

# Engagement and Understanding: Pregnant adolescents and health information in Freedom Park

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## **Abstract**

Adolescent and young adult pregnancy is a major sexual health issue for vulnerable young women in South Africa. Beginning by examining the origins of adolescent pregnancy in South Africa, this paper then proceeds to examine the various sources of health information accessible to adolescent women, and how said information is used. Finally, it examines the disconnect between knowledge and use of health information, and the role this plays in high levels of adolescent pregnancy. This independent research examines how adolescent women in the South African township of Mitchells Plain, Cape Town (specifically the neighbourhood of Freedom Park) understand and engage with the limited health information at their disposal. Through a qualitative research process resulting in interview analysis, this article explores how vulnerable young women internalize, believe, and use health information, in order to better understand the causes of adolescent pregnancy and risky sexual behaviour.

Participants were adolescent (18-20) women, who were residents of Freedom Park, (a neighbourhood in Mitchells Plain) and were either pregnant or had a child. Demographic screening tools (n=31) were used to select participants for semi-structured interviews (n=30). Interviews were later transcribed verbatim, and analyzed using NVIVO.

In this Freedom Park sample, the ability of young women to internalize and act upon information about sexuality and health varied depending on who proffered that information and how those individuals were perceived by the recipient. In the research, three key factors emerged as impacting the internalization and later use of reproductive health information. First, for both sources of health information and for recipients, life experiences played a critical role in making information more relatable and therefore easier to internalize, believe and use. Second, the perceived trustworthiness of the source of information made the knowledge more believable and relevant to the recipient. Finally, high levels of comfort in discussing sexual health with the source of information made information more easily internalized, while fear of negative judgment from sources reduced comfort and discussions of sexual health.

The research suggests that efforts to reduce instances of adolescent pregnancy in South Africa should pay close attention to who delivers information about health and sexuality. To be effective, young women should feel they share experiences with, trust in, and are comfortable with sources of information. Future research should pursue how improving adolescent's engagement with health information through feelings of belonging, self-efficacy, and empowerment can improve understanding, trust, and utilization of health information.

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### **Part A: Protocol**

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# Protocol

## Synopsis

My research is centered in a Cape Town township called Freedom Park, a subsection of Mitchell's Plain. This township struggles with a variety of complex issues, created from a combination of poverty, unemployment, lack of infrastructure, and a large and vulnerable population. Only recently have formal buildings been constructed for some of the 280 households, but residents continue to live in fear of gangsterism, hunger, or abuse. This community also struggles with high levels of gender based and domestic violence (as does much of South Africa).<sup>1</sup>

Adolescent pregnancy has become a major issue on the international scene-targeted by the Millenium Development Goals and other international initiatives. Pregnant teens face much higher risk of complications in pregnancy and birth, as well as health risks for the baby. Pregnancy amongst young mothers can also have a negative impact on their risk taking behaviour in the future, as well as increasing population growth which can lead to significant negative economic and social outcomes.<sup>2</sup> In 2003, 15% of South African adolescents (15-19) had been pregnant<sup>3</sup>- meaning that the issue of adolescent pregnancy is of great importance, and relevant to South Africa. While reliable statistics do not exist for Freedom Park or Mitchells Plain, the high levels of poverty, unemployment, and domestic violence suggest that teen pregnancy may be a pressing issue that bears examining.

The proposed research examines pregnant adolescents engagement with both formal and informal health education in Freedom Park. For the purpose of this study, I will be working with late adolescents between the ages of 18-20; henceforth the term "adolescent" refers to the study participants in that age range. I examine how pregnant adolescents understand and engage with these sources of information on sexual activity and contraception, and how these young women navigate the relationship between sexuality, norms, and health information. I will be exploring not only the formal transmission of information on contraceptive use and reproduction, but also the imparting and understanding of sexuality, cultural norms and attitudes regarding sex, contraceptives and pregnancy both from a group, and a personal perspective.<sup>4</sup> This research focuses less on where health information and education emerge from and more on how it is absorbed and applied by these young women. Examining the layers of understanding and engagement will allow for an in depth exploration of the relationships between health information, gender, sexuality, culture, and power in the lives of pregnant adolescents.

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<sup>1</sup> Development Action Group. *A Place to Be Free: A Case Study of the Freedom Park Informal Settlement Upgrade*. Case Study, DAG, DAG, 2009.

<sup>2</sup> World Health Organization. *Maternal, newborn, child and adolescent health: Adolescent pregnancy*. 2015. [http://www.who.int/maternal\\_child\\_adolescent/topics/maternal/adolescent\\_pregnancy/en/](http://www.who.int/maternal_child_adolescent/topics/maternal/adolescent_pregnancy/en/) (accessed July 20, 2015).

<sup>3</sup> Panday, S., Makiwane, M., Ranchod, C., & Letsoalo, T. *Teenage pregnancy in South Africa - with a specific focus on school-going learners*. Human Sciences Research Council, South African Department of Basic Education, Pretoria: Department of Basic Education, 2009.

<sup>4</sup> Robinson, Beatrice E., Walter O Bockting, B. R. Simon Rosser, Michael Miner, and Eli Coleman. "The Sexual Health Model: application of a sexological approach to HIV Prevention." *Health Education Research* 17, no. 1 (2002): 43-57.

