 2008; Ng et al., 2012).

Competence is another basic human need, which involves feeling effective in ongoing interactions with one's external environment; it also forms the foundation for self-esteem and self-confidence (Bartholomew et al., 2011; Sheldon et al., 1996). Competence is also linked to one's control of motivations, where an individual is able to plan and strategize on the different routes needed to progress toward a goal. When individuals have ineffective coping strategies or problem-solving deficits (hopelessness), they are likely to feel less competent (Robinson & Snipes, 2009; Yağmur & Oltuluoğlu, 2012). The competence need has also been defined as very similar to self-efficacy. However, competence refers to a psychological need being met that has more to do with general feelings about self and working efficiently or having a sense of motivation, while self-efficacy is more about the ability to attain a specific goal (Bandura, 1997; Patrick et al., 2007; Sheldon et al., 1996). Therefore, competence can be viewed as a determinant of self-efficacy; for example, "I feel generally self confident therefore I can achieve goal-A." It is important to understand how these two concepts are associated because both have been linked to psychological health and health-promoting behaviors in life situations (Ng et al., 2012; Patrick et al., 2007).

Relatedness can be defined as feeling connected to a partner, feeling secure, having a sense of belonging with others, in the social environment. If the need of

relatedness is satisfied, a person will have a sense of control in interpersonal spaces including sexual relationships; therefore, condom use self-efficacy in this context will be increased. When these three needs are met, they yield increased motivation, wellbeing, and mental health, and thus, women may feel more efficacious to protect their physical health (Bartholomew et al., 2011; Milyavskaya & Koestner, 2011; Patrick et al., 2007; Weinstein & Ryan, 2011).

We also considered the gender–power differentials and their link to the wellbeing of women in South African rural communities. The aim was to understand the social context in which sexual relationships occur, specifically those that might be associated with women's estimates of personal efficacy to use a condom. In terms of the South African constitution, men and women have equal and inalienable human rights (Bill of rights of South Africa; Act 108 of Certification of the Constitution of the Republic of South Africa, 1996). This act has seen the women's cause advanced to such an extent that they have visible representation in government institutions (Kehler, 2001). Furthermore, women have reproductive rights; young girls are also able to participate in school as boys do (Walker, 2013). However, the government is yet to make advances in the redistribution of resources and power such that the woman's position is more stable even in local settings (Walker, 2013). The insecure social position of women is clearly evident in rural communities where patriarchy is dominant partly due to the government's attempt to integrate tradition into today's progressive society (Albertyn, 2011; Walker, 2013). As such, women find themselves in a situation where the land's constitution grants them rights and traditional law undermines those rights (Albertyn, 2011). Because the constitution does not clearly address the norms and attitudes in society about gender inequality, the implications of gender–power imbalances extend to sexual relationships. Women are often unable to negotiate for safe sexual behavior in relationships, as they are afraid to diverge from socially acceptable norms. Rural men, on the other hand, bemoan the time where their male authority in the community and households was uncontested (Albertyn, 2011; Onyejekwe, 2013). The perceived insecurity of man's social position leads to retaliation and assertion of power through gender abuse and violence putting women in adverse health conditions (Dworkin et al., 2012; Morrell et al., 2012; Onyejekwe, 2013).

Previous research focused on the link between gender-based imbalances, intimate partner violence, and the ability to negotiate for condom use. These studies investigated how these factors affect the frequency of condom use (Bryan et al., 1997; DePadilla et al., 2011; Guti.rrez et al., 2000; Soet et al., 1999). This study considered variables measuring women's attitudes, and values and beliefs on gender issues including the experience of intimate partner violence (gender–power constructs). We hypothesized that constructs drawn from the three SDT psychological needs and gender–power concepts can contribute to the explanation of condom use self-efficacy among rural women and thus provide insight into how women's confidence to exert more persistent efforts on safer sexual behavior can be promoted in future intervention programs.

Methods

Study setting and sampling

Baseline data from a quasi-experimental study were used for this paper. From September 2012 to March 2013, participants were recruited from the OR Tambo and Amathole district municipalities of the Eastern Cape Province, South Africa; both districts lie along the eastern seaboard of the Indian Ocean. Women were recruited through a local tribal authority and development organization, the network of Eastern Cape Royal Chief's wives (Imbumba Yoomama Bakomkhulu (IYA)). IYA members recruited local women for the study through using the word of mouth in community structures. Community research assistants (CRAs) then contacted those women via telephone for screening and to set baseline assessment interview appointments. Participants were eligible if they were between 18 and 35 years of age and had low levels of education—below the South African Senior certificate, meaning that they had not completed schooling. However, participants needed to be able to read and/or write isiXhosa. They also needed to be unemployed at entry of study, to not be pregnant, and to be permanently based in the sampled communities. The selection criteria were established from the needs analysis conducted prior to baseline data collection, where the profile of women exposed to adverse health conditions including the risk to HIV/AIDS was developed. A total of 270 eligible women were sampled, and of those, 238

completed the questionnaire. The remainder did not meet the inclusion criteria due to one of the following reasons: possible relocation plans, reporting of mental illness, not attending appointments for the baseline assessment, and refusing participation upon understanding the study requirements (i.e. time commitment).

Procedure

Data were collected by six trained isiXhosa-speaking, female CRAs. The CRAs were familiarized with the objectives of the study, trained on recruiting participants, obtaining informed consent, and administering the questionnaire. All questionnaires were administered in isiXhosa through face-to-face interviews. The assessments were carried out at the local tribal authority homesteads because these were centrally located and accessible to all participants. Prior to conducting interviews, participants were verbally informed about the content of the study, procedures, and confidentiality. At the end of the information session, written consent was obtained from each participant. Ethical approval was obtained from the Walter Sisulu University (WSU) Ethics and Bioethics Committee.

Measures and scale construction

The development of the questionnaire was based on literature searches, a needs assessment, and theoretical constructs. The primary questionnaire was developed in English and then translated to isiXhosa for comprehension, cultural applicability, and language appropriateness, and subsequently back translated to English to check for accuracy, and finally pretested on Xhosa-speaking women.

Socio-demographic variables

Socio-demographic variables included age, highest grade passed (1 = no schooling to primary schooling, 2 = secondary schooling, and 3 = post-matric), marital status (1 = single, 2 = married, 3 = divorced or separated, and 4 = widowed), employment status, and household income in South African Rands (salary, social grants, other sources of income).

Sexual behavior

The sexual behavior question assessed whether a person had a sexual primary partner and a secondary/casual partner with one item (0 = no, 1 = yes). One open-ended question asked about the number of men a participant had sex with in a 3-month time period. For the measures below, confirmatory factor analysis was conducted to check whether items indeed grouped together as would be expected (which was generally the case, although in some instances not all items within a group made it to the scale). Inter-item correlations and principal axis factor analysis and direct oblimin rotations were used for extracting factors. Items with factor loadings of .40 or higher were grouped and subjected to reliability analysis. Groups of items with a Cronbach's alpha (α) score of .60 or higher were averaged into a single construct and labeled to reflect the underlying variable that was measured. All measures were based on Likert-type items, unless otherwise indicated. Items and variables were recoded such that higher scores reflect a stronger presence of the pertinent variable.

Condom use self-efficacy

Condom use self-efficacy was measured with 21 items with answering options (1 = strongly agree, 4 = strongly disagree) (Brafford & Beck, 1991). After recoding the scores such that higher scores reflect more self-efficacy, factor analysis suggested two sub-scales, which were labeled as condom use self-efficacy generally and condom use self-efficacy in risky situations. Condom use self-efficacy generally was the primary outcome variable for this study and was measured with 13 items (e.g. I am confident that I have safer sex and satisfy my partner"; "I am certain that I know how to use a condom correctly"; α = .77). Condom use self-efficacy in risky situations was the secondary outcome variable and was measured with eight items (e.g. How confident are you that you would use a condom when …"you or your partner have been using alcohol"; " when you want your partner to know you are committed to your relationship"; α = .82).

Three SDT psychological needs

We operationalized the three SDT psychological needs (autonomy, competence, and relatedness) using measures that we theoretically and conceptually linked to each of the needs, respectively. Autonomy was measured with these indicators: affect (perceived stress, ways of coping, and depression), satisfaction with life, and personal growth initiative. Competence was measured with self-esteem, hopelessness, and HIV knowledge, and relatedness was measured with interpersonal support and partner disapproval to use a condom.

Autonomy measures. Perceived stress was measured with nine items with response options from 0 = never to 4 = very often (Cohen et al., 1983). Factor analysis resulted in one scale with adequate internal consistency: the ability to control stress (ACS), which was measured with five items, with questions such as, "In the last month, how often have you felt things were going your way" ($\alpha = .74$).

Ways of coping measured how participants deal with stressful encounters (Folkman & Lazarus, 1980). The questions asked, "If you were faced or have faced a difficult situation, family problem, or medical treatment, please tell us how you dealt with that problem" and a scale of 22 items was used with scoring options (0 = not used, 3 = used a great deal). Factor analysis suggested two sub-scales: avoidance coping (AC) and maladaptive coping (MC). AC was assessed with statements such as "I hoped a miracle would happen" ($\alpha = .76$). MC was measured with questions such as "I tried to make myself feel better by eating, drinking, smoking, using drugs or medication etc." ($\alpha = .80$).

Depression was measured with a 21-item scale from Beck's Depression Inventory with response options (0 = no feelings of depression, 3 = strong feelings of depression) (Beck and Steer, 1984). Factor analysis suggested a one-factor solution that measured the participant's feelings of depression, presence of depressive symptoms (PDS; $\alpha = .84$).

Satisfaction with life was measured with a 5-item scale with response options (1 = strongly agree, 7 = strongly disagree) (Diener et al., 1985). After recoding, factor analysis showed a one-factor solution. A sample item was "So far I have gotten the important things I want in life"; $\alpha = .72$).

Personal growth initiative was measured with a 7-item scale with scoring options 0 = definitely disagree, 7 = definitely agree (Robitschek, 1998). Factor analysis showed a one-factor solution, personal growth perspective (PGP; e.g. “I take charge of my life”; α = .77).

Competence measures. Self-esteem was assessed with the Rosenberg 10-item scale with 4-point response options (0 = strongly agree, 3 = strongly disagree; Rosenberg, 1965). Following recoding, factor analysis showed a two factor solution, positive and negative self-esteem, respectively. Positive self-esteem was measured with five items (e.g. “I feel I have a number of good qualities”; α = .66).

Negative self-esteem was measured with four items (e.g. “All in all, I am inclined to feel that I am a failure”; α = .64). Beck’s Hopelessness scale was assessed with a 20-item scale with response options (0 = true, 1 = false) (Beck et al., 1974). Factor analysis showed two factor dimensions, hopeless future perspective (HFP) and hopeless personal perspective (HPP). HFP was measured with 10 items (e.g. “I might as well give up because there’s nothing I can do to items (e.g. “My past experiences have prepared me well for my future”; α = .77).

Knowledge about the spread and transmission of HIV/AIDS and sexually transmitted infections (STIs) was measured with six true–false questions, for example, “If a woman uses birth control pills it lowers her risk of transmitting HIV to her male partners” (0 = false, 1 = true; α = .60).

Relatedness measures. Interpersonal support was measured with a 28-item scale with scoring options (0 = definitely false, definitely true = 3) (Brookings & Bolton, 1988). Factor analysis showed a two-factor solution, presence of support (POS; e.g. “There are several people I trust to help me solve my problems”; α = .74) and lack of support (LOS; e.g. “If I were sick I could easily find someone to help me with my daily activities”; α = .72).

Partner disapproval on condom use was assessed with four items such as “If I were to suggest using a condom to a partner I would feel afraid he would reject me” with a scale of (0 = strongly agree to 4 = strongly disagree; α = .81).

Gender–power and intimate partner violence measures

Gender egalitarian roles were measured with a 4-item scale with options (1 = strongly agree, 5 = strongly disagree). Items measured gender equality beliefs (GEB; e.g. "If both of us are working, the husband should do the same amount of chores as the wife"; α = .60).

Gender–power attitudes were assessed with a 7-item scale with response options (1 = strongly agree, 5 = strongly disagree). Items measured power balance attitudes (PBA; e.g. "No one should have more power than the other in a relationship"; α = .70).

Beliefs about intimate partner violence (BIPV) were assessed with a 4-item scale with response options (1 = strongly agree, 5 = strongly disagree). Items measured BIPV (e.g. "There are times when a woman deserves to be beaten"; α = .60).

Exposure to intimate partner violence was assessed with a 5-item scale with response options (0 = never, 3 = always). The scale was assessed with questions such as, "Does your partner ever yell or curse you?" (α = .80). All of the above gender scales were obtained from the Compendium of Gender Scales (Nanda, 2011).

Data analysis

Frequencies and mean scores were used to describe categorical and continuous variables. Bivariate correlation analysis was used to assess the univariate associations between the study measures. Measures that showed significant univariate associations with the primary and secondary outcome measures on condom use were included in multivariate linear regression models to determine their unique contributions in the prediction of the respective outcome measure. SPSS version 20 (SPSS Inc., Chicago, IL) was used for analysis.

Results

Demographic profile of participants

A total of 238 women were interviewed at baseline of the study. The mean age of those women was 25.9 years (standard deviation (SD) = 4.37) with the youngest being 18 years and the oldest being 35 years. All participants were Xhosa speaking. Other personal characteristics are included in Table 1.

Sexual behaviors

About 66 percent of the participants in the study reported having a partner (main or casual). The majority (87.4%) of participants reported having sex with one partner in 3 months, while 9.7 percent reported having more than one sexual partner in the same 3-month period. A minority of the participants (39.4%) reported using condoms at last sex and 11.2 percent reported ever having had an STI. A majority of the participants (73.4%) reported having sexual partners who were 35 years and below and 12.7 percent reported having partners who were 36 years and above.

Summary of SDT psychological needs and gender–power variables

Regarding the SDT psychological needs, participants reported high positive self-esteem ($M = 2.20$, $SD = 0.57$) but also moderate levels of negative self-esteem ($M = 1.75$, $SD = 0.62$). Participants reported low levels of the PDS measure ($M = 0.73$, $SD = 0.48$). For the ACS, participants scored low ($M = 0.47$, $SD = 0.81$). Participants showed high hopelessness scores in both the HFP ($M = 0.39$, $SD = 0.27$) and the HPP ($M = 0.14$, $SD = 0.17$).

Table1. Socio-demographic profile of sampled women living in rural communities in the Eastern Cape.

Variables	Frequency	Percentage (%)
Educational		
No formal schooling	1	0.5
Primary school	8	3.7
Secondary school	164	76.3
Other	42	19.5
Marital status		
Married	25	10.6
Not married	208	89.4
Have one or more children (yes)	77	32.4
Have one or more children (no)	161	67.7
Employment		
More than 5 days	0	0
Less than 5 days	5	2.1
Social grant	51	21.8
Stay at home	17	7.3
Ill/disabled	1	0.4
Unemployed	158	68.4
Partner's employment status		
More than 5 days	15	7.0
Less than 5 days	8	3.7
Social grant	15	7.0
Stay at home	22	10.3
Ill/disabled	6	2.8
Unemployed	148	69.1
Household income		
No income	52	22.5
Under 10, 000	168	73.6
Over 10, 000	12	3.8

In both AC (M = 1.24, SD = 0.54) and MC (M = 1.19, SD = 0.52), participants reported moderate levels. LOS showed moderate levels (M = 1.35, SD = 0.62) while POS showed high levels (M = 2.31, SD = 0.44) of perceived support. Participants reported moderate levels on the PGP (M = 2.23, SD = 0.89). Only 10 percent of the participants reported lacking HIV knowledge or information about the different ways a virus can be transmitted between heterosexual individuals. For the gender–power constructs, participants reported high levels of GEB (M = 2.77, SD = 1.98) and PBA (M = 3.37, SD = 0.59). Only 28.4 percent of the participants reported that they never experienced intimate partner violence.

Correlates of condom use self-efficacy

Table 2 presents inter-item correlations, mean, and SDs for all study measures. The variables that had a positive bivariate correlation with condom use self-efficacy generally were PGP, HIV knowledge, attitude on power balance, BIPV, and POS. HFP, HPP, and GEB were negatively correlated with condom use self-efficacy generally. Bivariate correlation analysis for condom use self-efficacy in risky situations showed positive associations with AC, LOS, and HIV/STI knowledge, while the GEB measure was negatively correlated with condom use self-efficacy in risky situations.

Multivariate model of condom use self-efficacy generally

A linear regression analysis was conducted using significant bivariate correlated items of SDT psychological needs and gender–power variables in association with condom use self-efficacy generally. The results are outlined in Table 3 with standardized regression coefficients (betas), t-statistic and p values. The significant regression model, $F(9, 224) = 10.03$, $p < .01$, showed unique positive associations with condom use self-efficacy generally for PBA, HIV knowledge, and GEB, PGP, and BIPV. A unique contribution was also found for HPP, which was inversely related to condom use self-efficacy generally. Tests of multicollinearity were conducted through the calculation of variance inflation factor (VIF). No problems were observed as all the variables had a VIF score below 2 (Myers, 1990). The full model explained nearly one-third of the variance in condom use self-efficacy generally ($R2 = .30$).

A linear regression analysis with condom use self-efficacy in risky situations as an outcome measure gave a significant regression model, $F(6, 220) = 6.11$, $p < .01$, with unique positive associations for LOS and HIV knowledge (see Table 4). GEB also showed a unique contribution to condom use self-efficacy in risky situations, but the association was an inverse one. No problems with regard to multicollinearity were observed as all the variable values had a VIF score below 2 (Myers, 1990). The full model explained about 13 percent of the variance in self-efficacy for condom use in risky situations ($R2 = .13$).

Discussion

This study presents correlates of condom use self-efficacy generally and in risky situations for women who live in rural African communities. Our findings suggest that SDT psychological needs and gender–power constructs are predictors of condom use self-efficacy that may serve as change objectives for innovative sexual health promotion interventions. This study included 18- to 24-year-old women who are considered an important cohort, as they are highly susceptible to HIV infection. A significant proportion of participants reported that they had more than one sexual partner and ever had an STI, while 60 percent reported inconsistent condom use. Our findings on sexual behavior and condom use like other studies conducted among women confirm their vulnerable position in sexual and reproductive health (Onoya et al., 2011; Shisana et al., 2014; Zembe et al., 2012).

Table 2: Correlations of condom use self-efficacy with self-determination theory psychological needs and gender power constructs.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	
1. CUSE																							
2. CUSER	.19[b]	--																					
3.PSE	-.05	.12	--																				
4.NSE	.06	.07	-.19[b]	--																			
5. LSC	-.02	-.05	-.22[b]	-.21[b]	--																		
6. ACS	.15[a]	.12	.20[b]	.14[a]	.01	--																	
7.HFP	-.15[a]	-.06	-.13[a]	-.38[b]	.35[b]	-.14[a]	--																
8.HPP	-.16[a]	-.04	-.15[a]	-.05	.08	-.07	.11	--															
9.PDS	-.09	.02	-.19[b]	-.22[b]	.36[b]	-.13[a]	.32[b]	.27[b]	--														
10. AC	.09	.13[a]	-.04	.08	.07	.07	-.03	.01	.24[b]	--													
11.MC	.12	.12	-.02	.04	.07	.19[b]	.05	-.06	.18[b]	.56[b]	--												
12. SWL	.09	.11	.14[b]	.02	-.14[a]	.19[b]	-.20[b]	-.07	-.03	.15[a]	.18[b]	--											
13. PGP	.26[b]	.12	.22[b]	.02	-.08	.29[b]	-.24[b]	-.10	-.09	.11	.19[b]	.38[b]	--										
14. LS	-.01	.18[b]	.09	.29[b]	-.28[b]	.08	-.47[b]	.00	-.17[a]	.13[a]	-.02	.08	-.16[a]	--									
15. PDCU	.11	-.02	-.08	.08	.22[b]	.05	.21[b]	.08	.16[a]	.04	.01	.07	.04	-.16[a]	--								
16.HIV knowledge	.29[b]	.22[b]	.12	.01	.02	-.03	-.11	-.13[a]	-.07	.03	.08	.13[a]	.15[a]	.06	-.06	--							
17.HIVK_other factors	-.09	.10	-.05	-.06	.03	.06	.16[a]	.06	.04	-.05	.01	.00	-.08	-.15[a]	.09	-.03	--						
18. POS	.16[a]	-.02	.11	-.03	.11	-.19[b]	-.07	-.08	-.27[b]	.02	.09	.07	.21[b]	-.10	-.11	.12	.01	--					
19.BGE	18[b]	-.18[b]	-.00	-.14[a]	-.07	.01	-.21[b]	-.00	-.00	.06	-.06	-.00	-.03	-.09	.09	.00	-.16[a]	-.14[a]	--				
20. APB	.35[b]	.04	.10	-.06	.11	.13[a]	-.03	-.06	-.09	.08	.05	.09	.22[b]	-.05	.03	.17[a]	-.16[a]	.22[b]	.09	--			
21. IPV	-.09	.11	.06	-.02	.13[a]	-.06	.16[a]	.11	.08	-.01	-.04	-.07	-.17[a]	-.04	.04	.07	.24[b]	.14[a]	-.12	-.18[b]	--		
22. BIPV	.23[b]	-.07	.05	.12	-.13[a]	-.01	.24[b]	-.01	-.06	-.05	.05	.04	.07	.18[b]	-.03	.03	-.16[b]	-.03	.26[b]	.05	-.00	--	
Mean	0E-7	0E-7	2.20	1.75	1.71	0.47	0.39	0.14	0.73	1.24	1.19	3.83	2.23	1.35	2.16	2.00	0.47	2.31	2.77	3.37	0.35	8.16	-
SD	0.92	0.88	0.57	0.62	0.84	0.81	0.27	0.17	0.48	0.54	0.52	1.52	0.89	0.62	0.77	0.98	0.75	0.44	1.90	0.59	0.49	2.91	-

Note: a P< .05, b P< .01

CUSE: condom use self-efficacy generally; CUSER: condom use self-efficacy in risky situations; PSE: positive self-esteem; NSE: negative self-esteem; ACS: ability to control stress; HFP: hopeless future perspective; HPP: hopeless personal perspective; PDS: presence of depressive symptoms; AC: avoidance coping; MC: maladaptive coping; SWL: satisfaction with life; PGP: positive growth perspective; LOS: lack of support; PDCU: partner disapproval on condom use; POS: presence of support; BGE: beliefs about gender equality; PBA: power balance attitudes; IPV: intimate partner violence; BIPV: beliefs about intimate partner violence; SD: standard error. Post hoc bivariate correlation analysis was conducted in order to determine whether the demographic variables (education, marital status, income, partner's income, household income, and having children) had any significant associations with the outcome variables. Only the variable "having children" showed significant correlations (.13 and .17) with condom use self-efficacy generally and condom

Table3: A multivariate linear regression model of self-determination theory psychological needs and gender-power constructs associated with condom use self-efficacy generally.

Variables	Unstandardized regression coefficient b; 95% CI	SE-B	Beta (β)	*t*	Significance (P-value)
Constant	-3.51	.50		-7.03	.00
Ability to control stress (ACS)	.09 (-.04-.24)	.07	.08	1.31	.19
Hopeless future perspective (HFP)	.05 (-.37-.47)	.21	.01	.24	.81
Hopeless personal perspective (HPP)	-.64 (-1.29-.01)	.33	-.11	-1.92	.05
Personal growth perspective (PGP)	.14 (.00-.27)	.07	.13	2.02	.05
HIV knowledge	.19 (.08-.35)	.06	.19	3.35	.00
Presence of support (POS)	.11(-.14-.37)	.13	.05	.88	.38
Beliefs about gender equality (BGE)	.16(.06-.26)	.05	.19	3.07	.00
Power balance attitudes (PBA)	.46(.27-.65)	.09	.29	4.83	.00
Beliefs about intimate partner violence (BIPV)	.05(.01-.08)	.02	.16	2.61	.01

SE: standard error; CI: confidence interval.
R = .54, R2 = .30, ΔR2 = .27, standard error of estimate = .802.
A multivariate linear step-wise regression of factors associated with condom use was also conducted to compare the output with results in Table 3.
Step 1 included only SDT variables, and the results showed that PGP and HIV knowledge had a significant positive association with condom use self-efficacy generally.
Step 2 included SDT and gender–power constructs where PGP, HIV knowledge, PBA, BIPV, and BGE showed a positive association with condom use self-efficacy. HPP also showed a unique association; however, it was a negative one. Step 1: R = .45, R2 = .20, ΔR2 = .14, standard error of estimate = .88; Step 2: R = .58, R2 = .34, ΔR2 = .27, standard error of estimate = .80.

Table4: A multivariate linear regression model of self-determination theory and gender-power constructs associated with condom use self-efficacy in risky situations.

Variables	Unstandardized regression coefficient b; (95% CI)	SE-B	Beta (β)	*t*	Significance (P-value)
Constant	-.48	.24		-2.02	.04
Avoidance coping (AC)	.20(-.01-.40)	.10	.12	1.89	.06
Lack of support (LOS)	.24(.06-.42)	.09	.16	2.56	.01
HIV knowledge	.19(.08-.30)	.06	.21	3.36	.00
Gender equality beliefs (GEB)	-.17(-.27-.07)	.05	-.21	-3.29	.00

SE: standard error; CI: confidence interval.
R = .36, R2 = .13, ΔR2 = .12, standard error of estimate = .84.
Although only "having children" was significantly correlated with both outcome variables, all the demographic variables (education, marital status, income, partner's income, household income, having children) were included in multivariate analyses (post hoc) with both outcome variables, respectively. The demographic variables did not seem to have a significant contribution in explaining the variance for both outcome variables. The change (R) was about 5 and 9 percent, and their associations were not significant for the respective variables; therefore, a decision was made to not include demographic variables in the final reported results.

Higher HIV knowledge was significantly associated with increased condom use self-efficacy generally and in risky situations. This positive association is important although knowledge is not considered to be enough to prompt behavior change; it may do so in the long term (Eggers et al., 2014; Ibrahim et al., 2012; Morrison-Beedy et al., 2003; Shikwane et al., 2013). The finding that HIV knowledge is also significant in explaining condom use self-efficacy in risky situations is particularly interesting and emphasizes the importance of empowering young Black women on what to do in different sexual situations as that may serve as a protective factor.

On the issue of being empowered, women who reported positive GEB expressed increased condom use self-efficacy generally, but the relationship was an inverse one in risky situations. The positive association of equality beliefs and increased condom use self-efficacy generally suggests that those women are in relationships that are more equal where they have more personal agency in sexual situations, and therefore put themselves less at risk. The negative association found for risky situations may mean that women may have had an experience of asking for condom use in these situations and may have encountered resistance, which lowered their self-efficacy. Therefore, they may have learned that in such situations the power shifts toward the male partner. Similarly, positive attitudes toward power balances and negative beliefs on gender-based violence were associated with increased condom use self-efficacy generally.

Gender–power constructs being shown as significant predictors of condom use self-efficacy point to the importance and need for interventions that empower women. Such interventions would give women skills on using the language needed for safe sex behavior negotiation (Jama Shai et al., 2010). Moreover, studies confirm the finding that gender equality is linked to safer sexual behavior and less exposure to intimate partner violence (DePadilla et al., 2011; Wingood et al., 2013).

In terms of the SDT psychological needs, it was remarkable that in risky situations women who experience a lack of social support felt more efficacious to use a condom in risky situations as research shows that a low level of social support is associated with sexual risk-taking (Mazzaferro et al., 2006; Peterson et al., 2010). Past research shows that, in particular, individuals with strong positive behavior attachments

report practicing self-control in risky situations for fear of upsetting those social networks (Patrick et al., 2007; Peterson et al., 2010). On the other hand, it may be that women who feel less supported feel a stronger need to take personal responsibility for their health and report more competence to do so. This finding needs further investigation.