In the field of health information and sexual education there has been extensive research on the multiple sources of health education for pregnant teenagers, both formal and informal. However, the majority of this research fails to take into account the voices and experiences of the young women in question and how they mediate understanding and engagement of health information and sexual education. It is common for research to discuss teen pregnancy as an outcome of a variety of factors; socioeconomic status<sup>5</sup>, relationship with parents<sup>6</sup>, years of education, and risky behavior<sup>7</sup>, among others. When it comes to the relationship between education and teen pregnancy, research largely focuses on the impact of sexual education within the school system on contraceptive use and reducing levels of adolescent pregnancy.<sup>8,9,10</sup> Other research focuses on other sources of information about teen pregnancy, such as the media<sup>11,12</sup>, parents and peers<sup>13,14</sup>, or social norms.<sup>15,16</sup> What most research fails to discuss however, is how adolescents in resource poor areas understand and engage with this information on sex and pregnancy, and how this impacts their use of contraceptives, sexual activity, and ultimately pregnancy itself. The question of where teenagers get their education is only the precursor to many other key topics, but for the purpose of this research I am asking: *How do vulnerable young women interpret, internalize, and act upon health information available to them?* For the young women in question how do these sources of education compare and relate (or contrast) with one another, and how do they relate to local norms and gender roles? How are they engaging and understanding these sources of information? What is the quality of the information they are receiving, and are community dialogues about sexuality hurting or

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<sup>5</sup> Macleod, Catriona. "Economic Security and the Social Science Literature on Teenage Pregnancy in South Africa." *Gender & Society* 16, no. 5 (2002): 647-664.

<sup>6</sup> Brook, David W, Neo K Morojele, Chenshu Zhang, and Judith S. Brook. "South African Adolescents: Pathways to Risky Sexual Behaviour." *AIDS Education and Prevention* 18, no. 3 (2006): 259.

<sup>7</sup> Mchunu, G, K Peltzer, B Tutshana, and Seutlwadi L. "Adolescent pregnancy and associated factors in South African youth." *African Health Sciences* 12, no. 1 (2012).

<sup>8</sup> Panday, S., Makiwane, M., Ranchod, C., & Letsoalo, T. *Teenage pregnancy in South Africa - with a specific focus on school-going learners*. Human Sciences Research Council, South African Department of Basic Education, Pretoria: Department of Basic Education, 2009.

<sup>9</sup> Rooth, Edna. *An Investigation of the Status and Practice of Life Orientation in South African Schools in Two Provinces*. Thesis, University of Western Cape, UWC, 2005.

<sup>10</sup> Mukoma, Wanjuro, et al. "Process evaluation of a school-based HIV/AIDS intervention in South Africa." *Scandinavian Journal of Public Health* 37, no. suppl 2 (2009): 37-47.

<sup>11</sup> James, S, SP Reddy, MP Taylor, and CC Jinabhai. "Young people, HIV/AIDS/STIs and sexuality in South Africa: the gap between awareness and behaviour ." *Acta Paediatr* 93 (2004): 264-269.

<sup>12</sup> Brown, Jane D. "Mass Media Influences on Sexuality." *Journal of Sex Research* 39, no. 1 (2002).

<sup>13</sup> Phetla, Godfrey, et al. ""They have opened our mouths": Increasing Women's Skills and Motivation for Sexual Communication With Young People in Rural South Africa." *AIDS Education and Prevention* 20, no. 6 (2008).

<sup>14</sup> Campbell, Catherine, and Catherine MacPhail. "Peer education, gender and the development of critical consciousness: participatory HIV prevention by South African youth ." *Social Science & Medicine* 55 (2002): 331-345.

<sup>15</sup> Wood, Kate, and Rachel Jewkes. "Blood Blockages and Scolding Nurses: Barriers to Adolescent Contraceptive Use in South Africa ." *Reproductive Health Matters* 14, no. 27 (2006).

<sup>16</sup> MacPhail, Catherine, and Catherine Campbell. "I think condoms are good but, aai, I hate those things': condom use among adolescents and young people in a Southern African township ." *Social Science & Medicine* 52 (2001): 1613-1627 .



helping? How do at risk adolescents compare and relate the information at their disposal? Are certain sources perceived as more reliable, believable, or applicable? How do these young women approach sex and pregnancy within the context of both their knowledge, and of cultural and contextual norms that surround them? How does the information at their disposal and the cultural norms surrounding them interact with and change their own sexuality and feelings about sex? This research hopes to reach deeper into the individual experiences and personal understandings of sex, contraception and sexuality. Research about sources of sex and contraceptive education for young adults are broad areas of study. I feel their interaction and impact can only be understood in a specific context, in which both the young women who are being directly affected, as well as the resource poor region that is struggling with teen pregnancy where they live are taken into account.

Only by knowing more about how these vulnerable young women interpret, internalize, and act upon all the facets of health information available to them can we accurately comprehend the implications of health policy and educational change. Therefore, this research will examine the sources of health information that has been comprehensively explored to date (e.g. formal, parents, media, norms, religion, etc.) through the lens of comprehension and engagement. I will examine these topics in the specific cultural context of Freedom Park, exploring in particular how norms such as gender roles, demographic and socio-economic factors such as age and school engagement mediate understanding of engagement with health information.

Because of the population that adolescent pregnancy impacts, my research will focus on careful recruitment of a small but specific participant pool. Freedom Park is a subset of Mitchells Plain, which is largely coloured, has a 24% unemployment rate, is more than half (51%) female. 45% of the population is under the age of 25.<sup>17</sup> My recruitment pool is young women in Freedom Park between the ages of 18 and 20 who are either pregnant or have already had a child. The age range selected reduces recall bias given that, for the subject of the study, their health education will be recent or ongoing. Furthermore, their status as late adolescents represents a developmental maturity, and the cognitive ability to discuss at length their engagement with health education. Their demographic background is likely to be similar to that of Mitchells Plain, however the two requirements are age and pregnancy status. My access to the community and these young women is facilitated by a community leader and resident of Freedom Park, who has assisted in research and worked with the University of Cape Town on previous occasions. She is placing me in contact with local youth group leaders and clinics in order to ease my entrance into the community and reassure the adolescents I will be working with of my legitimacy.