The two other types of self-evaluation, namely, personal growth and less HPP, which were classified under the psychological need for autonomy and competence, respectively, were positively associated with condom use self-efficacy generally. Although these associations were moderate, they are worth further exploration because people with positive perspectives display mastery of their immediate environment; they may also feel more autonomous and are more confident in acting on safe sexual decisions (competence) (Ayub & Iqbal, 2012; Trobst et al., 2002).

More variance was explained in condom use self-efficacy generally (30%) than in risky situations (13%). It could be that in general situations when there are less immediate threats and more room to negotiate for condom use women may feel more self-efficacious. In situations of conflict (intimate partner violence and disagreements) as well as in high-risk situations, for example, due to alcohol consumption, external threats may be more salient and acquiescing may seem more self-protecting than feeling confident on insisting on condom use. In this regard, it may be important to measure specifically how women assess risk (e.g. immediate or long term) and how that is associated with acting on their decision-making.

This study has some limitations. First, the sample size was relatively small and women were recruited through IYA; therefore, the sample may not be representative of all rural, poor women in South Africa. Second, our measures relied on self-report of sensitive information about sexually related issues, and participants may have provided responses that are perceived to be socially desirable. However, efforts were made by our research team to encourage honest responses from the participants. Aside from the limitations of our investigation, this work highlights that it is important to identify new or additional psychosocial determinants of a highly complex behavior as consistent condom use. This may help to formulate new change objectives for interventions to reduce sexual risk behavior among women.

Chapter Five

Intimate Partner Violence and Its Association with Self Determination Needs and Gender-Power Constructs Among Rural South African Women

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Mpondo, F., Ruiter, R. A. C., van den Borne, B., & Priscilla S. Reddy

Introduction

Researchers and policy makers from around the globe have made a concerted effort into getting intimate partner violence (IPV) recognized as a serious public health problem that has devastating outcomes for many societies (Grose & Grabe, 2014; Russell et al., 2014; Stöckl, Devries, & Watts, 2015; van Niekerk & Boonzaier, 2016). South Africa is one of the highest ranking countries in IPV prevalence, where 20% to 50% of ever-partnered adult women have reported ever experiencing physical, sexual, or emotional violence (Abrahams et al., 2014; Devries et al., 2013; Shai & Sikweyiya, 2015). In the last two decades, South African researchers, health practitioners, and activists have initiated and conducted work to mobilize communities and to develop solutions for addressing IPV (Abrahams et al., 2014; Jewkes, 2002; Jewkes, Dunkle, Nduna, & Shai, 2010; Kim et al., 2007; Meintjes, 2003; Seedat, Van Niekerk, Jewkes, Suffla, & Ratele, 2009). There have been some positive effects, for example, the government previously labeled IPV as a private matter not needing any specific interventions; now, IPV is recognized as a punishable criminal offence (Domestic Violence Act 116, 1998; Meintjes, 2003; Mogale, Burns, & Richter, 2012; Seedat et al., 2009). However, the surface has barely been scratched, as South Africa still remains one of the highest ranking countries in IPV prevalence.

This article investigates correlates of IPV among young South African rural women. Earlier research focused on investigating personal and interpersonal factors associated with IPV, where it was shown that women who have poor education and low or no income tend to be more vulnerable to violent sexual relationships (Abrahams et al., 2014; Dunkle et al., 2004; Jewkes, 2002). In addition, alcohol or substance use by women or their partners predisposes women to IPV (Abrahams et al., 2004; Abramsky et al., 2011; Dunkle et al., 2004; Gass, Stein, Williams, & Seedat, 2011).

The research into personal and interpersonal risk factors of IPV has been important and useful in helping identify subgroups that are susceptible to violence. However, these factors do not fully explain the underlying factors that drive, maintain, or increase IPV. To fully understand the drivers, we have to first understand the context within which violence occurs. Theories at different ecological levels are good instruments that can help us achieve this goal by enabling us to consider the interactions of personal,

family, community, and social factors and how these influence interpersonal relationships, and in turn how that influence contributes to victimization and perpetration of violence (Ali & Naylor, 2013; Bell & Naugle, 2008; Cavanaugh, Hansen, & Sullivan, 2010; Koenig, Ahmed, Hossain, & Mozumder, 2003).

In this study, we used SDT with the aim of identifying psychosocial factors that contribute to women's exposure to or protection against IPV. SDT hypothesizes that human beings have three psychological needs, namely, *competence, autonomy, and relatedness*, which have to be met for individuals to have good health outcomes. When the three SDT needs are met, individuals gain psychological strength to start and maintain healthier behavior (Silva, Marques, & Teixeira, 2014).

The *autonomy* need is described as a fundamental human need; it provides an environment that enables freedom and agency in life situations. This means that decision making in sexual relationships is experienced or understood as an exercise where both partners willingly participate. This is mainly determined by whether or not both partners cultivate autonomy. The autonomy need being described here is distinct from the concepts of individualism, independence, and separateness. Also, autonomy should not be understood as being the opposite of dependence; it should rather be understood as being the opposite of heteronomy—a concept where an individual is forced to adopt decisions, in this case by a sexual partner, despite strongly holding different views or interests (Chirkov, Ryan, Kim, & Kaplan, 2003).

Competence involves feeling effective in ongoing interactions with one's external environment; it also forms the foundation for self-esteem and self-confidence (Ng et al., 2012; Sheldon, Ryan, & Reis, 1996). The *competence* need is also linked to one's control of motivations, where an individual is able to plan and strategize on different routes needed to progress toward a goal (Ng et al., 2012; Patrick, Knee, Canevello, & Lonsbary, 2007).

Relatedness can be defined as feeling connected to a partner, feeling secure, having a sense of belonging with others, in a social environment (Patrick et al., 2007; Weinstein & Ryan, 2011). The three psychological needs in life situations where wellbeing is promoted have been shown to enable freedom and agency. Moreover, these needs being met means that decisions and beliefs are internalized and therefore will be

sustained in the long term (Patrick et al., 2007; Weinstein & Ryan, 2011). Therefore, it is important to investigate whether women who feel autonomous, competent, or efficacious in enacting safe sexual behaviors and who feel connected to their partners and their social networks are protected against IPV.

In addition, gender-power ideologies at interpersonal and community levels were also considered because research shows that gender relations play an important role in the exposure or perpetration of IPV (Gibbs, Sikweyiya, & Jewkes, 2014; Morrell, Jewkes, & Lindegger, 2012; Pettifor, MacPhail, Anderson, & Maman, 2012; Shefer et al., 2008). IPV thrives in societies that are organized along patriarchal lines, and South Africa is an example of such a society. Even though the constitution recognizes equal and inalienable human rights for males and females, as well as the representation of women in politics and in education, the recognition of these rights is yet to translate to social spaces (Bill of rights, South Africa; Section 9(4), 1996). Women continue to be in social positions that are insecure as is evidenced by the lack of socio-economic resources and not having a voice in many local and traditional matters, especially in rural communities (Albertyn, 2011; Walker & Barton, 2013). In environments where experiences of manhood and womanhood are dictated by oppressive and very conservative traditions, power shifts to men and norms that valorize hegemonic masculinities are promoted.

The promotion of hegemonic masculinities is characterized by placing value on physical strength, aggression, control of female partner, expression of virility, male entitlement, and gender inequitable attitudes (Albertyn, 2011; Pettifor et al., 2012; Walker & Barton, 2013). Women, however, are expected to be demure and acquiescing especially in sexual relationships (Albertyn, 2011; Pettifor et al., 2012; Walker & Barton, 2013). Also such societies are often restrictive and punitive on women to such an extent that when women are victims of interpersonal violence in sexual relationships, they often do not challenge their situation nor report it. Instead, they live in fear, or they just try to cope because IPV is often still branded a private matter in South African communities (Shai & Sikweyiya, 2015).

In this study, we wanted to understand whether rural women internalize negative or positive gender ideologies (power and violence beliefs), and if so, what associations does that have with women's IPV victimization or absence thereof.

We hypothesized that the three psychological needs constructs—autonomy, competence, and relatedness—would be associated with young women's victimization to IPV and that gender-power constructs would mediate the association of the three needs with IPV. Gender-power constructs were hypothesized to play a mediating role because they are understood to represent the underlying socio-cultural mechanisms that explain how an individual's feelings of autonomy, competence, and relatedness influence whether or not they get exposed to IPV. This means that women's beliefs about gender-power issues depend on how empowered they are, and these beliefs in turn are important in the choice of partners and thus the chances of being exposed to IPV.

Method

Study Setting and Sampling

This article reports on a component of baseline data that were collected as part of a quasi-experimental study (Mpondo et al., 2015).From September 2012 to March 2013, participants were recruited from the OR Tambo and Amathole district municipalities of the Eastern Cape Province, South Africa; both districts lie along the Eastern seaboard of the Indian Ocean. Women were recruited through an extension network of the Eastern Cape Royal Chiefs' [Imbumba Yoomama Bakomkhulu/IYA] a local tribal authorithy and development organization. IYA members recruited local women for the study through the word of mouth in community structures. Community research assistants (CRAs) then contacted those women via telephone for screening and to set baseline assessment interview appointments. Participants were eligible if they were between 18 to 35 years of age, had low levels of education (below South African Senior certificate), were Xhosa speaking, were unemployed at entry of study, and were not pregnant. The selection criteria were established from the needs analysis conducted prior to baseline data collection, where the profile of women exposed to adverse physical (particularly sexual risk) and psychological health was developed. A total of 270 eligible women were sampled, and of those, 238 completed the questionnaire. The remainder did not meet the inclusion criteria due to one of the following reasons: possible relocation plans, reporting of mental illness, not attending appointments for the baseline assessment, and refusing participation.

Procedure

Data were collected by six trained isiXhosa-speaking, female CRAs. The CRAs were familiarized with the objectives of the study, trained on how to recruit participants, obtained informed consent, and administered the questionnaire. All questionnaires were administered in isiXhosa through face-to-face interviews. The assessments were carried out at the local tribal authority homesteads because these were centrally located and accessible to all participants. Prior to conducting interviews, participants were verbally informed about the content of the study, procedures, and confidentiality. At the end of the information session, written consent was obtained from each participant. Ethical approval was obtained from the Walter Sisulu University Bio-Ethics Committee.

Measures and Scale Construction

The questionnaire measures were selected to assess young women's IPV victimization preceding the baseline interview. The primary questionnaire was developed in English and then translated to isiXhosa for comprehension, cultural applicability, and language appropriateness, and subsequently back translated to English to check for accuracy, and finally pretested on Xhosa-speaking women.

Socio-demographic Variables

Socio-demographic variables included age, highest grade passed (1 = *no schooling to primary schooling*, 2 = *secondary schooling*, and 3 = *post matric*), and marital status (dichotomized to 1 = *married* and 2 = *not married*). Employment status of the participant and their partner (categorized as unemployed, disabled, social grant, employed less than 5 days or employed more than 5 days) as well as household income in South African Rand were assessed (see also Table 1).

Sexual Behavior

The sexual behavior question assessed whether a person had a sexual primary partner (0 = *no*, 1 = *yes*) and a secondary/casual partner (0 = *no*, 1 = *yes*). One open-ended question asked about the number of men a participant had sex with in the past 3 months. Another open-ended question asked "How old is the person you last had sex with?"

Measures

For the measures below, confirmatory factor analysis (CFA) was conducted using SPSS Version 22 (SPSS Inc., Chicago, IL) as pre-analysis and to check whether items indeed grouped together as would be expected. Scree plots and principal-axis factor analysis and direct oblimin rotations were used for extracting factors. Items with factor loadings of .40 or higher were grouped and subjected to reliability analysis. Groups of items with a Cronbach's alpha score of .60 or higher were averaged into a single construct and labeled to reflect the underlying variable that was measured. All measures were based on Likert-type items, unless otherwise indicated. Items and variables were recoded such that higher scores reflect a stronger presence of the pertinent variable.

IPV Measures

The number of incidences of IPV was assessed with three separate questions with yes/no answer options: "In the past 3-months have you been . . . "(a) sexually abused by your partner, (b) physically abused by your sexual partner, and (c) emotionally abused by your sexual partner.

Table1. Socio-demographic profile of sampled women living in rural communities in the Eastern Cape (*N = 238*)

Variables	Frequency (Cumulative %)	Percentage (%)
Educational		
No formal schooling	1	0.5
Primary school	8	3.7
Secondary school	164	76.3
Other	42	19.5
Marital status		
Married	25	10.6
Not married	208	89.4
Have one or more children (yes)	77	32.4
Have one or more children (no)	161	67.7
Employment		
More than 5 days	0	0
Less than 5 days	5	2.1
Social grant	51	21.8
Stay at home	17	7.3
Ill/disabled	1	0.4
Unemployed	158	68.4
Partner's employment status		
More than 5 days	15	7.0
Less than 5 days	8	3.7
Social grant	15	7.0
Stay at home	22	10.3
Ill/disabled	6	2.8
Unemployed	148	69.1
Household income		
No income	52	22.5
Under 10, 000	168	73.6
Over 10, 000	12	3.8

IPV was assessed with a five-item scale that focused on physical and verbal abuse, the response options were from 0 = *never* to 3 = *always* (i.e. "Does your partner ever yell or curse at you?" "Does your partner ever threaten to leave you?" "Does your partner ever threaten to hit you?" "Has your partner ever hit you?" "Did your partner ever leave you?"; $\alpha = .80$). *IPV* served as the main outcome measure for this study.

Beliefs about IPV were assessed with a four-item scale with response options from 1 = *strongly agree* to 5 = *strongly disagree*. The scale was assessed with the following questions: "There are times when a woman deserves to be beaten," "If a woman insults her man, he should defend his reputation with force," "A man using violence against his wife is a private matter that should be discussed only by the couple," and "A woman should tolerate violence to keep her family together" ($\alpha = .60$). A higher score reflected more negative beliefs toward *IPV*. *IPV* and *beliefs about IPV* were both taken from the Compendium of Gender Scales (Nanda, 2011).