The study will be flexible and exploratory, collecting new data that is not a part of an existing data set and expanding to account for it. The participants will be selected based on the basic criteria of being between the ages of 18-20, pregnant or having children, and living in Freedom Park. From that point they will be given a demographic screening tool which will allow me to select further interview participants based on specific criteria in order to have a wide range of interviewees. The recruitment process is eased

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<sup>17</sup> Strategic Development Information and GIS Department. *City of Cape Town – 2011 Census Suburb Mitchells Plain*. Census, Cape Town: City of Cape Town, 2013.

by my above-mentioned relationship with a community leader and the local youth group. Through their intervention and my own visits into the community, I will begin by handing out a demographic screening tool in the community center and clinic. These screening tools will be given either by myself in English, or in Afrikaans with the assistance of a translator. These screening tools will be conducted over the course of about a month (or until 30 or more are collected). Once this portion is finished, or during the screening process if the participant is willing or able, I will conduct semi-structured interviews that are tailored to the demographic characteristics of the participant in question (e.g. length of school, religion, age of first birth). These interviews will be recorded and transcribed. Each participant will be asked to provide informed verbal consent before participating in any part of the research. Each participant will be provided with a screening consent form in Afrikaans and English. A comparable form will be provided for the interview portion. Participants will not be offered compensation for participating in the screening tool, however they will be offered a 15 rand voucher as well as tea and cookies if they consent to return for the interview.

The potential risks from this research are largely psychological, any chance of physical or social risks associated with this study are unlikely. The psychological risk to participants may emerge if they were sexually abused in any way, and this emerges over the course of the interview. This may lead to fear and other emotional triggers. While this study seeks to examine sexual and health education, and this may bring up unpleasant past experiences, it does not ask the participant to go into any greater detail than what they are comfortable with. I intend to enter the interviews prepared with a trauma hotline that may be able to help anyone who is struggling and asks for assistance. Social or physical risks could emerge for those who participated, as they may be judged based on having or talking about sex, however since all the young women will be either pregnant or already mothers, I do not anticipate this emerging as a major issue. Another potential risk is my awareness of women using illegal drugs. In order to address some of these risk issues as well as the comfort and security of the participants, I will be conducting the interviews with a commitment of confidentiality. Pseudonyms will be used, and all identifying features will be removed if they are written about. The data will be stored in a locked room (if screening tools) and on a password protected computer if not.

The individual benefits of participating in this research extends only to what may be one of the first opportunities these young women have been given to express their life histories, stories, and feelings on sex education. On a larger scale, this research has the potential to be extremely useful for resource poor communities. By adapting a perspective that focuses on the interaction between women and health education, this research hopes to show where improvements in the delivery of health information might lie, and why. This research also has potential to be replicated in other areas, specifically townships in order to better understand the voices of pregnant youth in South Africa, and perhaps take the first steps in inspiring health education reform.

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- Mchunu, G, K Peltzer, B Tutshana, and Seutlwadi L. "Adolescent pregnancy and associated factors in South African youth." *African Health Sciences* 12, no. 1 (2012).
- Mukoma, Wanjuro, et al. "Process evaluation of a school-based HIV/AIDS intervention in South Africa." *Scandinavian Journal of Public Health* 37, no. suppl 2 (2009): 37-47.
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Robinson, Beatrice E., Walter O Bockting, B. R. Simon Rosser, Michael Miner, and Eli Coleman. "The Sexual Health Model: application of a sexological approach to HIV Prevention." *Health Education Research* 17, no. 1 (2002): 43-57.

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## **Purpose of the Study**

The proposed research will examine the interactions between pregnant adolescents and both formal and informal health education in a township in South Africa. I will examine how pregnant adolescents in resource poor areas understand and engage with sources of health education and information on sexual activity and contraception, and how these young women navigate the relationship between sexuality, norms, and health information. The research will be conducted in Freedom Park, a neighbourhood in the township of Mitchells Plain, located outside of Cape Town in the Western Cape province of South Africa

This research will focus on health information regarding sexual activity- specifically contraceptives, awareness of how sexual activity can lead to pregnancy, knowledge of intercourse, and knowledge on safe and protected sexual activity. I will take a broad view of sexual health education, exploring not only the formal transmission of information on contraceptive use and reproduction, but also the imparting of cultural norms and attitudes, sexuality, contraceptives and pregnancy.<sup>18</sup>

My use of the terms 'understanding' and 'engagement' intends to focus the research less on where the health information is emerging from, but rather how it is absorbed and applied by young women in Freedom Park. Examining layers of understanding and engagement will allow me to explore the relationships between health information, gender, sexuality, culture, and power in the lives of pregnant adolescents.

In the field of health information and sexual education there has been extensive research on the multiple sources of health education for pregnant teenagers, both formal and informal. However, the majority of this research fails to take into account the voices and experiences of the young women in question and how they mediate understanding and engagement of health information and sexual education. I feel that only by knowing more about how these vulnerable young women interpret, internalize, and act upon all the facets of health information available to them can we accurately comprehend the implications of health policy and educational change. Therefore, this research will examine all sources of health information that have been comprehensively explored to date (e.g. formal, parents, media, norms, religion, etc.) through the lens of comprehension and engagement. How do at risk adolescents compare and relate the information at their disposal? Are certain sources perceived as more reliable, believable, or applicable? How do these young women approach sex and pregnancy within the context of both their knowledge, and of cultural and contextual norms that surround them? I will examine these questions in the specific cultural context of Freedom Park, investigating in particular how norms such as gender roles, demographic and socio-economic factors such as age and school engagement mediate understanding of engagement with health information.

I hypothesize that despite the variety of sources of health information that adolescents' access, their engagement and understanding are most significantly impacted by the cultural and local context. I suspect that this normative shaping of

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<sup>18</sup> Robinson, Beatrice E., Walter O Bockting, B. R. Simon Rosser, Michael Miner, and Eli Coleman. "The Sexual Health Model: application of a sexological approach to HIV Prevention." *Health Education Research* 17, no. 1 (2002): 43-57.

health information affects both what they learn, and how they apply it during their every day lives. I hypothesize that the content of many sources of health information are linked to underlying cultural norms. Teachers using the life systems curriculum often only teach what they feel comfortable with<sup>19</sup>, which in turn is likely to be related to the local social norms regarding sex and sexuality. This is also likely to be similar to the advice and knowledge passed on by peers and parents.<sup>20</sup> Much media (such as Facebook and other social media) is strongly influenced by these social groups, and therefore their norms. Other forms of media, such as TV, internet, or radio, while possibly introducing new information, may be hard to access as well as targeted more strongly towards health issues such as HIV rather than young women struggling with pregnancy.<sup>21</sup>

## **Background**

Adolescent pregnancy has become a major issue on the international scene-targeted by the Millennium Development Goals and other international initiatives. Pregnant teens face much higher risk of complications in pregnancy and birth, as well as health risks for the baby. Pregnancy amongst young mothers can also have a negative impact on their risk taking behaviour in the future, as well as increasing population growth which can lead to significant negative economic and social outcomes.<sup>22</sup> In 2003, 15% of South African adolescents (15-19) had been pregnant<sup>23</sup> meaning that the issue of adolescent pregnancy is of great importance, and relevant to South Africa. While reliable statistics do not exist for Freedom Park or Mitchells Plain, the high levels of poverty, unemployment, and domestic violence suggest that teen pregnancy may be a pressing issue that bears examining.

It is common for research to discuss teen pregnancy as an outcome of a variety of factors; socioeconomic status<sup>24</sup>, relationship with parents<sup>25</sup>, years of education, and risky behaviour<sup>26</sup>, among others. When it comes to the relationship between education and teen pregnancy, research largely focuses on the impact of sexual education within

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<sup>19</sup> Mathews, C, H Boon, A.J. Flisher, and H.P. Schaalma. "Factors associated with teachers' implementation of HIV/AIDS education in secondary schools in Cape Town, South Africa ." *AIDS Care: Psychological and Socio-medical Aspects of AIDS/HIV*, 2007.

<sup>20</sup> (Lambert, Helen, and Kate Wood. "A Comparative Analysis of Communication about Sex, Health and Sexual Health in India and South Africa: Implications for HIV Prevention ." *Culture Health & Sexuality* 7, no. 6 (2005): 527-541.

<sup>21</sup> (Hutchinson, P.L., X. Mahlalela, and Josh Yukich. "Nass Media, Stigma, and Disclosure of HIV Test Results: Multilevel Analysis in the Eastern Cape, South Africa." *AIDS Education and Prevention* 19, no. 6 (2007).

<sup>22</sup> World Health Organization. *Summary Country Profile for HIV/AIDS Treatment Scale-Up*. Country Profile, WHO, 2005

<sup>23</sup> Panday, S., Makiwane, M., Ranchod, C., & Letsoalo, T. *Teenage pregnancy in South Africa - with a specific focus on school-going learners*. Human Sciences Research Council , South African Department of Basic Education, Pretoria: Department of Basic Education, 2009.

<sup>24</sup> Macleod, Catriona. "Economic Security and the Social Science Literature on Teenage Pregnancy in South Africa." *Gender & Society* 16, no. 5 (2002): 647-664.

<sup>25</sup> Brook, David W, Neo K Morojele, Chenshu Zhang, and Judith S. Brook. "South African Adolescents: Pathways to Risky Sexual Behaviour." *AIDS Education and Prevention* 18, no. 3 (2006): 259.

<sup>26</sup> Mchunu, G, K Peltzer, B Tutshana, and Seutlwadi L. "Adolescent pregnancy and associated factors in South African youth." *African Health Sciences* 12, no. 1 (2012).

the school system on contraceptive use and reducing levels of adolescent pregnancy.<sup>272829</sup> Other research focuses on other sources of information about teen pregnancy, such as the media<sup>3031</sup>, parents and peers<sup>3233</sup>, or social norms.<sup>3435</sup> What most research fails to discuss however, is how adolescents in resource poor areas understand and engage with this information on sex and pregnancy, and how this impacts their use of contraceptives, sexual activity, and ultimately pregnancy itself. The question of where teenagers get their education is only the precursor to many other key topics- for the young women in question how do these sources compare and relate (or contrast) with one another, and how do they relate to local norms and gender roles? What is the quality of the information they are receiving, and are community dialogues about sexuality hurting or helping? Research about sources of sex and contraceptive education for young adults are broad areas of study. I feel their interaction and impact can only be understood in a specific context, in which both the young women who are being directly affected, as well as the resource poor region that is struggling with teen pregnancy where their lives are taken into account.

When conducting research on these issues it is important to remember that access to formal and informal education (such as school, family, friends, or media) on health, sex and contraceptive use is not a catchall solution. Just because young women are made aware of the risks, and ways to prevent them, does not mean that teen pregnancy will be avoided entirely. Aside from the lack of a 100% effective birth control method, researchers must also remember to look at health education in the specific social, physical, and emotional context in which young women are expected to use this knowledge, or demand contraception during sex.<sup>36</sup> Difference in power structures and gender relations can transform any learned knowledge about contraception and safe

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<sup>27</sup> Panday, S., Makiwane, M., Ranchod, C., & Letsoalo, T. *Teenage pregnancy in South Africa - with a specific focus on school-going learners*. Human Sciences Research Council, South African Department of Basic Education, Pretoria: Department of Basic Education, 2009.

<sup>28</sup> Rooth, Edna. *An Investigation of the Status and Practice of Life Orientation in South African Schools in Two Provinces*. Thesis, University of Western Cape, UWC, 2005.

<sup>29</sup> Mukoma, Wanjiuro, et al. "Process evaluation of a school-based HIV/AIDS intervention in South Africa." *Scandinavian Journal of Public Health* 37, no. suppl 2 (2009): 37-47.

<sup>30</sup> James, S, SP Reddy, MP Taylor, and CC Jinabhai. "Young people, HIV/AIDS/STIs and sexuality in South Africa: the gap between awareness and behaviour ." *Acta Paediatr* 93 (2004): 264-269.