Three SDT Psychological Needs

We operationalized the three SDT psychological needs (*autonomy*, *competence*, and *relatedness*) by using measures that we theoretically and conceptually linked to each of the needs, respectively. Autonomy was assessed with a measure of *attitude toward decision making*, competence with a measure of *self-efficacy to practice safe sex*, and relatedness was measured with an *Interpersonal Support* sub-scale.

Attitude toward decision making was measured with a six-item scale with response options from 1 = *strongly disagree* to 5 = *strongly agree* obtained from the Compendium of Gender Scales (Nanda, 2011). Example items are "No one should have more power than the other in a relationship" and "My partner and I sit down and discuss important matters" ($\alpha = .70$). A higher score reflected more positive attitudes toward equal decision making in a sexual relationship.

Self-efficacy to practice safe sex was measured with a six-item scale with answering options from 1 = *strongly agree* to 4 = *strongly disagree* (Brafford & Beck, 1991) with items such as "I am certain I know how to use a condom correctly" and "I am confident that I can have safe sex and satisfy my partner" ($\alpha = .80$). Scores were coded such that higher scores reflect more self-efficacy to practice safe sex.

Interpersonal support was measured with a 28-item scale with scoring options ranging from 0 = *definitely false* to 3 = *definitely true*; Brookings & Bolton, 1988). Factor analysis showed a two-factor solution, *Presence of Support* (e.g. "If I were sick I could easily find someone to help me with my daily activities" with a total of 11 items, three items were dropped after reliability analysis; $\alpha = .74$) and *Lack of Support* (e.g. "If a family crises arose, it would be difficult to find someone who could give me good advice about how to handle it" with a total of 14 items; $\alpha = .72$). In our analysis, *Presence of Support* was used because it best captured the concept of relatedness with higher scores reflecting more presence of support.

Beliefs about Gender Equality (BGE)

Beliefs about gender equality (BGE) were measured with a four-item scale with response options from 1 = *strongly agree* to 5 = *strongly disagree*: "If both of us are working, the husband should do the same amount of chores as the wife," "I believe a woman's place is in the home," "In our family, as a wife I should not work outside unless it is a financial necessity," and "The husband should have the final word in most of the important decisions in our family." After re-coding, a higher score reflected having more positive *beliefs about gender equality* ($\alpha = .60$).

Model Development and Analysis

A step-wise structural equation modeling (SEM) was conducted using MPlus Version 7.11 (Muthén & Muthén, 2013) to assess the fitness of the proposed conceptual model. First, CFA was conducted with the aim of testing or confirming SPSS results (Byrne & Stewart, 2006). All measures were confirmed to be one-factor constructs except for the presence of support (relatedness) and self-efficacy to practice safe sex (competence), which were shown to each have two factors. For presence of support, the factor with four items was used, and for self-efficacy to use a condom, a factor with three-items was used for further analysis. The other factors for both measures were dropped to improve model fit. In the next step, a measurement model was fitted with all latent variables tested as second-order factors. A maximum likelihood estimator (MLR) was used to account for the fact that there were some missing data points; about 1.3% to

4.4% data points were missing for the respective measures used in this analysis. The MLR estimator uses standard errors and a chi-square test statistic that is robust to non-normality (Yuan–Bentley χ^2

Subsequently, a full structural model based on the theoretical conceptual model was specified. The sample (N = 238) was used for both the measurement and structural models, and even though it was relatively small, it allowed for a well-specified model to be tested (Jackson, 2001). The following statistics were used to assess an adequate structural model fit, such as the comparative fit index (CFI; Bentler, 1990), the root mean square root error of approximation (RMSEA; Steiger, 1990), and a standardized root mean square residual (SRMR). A CFI that is ≥0.90 or ≥0.95, RMSEA must be ≤0.08 or ≤0.05, and SRMR should be ≤0.08 (Hu & Bentler, 1999). Furthermore, indirect effects from the structural model were tested using bootstrapped standard errors (n = 5,000) to construct 95% confidence intervals.

Results

Demographic Profile of Participants

A total of 238 women were interviewed at baseline of the study. The mean age of those women was 25.9 years (SD = 4.37 years) with the youngest being 18 years and the oldest being 35 years. All participants were Xhosa speaking. Other socio-demographic characteristics are included in Table 1.

Sexual Behaviors and Intimate Violence Exposure

About 66% of the participants in the study reported having a partner (main or casual). The majority (87.4%) of the participants reported having had sex with one partner in the last 3 months, while 9.7% reported having had more than one sexual partner in the same 3-month period. A minority of the participants (39.4%) reported using condoms at last sex, and 11.2% reported ever having had a sexually transmitted infection (STI). The mean age of the participants' sexual partners was 30 years (SD = 6.00 years) with the youngest partner being 18 years and the oldest being 49 years. About 12.7% of the young women reported having a sexual partner who was 36 years and older. In terms

of victimization, about 36% of participants had been verbally abused by their partner. About a quarter (26%) of the participants were physically abused (beaten or hit) by their sexual partners.

Bivariate Correlations

Inter-item correlations are presented in Table 2. In terms of effect sizes, weak associations are correlations with Pearson *r* between .10 and .23; a correlation between .24 and .36 shows an association of moderate strength, and a correlation of $r \geq .37$ indicates a strong association (Cohen, 1988). The bivariate correlation analysis showed that BGE, autonomy, and relatedness were negatively associated with IPV representing weak associations. Beliefs about intimate partner violence (BIPV) and competence were not significantly associated with IPV. In addition, BIPV was positively associated with competence representing a moderate association. Autonomy and relatedness were negatively associated with BGE representing weak to medium associations. Competence and relatedness showed moderate positive associations with autonomy.

Measurement Model

The results of the CFA analysis and the hypothesized measurement model with all factors structures are presented in Table 3. The hypothesized conceptual measurement model fit was just adequate ($\chi^2 = 379.037$; $df = 307$, $p < .001$; CFI = 0.947; Tucker–Lewis index [TLI] = 0.929; RMSEA = 0.038; SRMR = 0.05, $p < .05$). To improve the fit, single items from BGE and BIPV were dropped, as they did not fit well with their constructs (low factor loadings; Brown, 2015). The fit for the complete measurement model improved ($\chi^2 = 307.194$; $df = 237$, $p < .001$; CFI = 0.939; TLI = 0.929; RMSEA = 0.035; SRMR = 0.05, $p < .05$).

Table 2. Correlation Matrix of the Latent Variables for the Structural Equation Model.

Measure	1	2	3	4	5	6
1. IPV	—					
2. BIPV	–.07	—				
3. BGE	–.19**	.05	—			
4. Autonomy	–.21**	.08	–.16**	—		
5. Com_S	–.07	.27**	.18**	.36**	—	
6. Relatedness	–.19**	–.03	–.29**	.25**	.14*	—

Note. IPV = intimate partner violence; BIPV = beliefs about intimate partner violence; BGE = beliefs about gender equality; autonomy = operationalized with attitudes toward decision making; Com_S = competence operationalized with self-efficacy to practice safe sex; relatedness = operationalized with presence of support.
*$p < .05$. **$p < .01$.

Table 3. Model Fit Statistics for the Confirmatory Factor Analysis.

Measure	Model	Observed	YB-χ^2	*df*	CFI	TLI	RMSEA	SRMR
Com_S	Competence	3	0.000	0	1.000	1.000	0.00	0.00
Presence of support	Relatedness	4	3.155	2	0.980	0.941	0.05	0.03
Attitudes toward decision making	Autonomy	6	19.076	9	0.940	0.901	0.07	0.05
Intimate partner violence	IPV	5	4.978	5	1.000	1.000	0.00	0.02
Beliefs about intimate partner violence	BIPV	3	0.000	0	1.000	1.000	0.00	0.00
Beliefs about gender equality	BGE	3	0.000	0	1.000	1.000	0.00	0.00
All	Complete model	24	307.194	237	0.939	0.929	0.035	0.05

Note. Observed = variable count; YB-χ^2 = Yuan–Bentler rescaled; *df* = degrees of freedom; CFI = comparative fit index; TLI = Tucker–Lewis index; RMSEA = root mean squared error of approximation; SRMR = standardized root mean squared residual.

Structural Model

Figure 1 depicts the results of the hypothesized structural model, which highlights the relations of the latent variables. The significant paths are indicated with bold arrows, the corresponding factor loadings are also indicated for all the paths. The fit of the final structural model was good (χ^2 = 313.980; *df* = 239, $p < .001$; CFI = 0.935; TLI = 0.925; RMSEA = 0.036; SRMR = 0.06, $p < .05$). In terms of the direct effects, the autonomy to IPV path was significant and negative (standardized structural coefficient = –.24; $p = .01$) suggesting that women who felt autonomous in their sexual relationships may have experienced less IPV victimization. The relatedness path to IPV showed a tendency toward significance (standardized structural coefficient = –.19; $p = .10$), whereas competence showed no significant association with the outcome variable (IPV).

The results of the hypothesized indirect paths were analyzed according to the empirical conditions of mediation (Baron & Kenny, 1986). A significant negative direct

path from BGE to IPV (standardized structural coefficient = –.26; p = .02) was observed, the competence to BGE path was also significant with a positive association (standardized structural coefficient = .28; p = .02). The results described above suggest that BGE is a full mediator of the competence and IPV path. The hypothesized indirect path of autonomy to IPV through BGE only showed a tendency toward significance (standardized structural coefficient = –.21; p = .08) while the direct path from autonomy to IPV was significant therefore suggesting that BGE was not a mediator between autonomy and IPV. The relatedness (indirect) path through BGE also only showed a tendency toward significance (standardized structural coefficient = –.21; p = .10) suggesting that there was no mediation through this path either. The observed indirect path of competence to IPV was subjected to MPlus test for mediation to verify whether indeed there was mediation; however, the test yielded no significant statistical results (z = –1.113; p = .30). No significance was observed for the hypothesized indirect path between competence, BIPV, and IPV thus suggesting that even though the path from competence to BIPV was significant (standardized structural coefficient = .28; p = .00), BIPV in turn did not relate to IPV.

Discussion

More than a quarter of young women (18-35 years) in our study reported having experienced verbal or physical violence by their sexual partners in their most recent relationships. This finding highlights the persisting problem in sexual relationships among South African young women (Devries et al., 2013; Shai & Sikweyiya, 2015). The reported verbal or physical violence, which may even have been underreported here, and the reports of inconsistent condom use (only 40% of women said that they used condoms at last sex) indicate that women continue to be exposed to adverse health conditions. Especially because previous studies have shown that violence and lack of condom use are strongly linked to the risk of HIV infection (Decker et al., 2014; Karamagi, Tumwine, Tylleskar, & Heggenhougen, 2006).

Bivariate analyses showed that autonomy and relatedness had significant associations with IPV. Of these two latent variables, autonomy was shown to have a

significant direct association with IPV in the SEM as well, whereas relatedness was not shown to have a direct effect on the outcome variable.

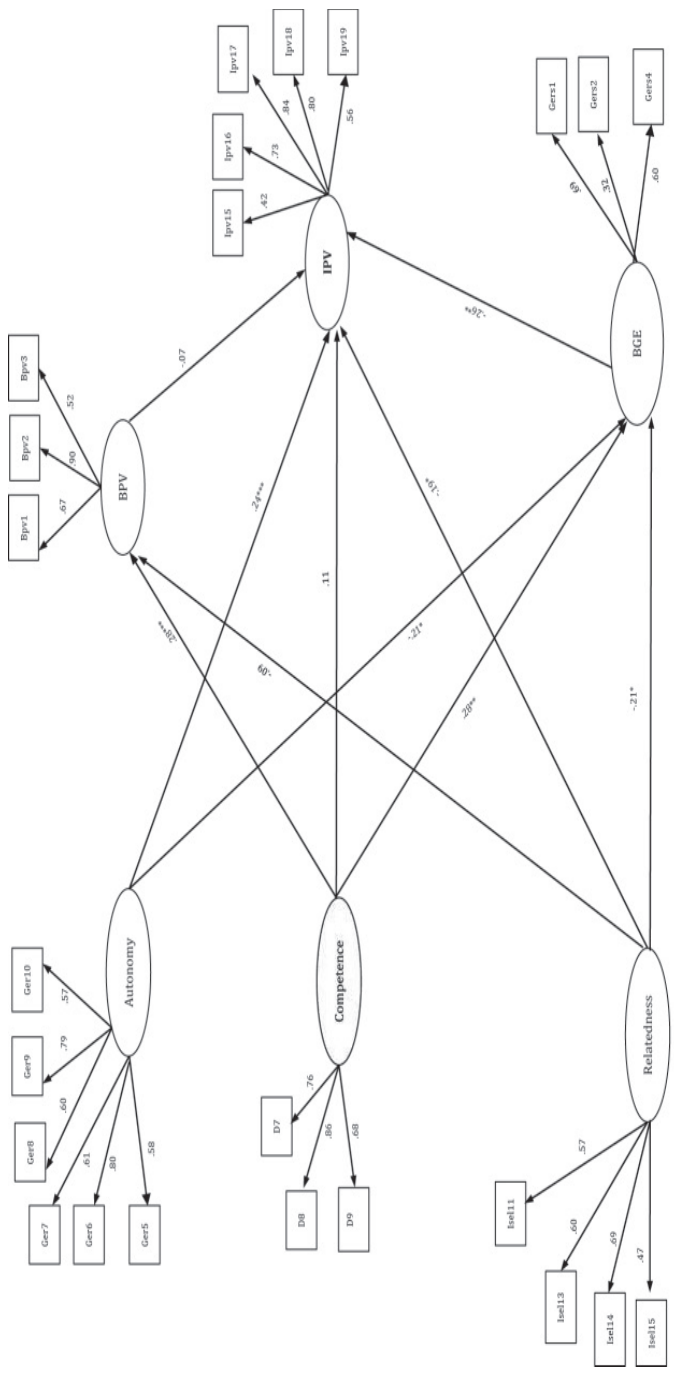

Figure 1. Structural latent variable model of operationalized three-SDT needs as predictors of IPV (standardized coefficients).