<sup>31</sup> Brown, Jane D. "Mass Media Influences on Sexuality." *Journal of Sex Research* 39, no. 1 (2002).

<sup>32</sup> Phetla, Godfrey, et al. ""They have opened our mouths": Increasing Women's Skills and Motivation for Sexual Communication With Young People in Rural South Africa." *AIDS Education and Prevention* 20, no. 6 (2008).

<sup>33</sup> Campbell, Catherine, and Catherine MacPhail. "Peer education, gender and the development of critical consciousness: participatory HIV prevention by South African youth ." *Social Science & Medicine* 55 (2002): 331-345.

<sup>34</sup> Wood, Kate, and Rachel Jewkes. "Blood Blockages and Scolding Nurses: Barriers to Adolescent Contraceptive Use in South Africa ." *Reproductive Health Matters* 14, no. 27 (2006).

<sup>35</sup> MacPhail, Catherine, and Catherine Campbell. "I think condoms are good but, aai, I hate those things': condom use among adolescents and young people in a Southern African township ." *Social Science & Medicine* 52 (2001): 1613-1627 .

<sup>36</sup> Macleod, Catriona. "Economic Security and the Social Science Literature on Teenage Pregnancy in South Africa." *Gender & Society* 16, no. 5 (2002): 647-664.

sex.<sup>37</sup> While this is important, it is also key to understand how women learn and talk about sex and health. Examining how young women collect and comprehend health information will lead to important realizations about how they put such information to use within the existing structures, as well as creating a comparison between knowledge and practice.

This research will be taking place in Freedom Park, a subsection of Mitchell's Plain township, just outside of Cape Town. This township struggles with a variety of complex issues, created from a combination of poverty, unemployment, lack of infrastructure, and a large and vulnerable population. Only recently have formal buildings been constructed for some of the 280 households, but residents continue to live in fear of gangsterism, hunger, or abuse. This community also struggles with high levels of gender based and domestic violence (as does much of South Africa).<sup>38</sup>

### **Conceptual Framework**

In discussing engagement I am applying a 3-part model, taken from a study on school level engagement, which I am applying to health information. This framework divides engagement into affective engagement- meaning participant feelings on the subjects of health and sexuality, behavioural engagement- or how participants act based on said information, and cognitive engagement- meaning beliefs around the topic of sex, sexuality and contraception.<sup>39</sup> These three aspects of engagement allow me to look deeper into how adolescent women not only understand the information they are receiving, but how they internalize it, and utilize it.

This research also applies the Sexual Health Model, which suggests that sexual health should be culturally relevant, and is most effectively internalized when based on local norms.<sup>40</sup> When applied to health education, this concept allows the research to look not primarily at the content of the health information the participants are provided, but rather their engagement with it on a personal level. While the content of what they are learning is relevant, the focus lies rather on how they are learning and internalizing it. The Sexual Health Model can be applied by learning about the background and practices of the participant in order to analyze their current sexual behaviours. In this research a screening tool will take account of basic demographic characteristics, while semi-structured interviews will be used to discuss how these young women have engaged with and internalized health information about sex and contraceptive use on an individual level.

This research will also follow Michelle Fine's research on discourses of sexuality. Fine's research discusses the negativity surrounding adolescent female

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<sup>37</sup> Boer, Henk, and Tshildzi M. Mashamba. "Gender power imbalance and differential psychosocial correlates of intended condom use among male and female adolescents from Venda, South Africa ." *British Journal of Health Psychology* 12 (2007): 51-63.

<sup>38</sup> Development Action Group. *A Place to Be Free: A Case Study of the Freedom Park Informal Settlement Upgrade*. Case Study, DAG, DAG, 2009.

<sup>39</sup> Jimerson, Shane R, Emily Campos, and Jennifer L. Greif. "Toward an Understanding of Definitions and Measures of School Engagement and Related Terms." *The California School Psychologist* 8, no. 1 (2003).

<sup>40</sup> Robinson, Beatrice E., Walter O Bockting, B. R. Simon Rosser, Michael Miner, and Eli Coleman. "The Sexual Health Model: application of a sexological approach to HIV Prevention." *Health Education Research* 17, no. 1 (2002): 43-57.



sexuality, and argues that sexual education should involve not just health information but also discussion of female sexuality.<sup>41</sup> This research applies this framework to the young women being discussed, in examining their internalization of culture and norms, and how personal sexuality is expressed in their engagement with health information from both formal and informal sources. This discourse follows a similar path to the critique of works on sexuality by Dixon-Mueller, which is included here in order to include a broad variety of sexual behaviour and attitudes. As her appraisal points out, much research on sex suffers the pitfall of ignoring individual sexuality, as well as the gender roles that often surround sexual activity.<sup>42</sup> Rather than avoiding the issue of sexuality in adolescent women, this research applies this critique to health information in order to get a pervasive view of engagement and internalization with the issues of sex and contraception.

A study similar to my research, conducted via web-based survey in 2009, in Philadelphia, PA, examined the way that adolescents learned about sex and contraception from informal sources, and how the source of information affected internalization and use. While it focused on informal sources of health information, the methods and results of this study are nevertheless applicable to my own research. The data was organized by belief and efficacy- or what is referred to in my own research as internalization and engagement, as well as actions and norms. The results show that while each source of information has an impact on sexual behaviour and sexuality outcomes, no single source of informal health information outweighs another.<sup>43</sup> This is one of the reasons my own research includes formal as well as informal sources of health information- I suspect that there are over-arching similarities in cultural values and norms among informal sources of health information in such a small community, therefore in order to have well triangulated data it is important to include formal sources of information. The table below, extracted from the work by Bleakley et al. shows a basic framework for evaluating engagement with informal sources of health information. While my own research includes a focus on individual sexuality as well as examining sources of formal health education, the premise is similar, and so it bears including. In using it to analyze my own data, external variables would be replaced with formal and informal sources of information- they would then be followed through pathways of beliefs and determinants.

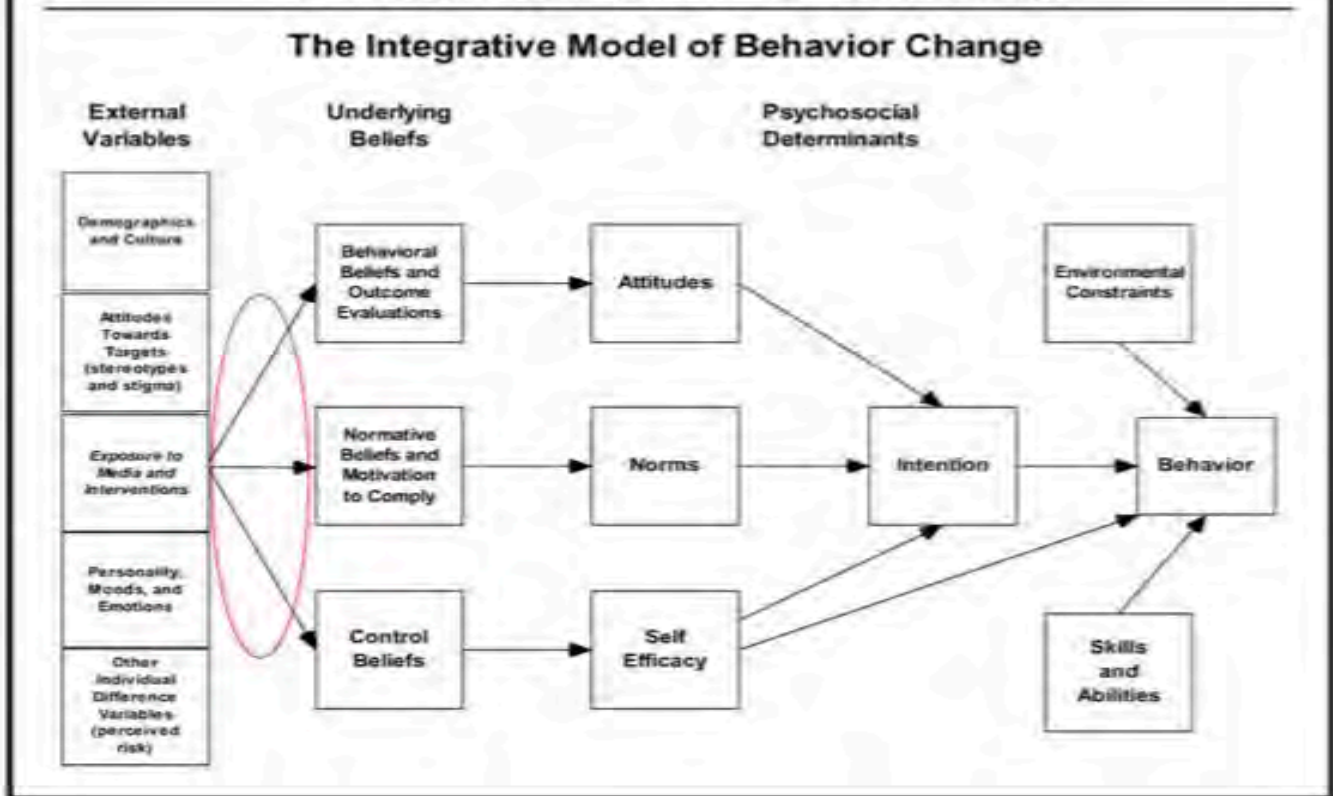
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<sup>41</sup> Fine, Michelle. "Sexuality, Schooling, and Adolescent Females: The Missing Discourse of Desire ." *Harvard Educational Review* 58, no. 1 (1988).

<sup>42</sup> Dixon-Mueller, Ruth. "The Sexuality Connection in Reproductive Health." *Studies in Family Planning* 24, no. 5 (1993).

<sup>43</sup> Bleakley, Amy, Michael Hennessy, Martin Fishbein, and Amy Jordan. "How Sources of Sexual Information Relate to Adolescents' Beliefs About Sex." *American Journal of Health Behaviour* 33, no. 1 (2009).

**Figure 1**  
**The Integrative Model of Behavior Change**



44

In doing this research it is important to acknowledge, and account, for the fact that there are a great deal of factors that shape engagement with sex and contraceptive use. While factors such as socio-economic status, family life, and social engagement have been shown to have a direct impact on sexual activity and contraceptive use<sup>45</sup>, this research will look specifically at the realm of health information and education.

Using existing research and the conceptual framework laid out above, the research will be addressing this question: *How do vulnerable young women interpret, internalize, and act upon health information available to them?* From this standpoint I will be investigating how these young women understand and engage with formal and informal sources of information, sexuality, and norms surrounding gender and sex.

## **Methodology**

### **Study Design**

This research is exploratory, and will follow a flexible study design. As the data evolves, so will the design (e.g. interview questions etc.). A flexible design strategy allows the study to be shaped by what it discovers, interpret the data based on the context, and follow the evidence as it is discovered. This study design is the most

<sup>44</sup> Ibid.

<sup>45</sup> Biglan, Anthony, et al. "Social and behavioral factors associated with high-risk sexual behavior among adolescents." *Journal of Behavioral Medicine* 13, no. 3 (1990): 245-261.

effective for the proposed research as it allows the data to develop, shape, and strengthen the hypothesis and question. This flexible and exploratory design is what allows this research to be best tailored to the topic. The lack of statistical data or research in the area on major topics such as education, health, sexuality, and gender means that each interview and screening tool will expand the base of information and help to mold and structure the rest of the study being conducted. As information, perceptions, and stories emerge, so will the study design be shaped by them. This is important within the qualitative and exploratory nature of the work.