Note. Bold arrows denote statistically significant paths as well as those that show tendency toward significance. Fit indices: $\chi^2 = 313.980$; $df = 239$, $p < .01$; CFI = 0.935; TLI = 0.925; RMSEA = 0.036; SRMR = 0.06, $p < .00$. SDT = self-determination theory; Autonomy = operationalized with attitudes toward decision making; BIPV = beliefs about partner violence; Com_S = Competence operationalized with self-efficacy to practice safe sex; IPV = intimate partner violence; Relatedness = operationalized with presence of support; BGE = beliefs about gender equality; CFI = comparative fit index; TLI = Tucker–Lewis index; RMSEA = root mean squared error of approximation; SRMR = standardized root mean squared residual.
*$p < .10$. **$p < .05$. ***$p < .01$.

Autonomy being negatively associated with IPV may mean that women who feel a sense of agency or who feel included or consulted by their partners in decision making within sexual relationships are less likely to be exposed to verbal physical and sexual violence possibly because joint decision making acknowledges each partner's values and cultivates trust in a sexual relationship, and as such, the male partner will be less likely to assert himself through violence (Minnis et al., 2015; Ogland, Xu, Bartkowski, & Ogland, 2014).

BGE did not mediate the effect of autonomy on IPV. But the fact that it has a significant negative direct association with IPV is important, suggesting that women who hold gender equality beliefs may involve themselves less in oppressive relationships and thus get exposed less to violence (DePadilla, Windle, Wingood, Cooper, & DiClemente, 2011; Wingood et al., 2013). They may choose partners who do not espouse hegemonic masculinities as those partners who do may be perceived as violent. Furthermore, the association also highlights the importance of including human rights in interventions, especially how these rights can be practiced or applied in personal situations. These interventions should help women understand that relationships that recognize equality of partners are healthier than those that do not, and it would be important to promote autonomy and competence feelings for healthier (sexual) relationships.

The indirect path of competence to IPV via BGE needs further investigation, as it was shown to be significant in the SEM but not proven to be so in the mediation analysis possibly due to power issues as our sample was relatively small. Furthermore, competence being positively associated with BGE suggests that women who are efficacious in practicing safe sex or suggesting condom use also have an ability to choose healthier relationships and therefore may experience less violence (DePadilla et al., 2011; Wingood et al., 2013). Even though in the structural model BGE was also not shown to mediate the path between autonomy and IPV, it is important to understand the relationship between autonomy and BGE as the concept of equality is proximal to having the need for autonomy met. Further research may help us better understand the association between these concepts.

Also further research is needed to better understand the significant negative bivariate association between BGE and relatedness that approached significance in the structural model. Past research shows that in cases where social support was not present, women were shown to be more likely to suffer from mental ill health (stress and depression), and in worst cases, psychiatric morbidity (Coker et al., 2002). Beyond sharing challenges about sexual relationships, social networks are used for practical purposes such as poverty alleviation especially because unemployment is so rife in rural communities. It would be interesting to understand what role relatedness plays in preventing women from being involved in violent relationships, especially in a patriarchal context such as the one where our study was conducted.

We conclude that this study supports the SDT theory by showing that autonomy (direct effect) and competence (indirectly through BGE) measures are associated with less exposure to verbal and physical IPV. This means that teaching women to pursue relationships that will promote and cultivate the fulfillment of the three SDT needs may prevent them from being vulnerable and may also enable them to live healthier lives.

Furthermore, the sample size was relatively small, and women were recruited through IYA; therefore, our sample may not be representative of all rural, poor women in the Eastern Cape or South Africa. Also, our measures relied on self-report on sensitive information about sexually related issues, and participants may have provided responses that are perceived to be socially desirable. However, efforts were made by our research team to encourage honest responses from the participants. Finally, we designed a cross-sectional study, which may not have fully captured the hypothesized effects of the three needs on IPV. Therefore, a longitudinal study may be a better design for capturing these relationships. Aside from the limitations of our investigation, this work highlights that it is important to identify new psychosocial determinants of IPV because it is a complex and persisting problem. This way, identified correlates can help in the formulation of new change objectives for interventions to reduce women's exposure to IPV.

Chapter Six

Efficacy of a tailored intervention to enhance psychological wellbeing and healthy sexual behaviors among rural women from the Eastern Cape province, South Africa

Submitted for publication

Mpondo, F., Ruiter, R. A. C., van den Borne, B., & Reddy, S.P. Reddy

Introduction

In the past three decades the global health community has had to face the burden of HIV/AIDS as it threatened many people, especially those in developing countries (Zuma et al., 2016). South Africa like all other African countries in the Southern region remains the epicenter of the disease (Deaton & Tortora, 2015). As such, various clinical and primary health interventions have been implemented, first for mothers and new newborn babies. Treatments for them included antenatal testing of pregnant women, early testing and provision of anti-viral prophylaxis for infants, as well as anti-retroviral treatment (ART) for mothers (Takah, Kennedy, & Johnman, 2016; Barron et al, 2013). All these interventions have contributed to the reduction of new HIV infections, especially among children below the age of 14 years (Barron et al, 2013; Zuma et al., 2016). For adults the interventions have mainly been the roll out of ARTs, national campaigns for condom use and medical male circumcision (Zuma et al., 2016; Takah, Kennedy & Johnman, 2016). However, these campaigns have not yet yielded significant reduction in the prevalence rates among adults; the current rate in South Africa is 12.2% (Zuma et al., 2016).

The prevalence rates are high mainly due to the fact that individuals in heterosexual relationships report low condom use generally. Research shows that approximately 64% of adults report inconsistent condom use (Shisana et al. 2016; Mpondo et al., 2015). This percentage also includes those who report to be in stable relationships, as coupled individuals can get infected by being involved in extra sexual relationships whether long-term or short term. Even though it is known that both males and females are at risk of HIV/AIDS infection, especially if they live in a context of poverty and have low levels of education, data shows that the factors for vulnerability are aggravated for young women (15-24 years) (Pitpitan et al., 2016; Shisana et al., 2010; Zuma et al., 2016). Young women, adolescents in particular, are vulnerable because they are still going through developmental changes, and as such still have immature cervixes, which tend to be susceptible to inflammation. Research suggests that this may be what makes them more prone to contract HIV/AIDS infection (Dellar, Dlamini, & Karim, 2015; Kaul et al., 2008). Additionally, young women often lack accurate sexual health knowledge, a factor that inhibits them from making informed decisions when it comes to

sexual matters (e.g. when to have their sexual debut). This is the case especially for those young women who have dropped out of school. Further, unfavorable socio-economic conditions expose young women to risky sexual partners and encounters, more than their male counterparts. Young women often get involved in transactional sex as a way of securing money for basic necessities (Zembe et al., 2012). Moreover, the South African socio-cultural context normalizes age and gender-power disparate sexual relationships, which makes it even more difficult for young women to have any autonomy in decision-making within their sexual partnerships (Pitpitan et al., 2016; Zembe et al., 2012; Shisana et al., 2010; Steffenson, Pettifor & Seage, 2002).

Since there is no effective vaccine or cure for HIV/AIDS yet and the only treatment available are anti-retroviral, pre-exposure prophylaxis and those used to minimize further transmission, effective behavior change interventions can play an important role in reducing the prevalence rates. Such interventions need to be based on a clear understanding of the unique issues, circumstances and barriers to individuals enacting safe sexual behaviors in order to have lasting effects. So far there are a number of interventions that have been implemented in the South African context that have been shown to have some significant effects in reducing or altering risky HIV-related behaviors (e.g. unsafe sex and substance abuse), as well as changing attitudes associated with HIV risk, for example with regard to HIV-testing and intimate partner violence (Harrison et al., 2010). Interventions that have had significant effects in addressing the above-mentioned determinants include examples such as Healthwise, and the Mpondombili project, as well as the Tshwane peer education and support programme. However, these interventions only focused on changing the behavior of school learners (Smith et al., 2008; Mantell et al., 2006; Visser, 2007). Very few interventions focus on those individuals who are in communities and who may have dropped out of school, and thus miss any opportunity to learn about sexual health. Stepping-stones and SISTA are two examples of such interventions (Jewkes et al., 2008; Wingood et al., 2013). Stepping-stones focused on young men and women (15-26 years old), and covered modules on risky sexual behavior, communication and intimate partner violence through using participatory learning and critical thinking approaches. The programme was more effective on young men; they reported less intimate partner violence, however, no

significant effects were reported for young women. Overall the Stepping-stones programme led to reduced reports of STIs namely herpes simplex virus (HSV-2) (Jewkes et al., 2008). SISTA was a randomized controlled trial (RCT) for South African Xhosa-speaking women, which was adapted from an American intervention (Wingood & DiClemente, 2006). The core modules of the RCT focused on gender pride, the importance of condom use negotiation, as well as health-care seeking behavior to treat STIs. SISTA was reported to be efficacious on sexual knowledge, reduced unprotected sex and relationship control (Wingood et al., 2013). These two studies outlined above indicate that there is a need to implement and evaluate more community-based interventions that include young women who are most at risk.

We conducted a study to assess the effects of an intervention on psychological wellbeing and sexual behavior of Xhosa-speaking young women (18-35) who live in rural communities of the Eastern Cape Province. The intervention named Zimele Responsible Womanhood was grounded on the self-determination theory (SDT; Ryan & Deci, 2000; Sheldon et al, 1996) and integrated components of SISTA. SDT helped us to understand the determinants that expose women to adverse psychological health outcomes, which in turn causes them to enact risky sexual behaviors. SDT was useful in explaining these complex health problems and behaviors because this theory posits that risky behavior may stem from the fact that individuals view behavior as something that is wholly controlled by external factors that they do not have any control over. SDT explains this phenomenon as lack of self-determination and lack of motivation to enact healthier behaviors (Ryan & Deci, 2000; Sheldon et al, 1996; Patrick et al., 2007). In this study we focused on the fact that SDT states that internalization of healthier behaviors can be facilitated through meeting the psychological needs of individuals. These psychological needs are *autonomy*, *competence*, and *relatedness* (Patrick & Williams, 2012). In this study we aimed at increasing *autonomy* by targeting the determinants of disempowerment and increasing an awareness of the importance of personal agency in sexual partnership. We also aimed at targeting poor psychological coping indicators (e.g. self-esteem and ability to manage external stress demands). For enhancing *competence* we targeted self-efficacy in enacting safer sexual behaviors, increasing sexual health knowledge and self-motivation towards behavior change. For strengthening *relatedness*

we highlighted the importance of social networks, being connected to other women and family as well stressed the importance of having a sense of control of interpersonal spaces, especially in sexual relationships.

The integrated components are those that are based on Socio-cognitive Theory (Bandura, 1989). Social Cognitive Theory (SCT) was integrated into the intervention in order to complement the SDT theory. SCT is premised on the fact that individuals are both products and actors of their immediate environment (Luszczynska & Schwarzer, 2005; Plotnikoff et al., 2013; Stacey et al., 2015). Therefore, for people to initiate and maintain behavior change they need to feel autonomy or have a sense of control over their behavior and environment. In this intervention, the aim was to help participants believe that they can seek agency in their sexual relationships, also that they can develop a strong sense of competency on their condom use skills.

We hypothesized that immediately after the intervention and at 6-month follow-up women in our intervention group would show an increase in main psychological wellbeing outcomes, namely increased self-esteem, reduced depression, and reduction in reports of intimate partner violence. We also hypothesized that the young women would report an increase in safer sexual behaviour namely condom use, condom use negotiation, and that they will report higher scores on psychosocial determinants of condom use.

Methods

Study setting and sampling

The intervention was carried out from October 2012 to September 2013. Data were collected from five villages in the OR Tambo and Amathole district municipalities of the Eastern Cape Province, South Africa. The municipal districts are located along the Eastern seaboard of the Indian Ocean. At the outset of the research, a local development organization called the network of Eastern Cape Royal Chief's wives [Imbumba Yoomama Bakomkhulu (IYA)] was identified as a key stakeholder. The IYA network assisted with the recruitment of women in its community structures. Eligibility criteria were established through a needs assessment conducted prior to the commencement of the study and described elsewhere (Mpondo et al., 2015). Prior to the implementation of

the study ethics approval was obtained from the Walter Sisulu University (WSU) Ethics and Bioethics Committee.

Study design

In this study we followed quasi-experimental design, where we selected villages from two district municipalities that had a similar socio-economic profile (i.e. higher poverty levels, income lack wealth-inequality and unemployment as compared to other districts). Women who belonged to the OR Tambo district were assigned to the intervention arm, and women from Amathole district were assigned to the control arm (see Fig.1). The study utilized a baseline test, a post-test after 1-month of implementation, and a 6-month follow-up test. A total of 270 women were sampled, of those 238 completed the questionnaire at baseline, *N= 196* completed the 1-month follow-up questionnaire, and n= 165 completed the 6-months follow questionnaire (see Figure 1).

Figure 1. A diagram representing the study flow

Intervention programme

Participants in the intervention arm were taken through a curriculum that comprised 4-sessions, each conducted for 3-4 hours once a week at a rural homestead. Whereas the participants in the control arm were taken through a general health curriculum. The curriculum for the intervention arm was developed first through using the SDT theory to gain an understanding of the determinants of psychological ill health and risky sexual behaviors (Deci & Ryan, 2008; Ryan & Deci, 2000). Works of Vansteenkiste and colleagues (2012), as well as that of Resnicow and colleagues (2001) were used as guides in designing the curriculum. The above-mentioned interventions focus on initiating behavior change through the perspective of motivational (MI) interviewing. Here we used a similar approach in order to elicit and strengthen personal motivation for change towards better psychological wellbeing and sexual health practices rather than to use a directive or coercive approach. Further, in the curriculum design modules of the SISTA intervention were used to strengthen the sexual health component (Wingood et al., 2013).