This study is facilitated by my relationship with a community leader in Freedom Park. Through her I will establish connections with the local clinic, as well as communicating with a leader of a local youth group. These connections will help me to locate adolescents from the ages of 18-20 who are pregnant, or have had children. The former is preferable due to the threat of recall bias, however both are viable options for research. Once an appropriate group has been identified, I will begin selecting participants. The women who fit the selection criteria (which are provided in greater detail later) will be asked to take a short survey, which will be used as a further screening tool. Based on characteristics listed below, certain women will be asked to remain or return for an interview. Over the course of this research I am hoping to screen 40 people, and conduct between 20-30 interviews. Freedom Park is a highly representative subset of Mitchell's Plain- both are largely coloured, English and Afrikaans speaking. I approximated the population of Freedom Park (based on number of houses, and average family size per house in Mitchells Plain<sup>46</sup>) at 3000 people. Applying Mitchell's Plain population pyramids this means that there are approximately 1,500 women in Freedom Park, 81 of whom are between the ages of 18-20.<sup>47</sup> If we assume that approximately half of these women are either pregnant or already have children, this gives a potential interview population of 40. Please note that population migration and lack of recent census, as well as amorphous nature of Freedom Park boundaries make this a rough estimate. As a representative subset 20-30 interviews is a reasonable goal given resource constrictions, and likelihood of saturation. The researcher will determine adequate sampling based on the contents of the interviews. Once saturation has been reached and no new data is being collected, the sample will be deemed adequate. The participants will be given incentive to return/participate in interviews by being offered airtime vouchers and refreshments. The interviews themselves will be conducted in a semi-structured format, with questions being tailored to the demographic information provided by the screening tool.

### **Characteristics of the Study Population**

In order to be surveyed for this study the participant must live in Freedom Park, or a nearby area of Mitchell's Plain. They must be a cis-gendered females between the ages of 18-20, and currently pregnant, or already having given birth. The criteria to

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<sup>46</sup> Lombard, Rose. *The history of Freedom Park before 10x10*. February 11, 2009. <http://designindaba10x10.blogspot.co.za/2009/02/history-of-freedom-park-before-10x10.html> (accessed September 7, 2015).

<sup>47</sup> City of Cape Town. *City of Cape Town – 2011 Census Suburb Mitchells Plain*. Census, Strategic Development Information and GIS Department, City of Cape Town, 2013.

continue on to the interview will evolve from the characteristics presented in the demographic screening tool. Participant selection will be purposive- participants will be chosen that represent different important criteria, which as mentioned may include age of first sex, years of schooling, number of children, or access to contraception. Interviews will be given in the preferred language of the participant- either in English by myself, or with a translator in Afrikaans.

Young women are distinctly more vulnerable than other sectors of the population, which in many ways makes it all the more important that their voices be represented, that consent be fully informed and that voluntariness of the process be maintained. If these women are not being effectively provided for in terms of health education and community support, then this needs to be remedied. Limiting the range to women between the ages of 18 and 20 means that all will have been presented with positions of some responsibility and maturity, are sexually active and making independent decisions. By 18 the majority of participants will be finished with their formal schooling, and will have been educated informally about sexuality, sex, consent, contraceptives, and other health information. However talking to these young women I hope to capture a more formative period where the participants are still young enough to be 'taught' (both formally informally) and are still learning about these topics. Many may just be beginning to experiment with understanding sex, and engaging with their sexuality.

### **Recruitment and Enrolment**

Recruitment of participants will be primarily done through a gatekeeper (a community leader and organizer in Freedom Park). She has connected me with a local clinic as well as a youth group leader. Participants will be identified in the clinic, youth group, and through snowballing based on the age and pregnancy statuses defined above. Using these criteria, I will then administer the demographic screening tool, which will further clarify if the participant will be invited to also do an interview. Before each participant is given the screening tool it will be made clear that they *may* be asked to participate in a follow up interview, either then or later, and they will be given the option to participate or not. The screening tool will use the Likert scale as well as multiple-choice answers to ask basic demographic questions about age, sex, and other demographic topics. The screening tool will also be piloted with my classmates to make sure the questions are easy to understand culturally and linguistically and the format is functional. The use of gatekeeping and snowballing through informants and respected members of the community will give me access to adolescent mothers, as well as giving me a small sense of legitimacy and trustworthiness I might not otherwise have. I hope that this will encourage young women to tell their friends about my research and invite them to speak with me, as well as making them more comfortable to do interviews.

The screening tool will be administered face to face, in a quiet room in the community centre. The screening tool will be translated from English to Afrikaans by translators who understand my topic of research and are able to appropriately phrase the questions. The questions will be reviewed in Afrikaans by another native speaker in order to ensure the meaning is being captured completely. Both English and Afrikaans will be available on each screening tool. I will be reading through the screening tool with each participant to ensure comprehension, particularly if the participant struggles

to read. These screening tools will be used to select participants for the in depth interviews. After the screening tools are administered, interviews will be undertaken immediately if the timing is sufficient, and the participants fit criteria, or seem open to discussion. While some willing and representative participants will be interviewed directly after the tool administration, the majority will give their contact information, and an interview time will be set up.

### **Research Procedures and Data Collection Methods**

The process of data collection will follow two steps. The first is a brief screening tool of volunteers from the target population to collect data regarding demographics and other data regarding attitudes, norms, and experiences, which will be used as a tool to select the participants for the second step, which is the interview. These screenings will be taken on location in an environment that provides as much privacy as possible. While names and contact information will be on each screening tool in order to allow the researcher to contact the participant for a follow up interview, these tools will be placed in a locked room until they can be entered on to a computer, after which they will be destroyed. This computer will be password protected and accessible only to myself. When the participants are discussed in writing they will be referred to only by pseudonyms in order to protect confidentiality and care will be taken to ensure that there is no identifying information.