Health promotion researchers facilitated the intervention sessions. *Session 1* of the intervention was designed to be an introductory session where young women got to know each other and learned about the aims and objectives, as well as their role as participants in the intervention. In this session women discussed the importance and value of being a woman, the beauty, as well as the importance, and role of culture in the daily lives of women. The latter part of the session was designed around a translated poem called “A strong woman”. *Session 2* focused on the topic of psychological wellbeing. Here collaborative discussions were held on the things that make it difficult to have a healthy self-esteem, as well as things that affect women’s ability to handle life stressors. Space was provided for sharing experiences that may have affected self-esteem, life events that may have led to poor psychological health. Women then discussed the difficulties and possible solutions to help equip each other should similar situations arise in the future. *Session 3* focused on relationships, the objective here was to encourage participants to recognize the value of healthy social networks. Having poor support systems cause women to expose themselves or tolerate intimate partner violence because they do not

feel a sense of belonging. Women here discussed healthy and unhealthy relationships (family, friendships and sexual relationships), effective communication strategies through the use of scenarios and personal stories. Gender-based violence (verbal, emotional and physical) was also discussed and how women get exposed to such situations and women were asked to come up with possible solutions to avoid violence or to extricate themselves from such situations. Here women were also asked and encouraged to share personal stories. Finally, *Session 4* was designed to meet the *competence* psychological need and enhance condom use self-efficacy (Bandura, 1989). Here women were asked to discuss general feelings about self as well as fears, comforts, and resistances on practicing sexual behaviors. An example question used was "why women think it is difficult to ask or convince a sexual partner to use a condom?". Women were asked to collectively come up with ways they could convince their partners to use a condom. Women were also given information on female anatomy as well as the ways of having good reproductive health care and health seeking were discussed. In this session women were given the space to practice condom use skills (i.e. correctly inserting condoms, removing and discarding).

Two health-promotion researchers who were isiXhosa speakers conducted the control arm sessions. This curriculum was carried out over 2 sessions each lasting for a maximum of 3 hours. In *Session 1* women discussed and practiced self-care methods (i.e. they focused on the importance of personal hygiene and grooming). In *Session 2* the participants discussed healthy nutrition and general health care seeking. In both sessions practical demonstrations were held on how to practice self-care.

Instrument design

Demographic variables

The demographic variables included age, highest grade passed (1= no schooling, 2= primary school, and 3= post matric), marital status (1= single, 2 = married, 3 = divorced or separated, and 4 = widowed), employment status (1= more than 5 days, 2= less than 5 days, 3= Social grant, 4= unemployed), and household income in South African Rands (salary, social grants, other sources of income).

For the measures below, confirmatory factor analysis was conducted to check whether items grouped together as would be expected (which was generally the case, although in some instances not all items within a group made it to a scale). Inter-item correlation and principal factor analysis direct oblimin rotations were used for extracting factors. Items with factor loadings of .40 or higher were grouped and subjected to reliability analysis. Groups of items with a Cronbach's alpha of .60 or higher were averaged into a single construct and labeled to reflect the underlying variable that was measured. All measures were based on Likert-type items, unless otherwise indicated. Items and variables were coded such that higher scores reflect a stronger measure of the pertinent variable.

Psychosocial measures

Presence of Depressive symptoms was measured with a 21-item scale from Beck's Depression Inventory, which is an inventory of whether or not an individual has experienced and depression symptoms in the past two weeks. The scale had response options (*0= no feelings of depression, 3 = strong feelings of depression*; α =.84). Presence of depressive symptoms was measured with questions such as: In the past two weeks did you have… "Feelings of sadness", "Loss of pleasure", "Suicidal thoughts or wishes" (Beck & Steer, 1984).

Self-esteem was assessed with the Rosenberg 10-item scale with response options (*0 = strongly agree, 3= strongly disagree*; Rosenberg, 1965). After recoding factor analysis showed a two-factor solution, positive and negative self-esteem, respectively. *Positive self-esteem* was measured with five items (e.g. "I feel I have a number of good qualities"; α =.66). *Negative self-esteem* was measured with four items (e.g. "All in all, I am inclined to feel that I am a failure"; α =.64). After re-coding, a higher score indicated a more negative self-esteem experience.

Perceived stress was measured with nine items with response options (*0= never to 4= very often;* Cohen et al., 1983*).* Factor analysis resulted in two-factor solution but only had adequate internal consistency: the *ability to control stress (ACS). ACS* had five items and was measured with the phrase "State your feelings and thoughts in the last

month…" and items such as "How often have you felt that things were going your way" *(*α =.64).

Ways of coping measured how participants deal with stressful encounters (Folkman & Lazarus, 1980). The questions asked, "If you have faced a difficult situation, family problem, or medical treatment, please tell us how you have dealt with that problem", and a scale of 22-items was used with scoring options (*0 = not used, 3 = used a great deal*). Factor analysis suggested two sub-scales: avoidance coping and active coping. *Avoidance coping* was assessed with statements such as "I hoped a miracle would happen" (α = .76). *Active coping* was measured with statements such as "I made a plan of action and followed it." (α = .80).

The sexual behavior question assessed whether a person had a sexual primary partner and a secondary/casual partner each with one item (0 = no, 1= yes). One open-ended question asked about the number of men a participant had sex with in the last 3-months.

Condom use self-efficacy was measured with answer options (*0= strongly agree, 4= strongly disagree) (e.g.* "I feel confident in my ability to use a condom correctly"; α =.83) (Brafford & Beck, 1991).

Condom use negotiation had answer options (*1= not at all, 3=always)* (e.g. How confident are you that you could easily … "Convince your partner to use a condom even if he didn't want to"; α = .76).

Knowledge about the spread and transmission of HIV/AIDS and sexual transmitted infections (STIs) was measured with six questions, for example "If a woman uses birth control pills it lowers her risk of transmitting HIV to male partners" (*1= false, 3= I don't know*; α = .60).

In addition three separate questions were asked about condom use and condom use intention. The first asked "During the past month did you and your sexual partner use a condom" answer options (*1 = yes, 2=no, 3= I don't know*). The second "In the past month, how often did you use a condom with your main sexual partner " 5-item Likert scale answer options (*0 = never, 4 = Every time*). The third question asked "In the next 3 months, how likely is it that you will use a condom every time you have vaginal sex with your partner" with answer options (*1= very uncertain, 4= very certain*).

Intimate Partner Violence (IPV) was assessed with a 4-item scale with response options (*0= never, 3 = always*). The scale was assessed with questions such as "Does your partner ever yell or curse you? " (α = .80).

Beliefs about Intimate Partner Violence (BIPV) were assessed with a 4-item scale with response *options (1= strongly agree, 5= strongly disagree).* An example of the items was "There are times when a woman deserves to be beaten up" *(*α = .60*).*

Data analysis

For the socio-demographic variables descriptive statistical analyses were conducted. To explore the effectiveness of the intervention over time separate time x condition repeated measure univariate analyses of variance (ANOVA) were conducted for testing intervention effects at post-test and follow-up against baseline scores. In case of significant time x condition interaction effects, simple contrast analyses were conducted to the effect over time on the outcome measure in both study arms. IBM SPSS statistics version 22 (SPSS Inc., Armonk, NY) was used for analyses.

Results

A total of N= 238 (M_{age} = 25.9; SD= 4.37) women were assigned to the study after the baseline assessment. A total of *N= 137* (57%) participants were assigned to the Zimele Responsible womanhood intervention arm, and *N= 101* (43%) participants were assigned to the control arm. In terms of other demographic measures, a majority of the participants (76%) had at least attended high school. About 89% of the participants were not married; 68% were unemployed, and 22% of the participants reported to not have an income. For an overview of the socio-demographic characteristics of the sample, see Table1.

Table1. Socio-demographic profile of sampled women living in the rural

Variables	Frequency	Percentage (%)
Education level		
No formal schooling	1	0.5
Primary school	8	3.7
Secondary school	164	76.3
Other	42	19.5
Marital status		
Married	25	10.6
Not married	208	89.4
Have one or more children (yes)	77	32.4
Have one or more children (no)	161	67.7
Employment status		
More than 5 days	0	0
Less than 5 days	2	2.1
Social grant	51	21.8
Stay at home	17	7.3
Disabled	1	0.4
Unemployed	158	68.4
Household income		
No income	52	22.5
Under 10, 000	168	73.6
Over 10, 000	12	3.8

Regarding sexual behaviors 66% reported to have a main or casual sexual partner. A minority 9.7% reported that they had more than one sexual partner in the past 3-months. About a third of the sample (39.4%) reported having used a condom at last sex. Of the Zimele intervention arm participants, *N= 96* (70%) completed 1-month follow-up and *N= 77* (56%) completed the 6-months follow-up. The 30% of the participants who dropped out in intervention arm did so before the end of the four sessions due to various reasons. Some of which included finding employment or learnership opportunities, others dropped out due to relocation reasons. In the general health arm, *N= 100* (99%) completed 1-month follow-up and *N= 88* (87%) completed the 6-months follow-up.

T1 (1-month post-test) effects between the intervention and the control arms

For the T1 post-test evaluation, the analysis showed significant time x condition interaction effects on negative self-esteem (NSE), F (1,193) = 4.62, $p < .05$, and presence of depression symptoms (PDS), F (1,180) = 4.62, $p < .05$. Simple contrast analyses showed that young women in the intervention arm reported significant reductions in negative self-esteem, F (1,193) = 9.41, $p < .01$, and depressive symptoms, F (1,180) = 7.63, $p < .01$, compared to virtually no changes for women in the control arm (p's > .10). A significant time x condition interaction was also found on intimate partner violence (IPV), F (1,180) = 5.24, $p < .05$, showing that IPV reduced over time in the intervention arm, F (1,180) = 7.63, $p < .01$, and did not change in the control arm ($F < 1$, *ns*). No significant effects of the intervention were found on condom-use self-efficacy (CUSE), condom use negotiation, HIV knowledge, and intention to use a condom (F's < .1, p's > .10; see Table 2 for the mean scores across intervention conditions and time).

T2 (6-months) follow-up effects between the intervention and the control arm

At 6-months follow-up, the only intervention effect was found on negative self-esteem (NSE), F (1,163) = 7.16, $p < .01$. Simple contrast analyses showed that women in the intervention group reported a significant reduction in negative self-esteem, F (1,163) = 5.03, $p < .05$, while women in the control group showed a slight increase in negative self-esteem, F (1,163) = 2.31, $p > .10$ (see Table 2 for means). The time x condition interaction effect analyses for IPV only showed a tendency towards significance F

(1,155) = 3.296, p= .07, with participants in the intervention group reporting less instances of IPV following participation in the program, F (1,155) = 5.203, p < .05, while no changes in the control arm (F's < 1, ns) were observed. No significant long-term intervention effects were found on the other outcome measures (F's < .1, p's > .10).

Table2. Mean scores for baseline, post-test and 6-months follow-up effects of the psychological wellbeing and sexual behaviors intervention

	T0 baseline Mean (SD)		T1 post-test Mean (SD)		T2 follow-up Mean (SD)	
Outcome measure	**Intervention**	**Control**	**Intervention**	**Control**	**Intervention**	**Control**
Presence of depression symptoms (PDS)	0.84(0.47)	0.59 (0.44)	0.65 (0.44)	0.60 (0.47)	0.59 (0.44)	0.59 (0.47)
Negative self-esteem (NSE)	1.40(0.58)	1.11(0.60)	1.20(0.61)	1.16(0.53)	1.22 (0.56)	1.17 (0.58)
Positive self-esteem (PSE)	2.19(0.56)	2.24(0.53)	2.47(0.47)	2.48(0.53)	2.31(0.47)	2.39 (0.53)
Ability to control stress (ACS)	1.74(0.85)	1.65(0.79)	1.64(0.77)	1.53(0.85)	1.58(0.77)	1.66 (0.85)
Avoidance coping	1.26(0.57)	1.23(0.57)	1.48(0.53)	1.38(0.49)	1.38(0.53)	1.25 (0.50)
Active coping	1.17(0.54)	1.25(0.51)	1.38(0.45)	1.29(0.48)	1.20 (1.38)	1.12 (1.29)
Communication about STIs	1.61(0.74)	1.49(0.60)	1.61(0.57)	1.61(0.73)	1.58 (0.58)	1.67 (0.74)
Condom use frequency	1.49(1.08)	1.41(0.57)	1.34(0.54)	1.37(0.62)	1.41(0.54)	1.37 (0.62)
Intention to use a condom	2.71(1.24)	2.70(1.31)	2.69(1.34)	2.69(1.24)	2.71(1.33)	2.67(1.29)
Condom use self-efficacy	2.52(0.96)	2.23(0.97)	2.70(0.87)	2.65(0.82)	2.40(0.91)	2.40(1.00)
Condom use negotiation	1.97(0.61)	2.13(0.63)	2.11(0.56)	2.30(0.51)	2.95(0.78)	2.87(0.84)
HIV knowledge	1.90(0.41)	1.76(0.41)	1.85(0.43)	1.76(0.41)	1.95(0.47)	1.97 (0.46)
Intimate partner violence (IPV)	0.45(0.48)	0.25(0.44)	0.27(0.39)	0.28(0.46)	0.32 (0.87)	0.32(0.96)
Beliefs about intimate partner violence (BIPV)	2.87(0.69)	3.05(0.63)	3.06(0.69)	3.26(0.63)	3.01(0.72)	2.98(0.64)

Discussion

This study presents the time x condition as well as simple interaction effects of a Zimele Responsible Womanhood intervention. The intervention was designed to enhance psychological wellbeing of young women (18-35 years of age) and to reduce risky sexual behaviors as well as the exposure to intimate partner (IPV) amongst rural women in the Eastern Cape province of South Africa. The results of this study show that women in the intervention reported a significant reduction in exposure to intimate partner violence. Women in the experimental arm also reported a significant reduction in symptoms of depression (PDS) and negative self-esteem (NSE) as compared to women in the control condition. No significant effects were observed for HIV knowledge as well as condom use self-efficacy, frequency of condom use, and intention to use a condom.

The reduction in exposure to intimate partner violence is important because studies show that more than 50% of women report exposure to physical, emotional and sexual violence daily. South Africa is also reported as the highest-ranking country in terms of IPV prevalence (Abrahams et al., 2014; Shai & Skweyiya, 2015). Further, women with low or no income are reported to be most vulnerable to IPV as they may feel dependent on their sexual partners and thus tolerate acts of violence. In addition, studies show that IPV thrives in societies that uphold patriarchal norms; this is especially the case in rural communities and thus makes it very important that interventions such as this one are able to reduce reports of IPV.

The fact that this study showed a reduction in reports of negative affect (NSE and PDS) amongst young women in the intervention arm is important as studies show that poor psychological wellbeing (not clinical morbidity) may lead to poor decision-making

and exposure to risky behavior (Miron & Orcutt, 2014; Dawson, Shih, deMoor & Shrier, 2008). This means that young women may engage in sexual activity or have multiple partners as a way of relieving their psychological distress. Inversely, having reduced psychological distress may enhance better decision-making and possibly increase the enactment of healthier sexual behaviors.

The fact that no significant effects of the intervention have been observed in intention to use a condom, in condom use self-efficacy and in condom use frequency may have to do with entrenched gender-power incongruences in rural communities. The extent to which this is true needs further investigation. In this regard, it may be also important to study data collected amongst peri-urban women, which shows that women in mentioned communities report being better informed, and able to challenge gender norms, at least to a certain degree. Women in these settings also report being able to ask or assert for condom usage as compared to their rural counterparts (Eggers et al., 2014). Understanding how these dynamics work in peri-urban communities may help us improve the situation in rural communities.

It was surprising that the intervention did not increase HIV-knowledge as past interventions showed to be efficacious in increasing knowledge among participants (Wingood et al., 2013). It may be that participants had a general awareness on HIV transmission and that the intervention did not provide any new knowledge. The National Incidence and Behavioral Survey also showed that accurate HIV knowledge was decreasing. The survey attributes this to the success of national biomedical interventions by the South African Department of Health, which may downplayed the importance of prevention (Zuma et al., 2016). It may also be that individuals though still enacting risky

behaviors are fatigued from receiving HIV information and are hoping for female focused biomedical interventions or a cure. This then possibly requires an evaluation of how prevention messages or HIV-knowledge information is disseminated and evaluated.

A limitation of this study was that a randomized controlled trial was not feasible, and that in our quasi-experimental design we had to correct statistically for baseline differences between experimental and control group. Notwithstanding this limitation, our study highlights that the psychological wellbeing of young women has to be factored in when conducting interventions as this may have an influence on their decision-making. It may not be sufficient to count on their resilience and not target psychological factors when providing sexual health skills. It may be important to also provide tools to help women understand that their environment has an impact on their psychological wellbeing and that in turn impacts all decision-making.

In conclusion, future work should focus on understanding why the intervention was not successful in changing the motivation of young women towards enacting safer sexual behaviors. It may be important to get an in-depth understanding of social and cultural practices that influence young women's decision making and in turn have an influence on their behavior. Once this is done it may be important to design instruments that help women overcome these barriers.

Chapter Seven

General Discussion

Discussion

The majority of South Africans continue to face the consequences of Apartheid and this is especially the case for rural dwellers that are spatially isolated from economic and development resources. Women bear the brunt even more than their male counterparts as they are also confronted with structural, socio-economic and socio-cultural conditions that expose them to adverse health outcomes. Addressing these conditions may be very challenging, as that requires higher level and complex interventions. Health promotion interventions may be used to empower women to be less vulnerable physically and psychologically against adverse health circumstances. The objective of this dissertation is to describe the systematic development and evaluation of a culturally tailored intervention conducted amongst 18-35 year old young women. The intervention was designed to enhance psychological wellbeing and reduce risky sexual behaviors as well as exposure to intimate partner violence (IPV). In this chapter we put the main findings from our research into perspective. We also reflect on methodological issues, public health as well as practice implications. We further make recommendations for future research.

Problem analysis research

Rural resilience and psychological wellbeing

Chapter 2 and 3 describe the problem analysis stage into the development of the intervention. Findings from 7 in-depth focus group discussions (FGDs) with adolescents, young and adult women, provided insights into lived experiences of women who had low levels of education and very few socio-economic prospects. Background literature searches conducted as part of the problem definition showed that there is sufficient data on the prevalence of poverty. Also, that information is available on structural difficulties faced by individuals and families who live in underdeveloped communities. The FGDs were therefore used to gain insight into women's appraisals of how sustained poverty impacted their wellbeing. In chapter 2, the findings show that living in under-resourced settings comes with continuous distress for women, and that their ability to cope gets constantly challenged by circumstances. Women seemed to understand that resilience was important for sustaining wellbeing. It also emerged that it was important for rural

women to use abiding familial and social network resources to tackle some of the exposing elements or to help with coping. This insight highlighted a need to use a health promotion intervention to focus on addressing women's coping mechanisms, to use psychological healthcare methods to enhance their mental wellbeing, and therefore ensure sustained wellbeing. There have not been many interventions conducted in South Africa that have had psychological wellbeing as a main outcome. Yet, it is clear that in order to effectively address health problems that arise from living in impoverished settings programs must also incorporate mental wellbeing care strategies. A recent meta-analysis study substantiates the above-mentioned findings. In their study Weiss and colleagues (2016) assessed the effect of having psychological wellbeing as a primary or secondary outcome in behavioral and bio-behavioral interventions. The latter should be understood as interventions that involve addressing both behavioral and biological elements. Studies that were included in the meta-analysis had to be randomized controlled trials (RCTs) that were conducted in a community setting. The RCTs also had to focus on enhancing psychological functioning while excluding participants who presented with psychological or pathological complaints. The findings of the meta-analysis showed that bio-behavioral interventions, which had a psychological wellbeing enhancement component tended to be more effective than those that did not (Weiss, Westerhof & Bohlmeijer, 2016).

Culture and sexual health communication

The study outlined in chapter 3 explored issues associated with young women's sexual health, particularly how adolescents are equipped at home and how the preparation for young adulthood or lack thereof influenced their behavior in their young adulthood years. It emerged that there was a norm of mothers not being proactive communicators with regards to sexual health and reproductive development. Also, that dictums were used in an attempt to discourage sexual activity or warn against teen pregnancy but the use of the dictums was not accompanied by explanations. Moreover, the findings from the study also suggested that mothers were not able to equip their adolescent daughters with necessary sexual health information because they were ill equipped themselves. The findings suggest that it would be important to integrate a sexual and reproductive health

component into the intended intervention. The component would empower young women on sex matters so that they would be able to protect themselves from risky partnerships. It was clear that it would be important to demonstrate to women that reproductive health is not a taboo subject. An intervention addressing the aforementioned sexual health components may demonstrate to women that they can broach the subject with their daughters in future.

Study of determinants

Condom use self-efficacy and exposure to HIV/AIDS risk

Chapter 4 and 5 describe research that focused on explaining the determinants that influence women's confidence to exert persistent efforts on safer sexual behaviors, as well as women's exposure to intimate partner violence (IPV). The research in both chapters formed part of the behavioral analysis for the development of the intervention for young rural women. These studies add to findings from empirical research that focuses on the associations between the three self-determination theory (SDT) needs and health behaviors, and therefore demonstrate that SDT is important in understanding optimal development or human growth and functioning (Gagnè & Deci, 2014; Gaston et. al., 2016; Sanchez-Oliva et. al., 2014).

In chapter 4, important information was gleaned about the association of the three SDT psychological needs with condom use behavior. The research demonstrated that in order for the *competence* and *autonomy* needs to be fulfilled or for individuals to internalize the confidence to use condoms (condom use self-efficacy), a number of factors were important. These were, HIV-knowledge and positive life outlook (i.e. not being hopeless and having a positive growth perspective). Further, since *relatedness* facilitates how individuals process the behavior-change needed, environments that diminish a sense of social security for women, may lead to those women having poor confidence in exerting safe sexual behaviors. For instance in societies where women believe they have a low social status (gender inequality beliefs) their self-efficacy to use condoms will be low or will decrease after a negative reaction of a partner to a first suggestion to use a condom.

In Chapter 5, the psychosocial determinants of intimate partner violence (IPV) associated with the three SDT needs and gender constructs were examined. Research here mainly showed that in sexual relationships where the autonomy need was not satisfied individuals were more likely to be exposed to IPV. Further, the research presented in this chapter suggested that societal norms and beliefs on gender equality also mediated exposure to intimate partner violence.

The findings of the two studies showed that it would be important to incorporate into the intended intervention the concept of self-evaluation, so as to help participants make judgments about their personal decision-making, life choices and progress in a way that would enhance their wellbeing. Literature shows that when individuals can make important self-evaluations, they are able to progress in life. Moreover, when they gain confidence, they also feel secure and in control of their immediate environment (Jiang & Jiang, 2015). Practically this meant that facilitators and participants would have discussions on how an individual makes valuations on their personal development. They would look at the things that have improved in their life and at things that still needed improvement in the future.

The empowerment intervention

The objectives of the intervention evaluated and described in chapter 6 of this thesis were to help women increase their awareness of personal agency especially in sexual relationships. The intervention also targeted poor psychological outcomes such as stress and the management of external stress indicators. A component of the intervention also focused on empowering women with reproductive and sexual health knowledge. This intervention was expected to contribute to empirical studies that have been conducted in hard-to-reach rural community settings. Interventions with similar objectives that have been conducted in other settings in South Africa include the Stepping-stones and SISTA interventions (Jewkes et al., 2008; Wingood et al., 2013). It was also important that the systematic development of the intervention included both literature searches to understand epidemiological and contextual problems, and also to use focus group data. This allowed planners to collaborate on examining the intricacies of the health problems and to gain background information and insight into the behaviors of

the intended participants and their communities. The intervention was grounded on SDT and Social Cognitive Theory (SCT) (Ryan & Deci, 2000; Bandura, 1986; Bartholomew Eldredge et. al., 2016). Both these theories were chosen because they have similar underpinnings; they can be used to explain health problem determinants, and they have been shown to be useful as frameworks for behavior change design.

The findings from the evaluation of the intervention show that there were significant effects in the short-term, especially for the measures of psychological health. After 1-month of the intervention, compared to the control arm, negative self-esteem and the presence of depression symptoms were significantly reduced. Also the young women reported less intimate partner violence exposure (IPV). Stepping-stones, a mixed-gender empowerment intervention also showed an effect on reducing reported intimate partner violence. However, the IPV reports were reduced amongst males and no experiences of violence were reduced amongst females (Jewkes et. al., 2008). Our findings and those of Jewkes and colleagues (2008) show that even though exposure-to or perpetration of IPV is a widespread social problem, when targeted it can be combated or reduced when participants (male or female) are empowered to address its determinants.

Our intervention had no long-term effects (after 6-months follow-up) on the measured outcome variables, except for the presence of depression symptoms, which was reduced. It is noteworthy that the young women were able to maintain their psychological resilience in the long-term. The fact that no long-term effects were observed on women's exposure to IPV is also interesting. It could be that women entered into new relationships where their sense of social security was reduced and therefore required them re-assert themselves or extricate themselves from violence. It would have been helpful to have qualitative evaluation data to test the above assertion, or to better understand the lack of long-term effect on this particular measure.

Further, the intervention was unsuccessful in changing the motivation of women to enact safer sexual behaviors, both in the short-term and in the long term. This is particularly interesting since SISTA another empowerment intervention in South Africa from which the sexual health component was adapted showed an effect on reducing risky sexual behaviors (Wingood et al., 2013). The SISTA intervention may have been more effective in reducing the aforementioned behaviors because they had a voluntary HIV-

testing component, which may have caused participants to personalize their vulnerability to HIV. Finding no effect for intention to use condoms and condom use self-efficacy measures in our intervention may have to do with a number of factors. Firstly, even if women may have realized the importance of condom use after the intervention, entrenched patriarchal norms or gender-power inequalities within sexual relationships may have served as a hindrance for women to enact healthier sexual behaviors. Secondly, it may be that women have tried to initiate condom use but may have had refusals by their sexual partners which may have caused their condom use self-efficacy levels to drop, thus possibly making it an issue of persistence in order to realize behavior change.
The lack of effect on HIV-knowledge may have to do with how the message about this topic was delivered. The intervention message stressed more on how HIV is contracted, while it did not directly address myths about how individuals could avoid contracting HIV, and myths about available non-medical cures. In retrospect, addressing myths surrounding HIV contraction can help participants learn that they can't avoid safe sexual behaviors for what has not been scientifically proven to work. Further, it may be important for facilitators to develop measures of testing whether accurate information relating to infection, prevention and curing HIV/AIDS are clearly addressed. Also testing whether or not accurate information has been received can help participants fill any biomedical or health promotion gaps that may be apparent, within reason. In terms of this finding, when our study is compared to the SISTA intervention, the latter showed to have an effect on increasing HIV knowledge in the intervention arm (Wingood et. al., 2013). The effect could possibility also be attributed to the HIV-testing component, which may have helped echo the information on safe sexual behaviors and general HIV-knowledge. Prior to testing it is standard that clients are given pre-and-post-test counseling.

Reflections on methodology

Using Intervention Mapping for intervention planning

The work conducted in this thesis describes how the Intervention Mapping (IM) framework was used for the planning and the development of a new intervention; with small incorporations of an existing intervention, which was conducted in South Africa. Chapter 2 and 3 describe the outcome of step 1 where IM was applied, this step resulted

in the development of a logic model of the problem and the identification of key determinants to target in the intervention. Stakeholders played an important role in step 1 (Logic Model of the Problem), their involvement started with meetings that were held with the Provincial Traditional Legislature (Eastern Cape House of Traditional Leaders; ECHTL). The objective of the meetings was to gain entry into the communities, and to also get different perspectives of the problem, as well as social and cultural roles in worsening or lessening the problem. Further, the researchers identified a network of local traditional leaders, mostly women, who already had development projects within their rural communities. The local leaders formed part of the participatory planning team, however due to funding constraints, the network of leaders could not be involved full-time in the process. This limitation was addressed by updating the traditional leaders on the progress at regular time intervals. The planning team used Step 2 (Programme Outcomes and Objectives) to outline what should be addressed to promote healthy sexual behaviors as well as psychological wellbeing. However, the scientific team took a decision to only follow the core tasks of this step because of time constraints. Therefore, a list of the determinants that were considered a priority based on the needs of the community and what the literature showed to be a health burden was compiled. Chapter 4 and 5 describe some of the selected determinants and illustrate the use of theory to explain how the determinants affect wellbeing. For the remainder of the framework, a careful step-wise approach was followed to complete the tasks and develop an intervention program. The team felt that the expertise of the principal investigator was important for steps 3 to 5 (Programme Design and Programme Production) to be successful. Also, the expertise of a senior researcher who had extensively worked in similar communities (i.e. in a peri-urban and a rural setting) was used to help with the practical messages and the language used within the curriculum. In addition, the component of sexual health that was adapted from SISTA was formatted to follow a similar structure to the rest of the lessons in the intervention program. In the new intervention the sexual health topic was introduced in a form of a group discussion, and then followed with parts that provided health information.

The intervention was developed for implementation. Therefore, it was important to include measures of monitoring and evaluation. This was done through evaluating reports

of sessions that were compiled by the facilitators. Because the intervention only had four sessions, the planning team agreed that it was important to attempt to get the participants to receive a complete dose. This was challenging since the intervention was implemented in a rural community setting. The facilitators encountered problems where participants missed sessions and often had to schedule time for catch-up sessions. Participants often missed sessions because they had to attend to other life demands. The other reason behind requiring participants to attend catch-up sessions was that it was important for the participants to process the elements of the interventions in a step-wise manner without having components of information missing. Also, exposing participants to all components of the intervention allowed the group to evolve together.

Other methodological issues

The strength of this dissertation is the fact that the intervention was developed in a systematic manner, thus allowing a learning process of the successes and limitations that come with undertaking work of this magnitude. In reflecting on the methodology used in the thesis we will start with the qualitative research. It is important for researchers to ensure that when they conduct qualitative studies they have a way of ensuring validity and reliability of their results (Noble & Smith, 2015). First in terms of sampling, the strength of this work (chapter 2 and 3) was that a sample was selected from a cross-section of adolescents, young and adult rural women. Also the discussion groups were comprised of 6-12 members at a time. The data collection was concluded once saturation was reached; meaning that there was no new information arising. In addition, the groups were set-up in such a way that participants of similar age were grouped together, so that age and seniority was not a barrier to open communication. Further, to ensure sufficient depth, post-focus-group discussions were held by the researchers; the team comprised of the principal investigator, an experienced professor in qualitative research and two other junior researchers. Regarding the analyses, the lead researcher consulted the principal investigator, an experienced qualitative researcher and two other senior professors on the data findings as a way of reducing researcher bias. However, the analysis could have benefited from analysis triangulation, where at least two other researchers conducted

independent analysis of the data. This therefore was a limitation of the analysis of the qualitative research.

In terms of the quantitative research conducted in this thesis, a strength was the fact that behavioral and psychosocial measures in the questionnaires (baseline, 1-month follow up and 6 months follow up) such as exposure to violence, condom use frequency and gender-power constructs were assessed using at least two different set of scales or question items. Thus ensuring that reliable responses from participants were obtained, especially since these were sensitive topics and most likely to be answered according to perceptions of social desirability. Even though, a strong overview of the SDT theoretical framework was provided in chapter 4 and 5, upon reflection the three SDT may not have been adequately operationalized. The weakness particularly lies in not ensuring that where the same constructs are used they are mapped onto the same psychological needs in both chapters (4 and 5). However, further research of which theoretical concepts fit into which psychological needs is required. This is to refine the list of existing social cognition or psychosocial constructs that best describe the three SDT needs. Another limitation of the quantitative research was the fact that the effect evaluation of the intervention was designed to be a quasi-experimental study. However, the design was the most optimal for this intervention because of the spread of the target population, which could have increased the likelihood of contaminating the sample. Another limitation was that even though the criteria for participation were strict and informed by the problem analysis step, the sample was small (N = 240), and may have resulted in reduced statistical power to obtain statistically significant differences between the intervention and control group on the main outcome measures.

Implications of this intervention development process for practice

The studies conducted for this dissertation demonstrate the development and implementation of a community-based empowerment intervention. Rural communities are an important health care setting, especially in terms of acting on the UNIFEM and World Health Organization call made about three decades ago, which states that "individuals have a right to the enjoyment of the highest attainable standard of physical and mental health. That health is all encompassing and not just the absence of disease". Also, that "Health is determined by the structural environment, social space, politics, and

biology". Further that "Inequality prevents women from attaining the highest levels of health" (WHO, 2008). Health promotion efforts in rural communities can also contribute to the body of knowledge, which shows what is feasible and what are the difficulties that are likely to be encountered in terms of implementation.

Although it was important for this intervention to target individuals who had dropped out of school in order to help them be less vulnerable to adverse health outcomes. The planners were aware that linguistic challenges and poor perception of health concepts could serve as barriers to the effective transfer of health messages. Therefore, attention was also paid to ensuring that the lessons were simple enough without diluting the core message. Another issue was that because the intervention also targeted young women who were unemployed or under-employed, the women tended to be impermanent rural dwellers. This therefore posed serious challenges to the retention of participants, especially in the intervention arm. After the intervention, especially after 6-months, the research team had to make an effort to track the participants who were in the nearby towns, as they had completed all the intervention sessions. For further practice purposes this too has to be accounted for when power issues are considered. Further, to extend the ecological approach to addressing health problems in rural communities, health promotion researchers can facilitate the dissemination of key health messages from an intervention by helping participants formulate action campaigns. Topics such as intimate partner violence are sensitive and urgent; therefore prevention messages about these topics need to be spread as far and wide as much as possible. Collaborations between the researchers, participants and stakeholders can help communities become more open about these problems.

Recommendations for future research

In considering contextual factors that facilitate women's health and wellbeing, we have outlined that access to socio-economic and structural resources is crucial. The background studies for this thesis, however, highlight that for rural communities this ideology is currently impossible. Instead young women are forced to live under impoverished conditions that cause them to be vulnerable to risky sexual and violent behavior. Therefore, since we were designing an empowerment intervention it would

have been beneficial to integrate a component where women were equipped with practical ways on how to free themselves from poverty. Examples of these ways could have been steps on self up-skilling, adult education and how to source government funding for small business enterprises. The lack of component in the intervention, therefore serves as a limitation. However, we recommend that such a component be considered in future empowerment interventions.

In terms of having a well-designed intervention, planners have to apply relevant and potentially effective theoretical frameworks, and they also have to use effective assessment measures (cf. Bartholomew Eldredge et al., 2016). Regarding relevant theoretical frameworks it may be beneficial for future research to go beyond using SDT constructs, which only explain how undermining the three psychological needs exposes people to illhealth. This particularly concerns sexual health behavior, it may be important for future research to consider incorporating human rights based approaches (explicitly). The human rights based approach advocates for programs to include an element where the stakeholders discuss the importance of the identification of individual rights and freedoms (Health Policy Makers, 2014). This consideration would be very important for rural young women, especially how they are to exercise their sexual and reproductive health rights (SRHR) as well as their entitlements.

Concerning well-designed assessment measures, this intervention only used a quantitative effect evaluation; future research may consider also conducting a qualitative evaluation. This would allow a nuanced and a rich understanding of the effect or lack thereof. Such an evaluation may be important for a rural setting were there may be linguistic challenges as it would allow participants to express their valuations using their own understanding.

Since this was an empowerment intervention it may have also been beneficial to include an arm in the intervention that would have facilitated the formation of mentorship groups. The research team would train the mentorship groups or facilitators and the groups would in turn mentor their peers. Further the trained mentees could be included in the planning team (for implementation) to help tailor the intervention to the needs of the community. The above-mentioned process would create effective collaborations but would also impart some skills that the young people can use should similar projects arise in the communities.

Concluding remarks

This thesis has provided, through using a systematic approach insights into the development, implementation and evaluation of an empowerment intervention, which targeted young rural women. In the absence of primary healthcare services, empowerment based programmes can be implemented in rural settings to improve the wellbeing of rural residents. However, to effectively promote healthier sexual behaviors programmes would need to explicitly address environmental gender-power issues from a rights-based perspective as well. This cannot be overlooked or neglected as young women continue to be disproportionately affected by adverse outcomes that come with risky sexual behavior. Further, incorporating a rights-based approach in future interventions may teach women, especially rural women that they reserve the rights to their own bodies, and that they are not the property of males, whether it is their immediate sexual partner or any other male in society.

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Summary

Even though the outcomes of poverty have adverse consequences on all genders and households, it is women that are extremely burdened by this problem and become vulnerable. Women become vulnerable because they assume the role of being primary caregivers and homemakers, which often means dealing with issues of structural deprivation. Further, because many women move away from the nuclear family constructions, they have to deal with issues that come with being a primary breadwinner (i.e. socio-economic burden). The socio-economic vulnerability in turn often comes with coping and psychological wellbeing issues. Furthermore, women often get exposed to risky sexual behavior and intimate partner violence because rural societies often assign women a low social status.

Chapter 1 provides a general introduction to the thesis. First rural poverty is placed into context; then the ways in which young women get burdened by living in impoverished settings are described. A justification for the research conducted for this thesis is provided, and an outline of all the studies conducted is given.

Chapter 2 describes a study conducted during the initial problem analysis phase, which provided an in-depth understanding of how deep-rooted poverty is in rural communities of the Eastern Cape province. Further, the study showed how young women who live in that context are affected physically and psychologically, to such an extent that they have to actively find ways of coping with their distress. Moreover, it emerged that a majority of the young women interviewed were beneficiaries of child and old age social grants. Also, a majority of the homes struggled with food insecurity and could not find alternative and sustainable ways of sourcing income due to many structural impediments. The findings of the study suggested a strong need for a health Programmethat would provide coping mechanisms, which would help women deal with their distresses and also help protect their psychological wellbeing.

Chapter 3 describes another component of the problem analysis phase, which focused on factors that impacted reproductive and sexual health practices of young women. Data shows that young women who are 15-24 years old remain vulnerable to HIV/AIDS due to factors such as being having early sexual debut, older sexual partners, and engaging in unprotected sex. Further, studies show that the aforementioned risky

sexual behaviors may be linked to poor parent-child sexual health communication, especially the timing thereof. In this chapter qualitative data was used to study variation in the timing, frequency, content of parent-child sexual health communication within South African rural families. We were interested in determining whether the patterns of communication have changed over time. The findings of this study show that parent-child communication on sexual matters in rural communities continues to be lacking and is laden with cultural idioms that are not well explained. The school sexual health curriculum also fails to adequately equip adolescents to make informed decisions regarding sexual matters.

Chapter 4 presents data from a study of determinants of poor condom use self-efficacy where concepts from the self-determination theory and gender–power measures were used. Significant associations between gender equality beliefs, HIV knowledge, power balance attitudes, negative beliefs about intimate partner violence, positive growth perspective and hopeless personal perspective were found. These associations demonstrated that psychological needs derived from self-determination theory and gender–power constructs can predict condom use self-efficacy. Also, that they may be targeted as change objectives for future sexual health promotion interventions.

Chapter 5 reports on the psychosocial correlates of intimate partner violence (IPV) that are also derived from the self-determination theory (SDT) and gender-power scales. Bivariate correlation analysis and structural equation modelling (SEM) showed that autonomy and beliefs about gender equality (BGE) were strongly associated with IPV. Further, BGE was hypothesized to play a mediating role betweem autonomy, competence, relatednes and IPV. The associations suggest that women who are in relationships that allow them to make decisions along with their partners, and women who know their possibly experience less IPV. It may also be that these women experience less IPV because they choose partners who do not espouse hegemonic masculinities.

Chapter 6 describes a quantitative effect evaluation of an intervention systematically developed and implemented amongst Xhosa-speaking women of the Eastern Cape Province. The intervention was designed to increase healthy sexual behaviors and to enhance the psychological wellbeing of young women using Self-

determination and Social-Cognitive theories. The intervention was split into four sessions, which addressed the following: empowering women on their value and strengths, self-esteem, self-evaluation, psychological health issues (e.g. life events and problems), coping mechanisms, relationships, support and intimate partner violence, safe sexual practices and condom use self-efficacy. Effects were observed on short-term outcomes for psychological health outcomes and IPV but no effects were shown, especially regarding changing the motivation of women to enact safer sexual behaviors. The study demonstrates that even though the study may have been effective in enhancing psychological health amongst young rural women, further research would need to be conducted in order to understand how risky behaviors can be changed amongst this cohort that is most at risk.

In chapter 7, the final chapter of this dissertation, all the empirical findings are synthesized and put in perspective. In sum, this thesis provides insights into the systematic development and implementation of a health promotion intervention in rural communities of South Africa. Further, the significant results of the different studies, as well as the limitations were discussed. In addition, the implications for practice and recommendations for future research were stated.

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'From Him and through Him and for Him all things exist - to Him be glory for ever!' (Romans 11:36; The Holy Bible).

About the Author

Feziwe Mpondo was born on the 4th of April 1983 in the Mossel Bay, South Africa. After completing high school in Plettenberg Bay she attended the University of the Western Cape and obtained an Honors Degree in Science with majors in Biochemistry and Microbiology. She continued with Science up to Masters level at the South African Bioinformatics Institute, also at the University of the Western Cape, where she graduated with Cum Laude (2009).

In 2009, Feziwe joined the Health Promotion Research and Development Unit of the Medical Research Council, as a Junior Scientist where she had an opportunity to work on various projects in the communities and schools across South Africa. In October 2011, Feziwe registered as an external student for a PhD with the Department of work and Social Psychology at Maastricht University, the Netherlands. This enabled her to apply and receive a fellowship with the Medical Research Council/ National Department of Health Scholars Fund.

Since January 2018, Feziwe works at the Wits/MRC Developmental Pathways for Health Research Unit (DPHRU) in Johannesburg as a Postdoctoral Fellow. She is involved in a collaborative project that involves low to middle income countries, namely Brazil, Guatemala, Philippines and South Africa. Her work is focused on exploring adult cognitive functioning, mental health, social and human capital amongst young adults who are 27/28 years old.