Following participant selection, I will begin the semi-structured interviews. The interview questions will be tailored to their demographic information, however they will follow flow of conversation. Each interview will be recorded and later transcribed.

Interviews will be conducted in the language in which the participant is most comfortable. They will be conducted by myself if in English, and if Afrikaans is preferred, either the community leader or youth group leader will act as translator. They have been made aware of the focus of my study, and will be further coached on the topics we are discussing, interview questions, and how to work with youth should their help become required.

The interviews will be conducted in a private space that is comfortable for the participants. Each interview will have field notes taken by the researcher as well as being recorded. If there is an interpreter present they will be asked to sign a non-disclosure form. The recordings and transcripts of these recordings will be placed on the same password locked computer. Again, when referenced in the final result, pseudonyms will be used.

### **Data Safety and Monitoring**

There are two potential risks I see emerging from this research. The first is the possibility that past or current issues of domestic or sexual abuse will emerge when discussing sexual activity and access to contraception. As the researcher I feel that it is my duty to acknowledge and include any information that comes to light about sexual abuse. However, I feel that neither I nor the community of Mitchells Plain has an effective recourse mechanism for young women who are the victims of abuse, nor is it my function to expose private information about my interviewees. As my research assures anonymity of the participants, I will remind them that they are not placing themselves in a position of risk or immediate exposure by talking to me. If asked for

assistance in any way, I will provide the young women with contact information for an abuse hotline or NGO working in the area on this topic for them to contact in their own time. I feel that it would be inappropriate to get involved in personal relationships or reporting specific instances. If a specific situation arises where I am involved and asked to intervene, I will discuss appropriate measures with my advisor, but feel confident in saying that it is better to contact appropriate and trained authorities.

The second potential risk is revealing illegal drug abuse in young women. As in the above case I am taking stringent measures to ensure confidentiality of data throughout this study, and therefore will not reveal this information to any person or agency. Again, if asked for assistance in any way, I will provide the young women with contact information for an appropriate hotline or NGO working in the area.

In order to ensure confidentiality, the participants will be referred to by pseudonyms in the final research, and while I will require their names on the screening tool and interviews, as well as some contact information for follow up interviews, all the physical information will be kept in a locked room until entered on a computer, where it will be password protected- both only accessible by myself.

### **Data Analysis**

The accuracy and reliability of the data I collect will largely rely on my relationship with the community and the individual participants. The closer my relationship, and interaction with members of the community, the more likely I am to have reliable results. I will also rely on verbal analysis and extent of conversation with the participants to gauge if they are truly answering questions or seem uncertain or worried about telling the truth. As is the case with much qualitative data, a lot will rely on interpretation and analysis.

The data collected from the screening tool and interviews will be analyzed quantitatively and qualitatively. The quantitative analysis will focus on descriptors providing an overview of the respondents, however the main focus of the analysis will be qualitative. Through a process of inductive analysis I will examine the screening tool, and primarily the interviews related to each screening tool. Through intensive and repeated readings I will look for themes or codes that I can use to categorize the data. These major themes from both the interviews and the screening tools will be used to further sort and organize the data. Depending on the quality and amount of data collected, alongside my written analysis I will also include tables to better analyze and swiftly read the information. These steps will allow me to more concisely evaluate the value and content of the information represented by the data collection process. No data analysis software will be used because the small n-value makes it unnecessary, the intuitive and inductive nature of this research, and because ESL participants who use different slang may require a personal reading rather than a more technical one.

### **Description of Risks and Benefits**

#### **Potential Risks and Discomforts**

The potential risks from this research are largely psychological, any chance of physical or social risks associated with this study are unlikely. The psychological risk to participants may emerge if they were sexually abused in any way, and this emerges over the course of the interview. There is also slight risk of re-exposing previous forms

of stigma, sources of vulnerability, or exclusion. This may lead to fear and other emotional triggers. While this study seeks to examine sexual and health education, and this may bring up unpleasant past experiences, it does not ask the participant to go into any greater detail than what they are comfortable with. I intend to enter the interviews prepared with a trauma hotline that may be able to help anyone who is struggling and asks for assistance. Social or physical risks could emerge for those who participated, as they may be judged based on having or talking about sex, however since all the young women will be either pregnant or already mothers, I do not anticipate this emerging as a major issue. Another potential risk is my awareness of women using illegal drugs. However, because of my commitment to confidentiality I do not think this will present any real risk.

In order to ensure the effectiveness and quality of this research, I will be drawing from my courses on qualitative research methods (the professor of which is my advisor), as well as on previous field experience in data collection. I have worked in rural Malawi not only giving surveys in the context of orphan health, but also interviewing health professionals in clinics and hospitals. These skills and experiences easily translate to this research and are applicable to working in Freedom Park. Also important is the relationship I am building with the community, which I feel is necessary and integral to an open and educational discussion on sexual health and pregnancy.

### **Risk Classification**

I believe that the risks offered by this study are minimal. The level of triggers or psychological trauma that could be raised by the study are unlikely to be much greater than they are in every day life. Unfortunately in a small community like Freedom Park, the likelihood that those who have been assaulted will be faced every day with this trauma is quite high. It is unlikely that this study will create a higher than every day level of risk.

### **Minimizing Risk**

As previously mentioned, both screening tools and interview questions will be structured around the ultimate comfort of the participants. While questions will be asked about age of first sex, sexual education, and engagement with said information, nothing will be asked about who or how they are engaging in said sexual activities. This level of intimacy is completely up to the level of sharing the participant is comfortable with. As previously mentioned I will also provide helpline information for those seeking help with trauma or abuse. Finally, all responses referenced in my research will use pseudonyms, and as any details regarding sexual or drug abuse are unlikely to be directly relevant to the research, they will not be included in the final report, therefore not endangering any participants who may have revealed details that would place them at or exacerbate risk.

### **Potential Benefits**

The individual benefits of participating in this research extends only to what may be one of the first opportunities these young women have been given to express their life histories, stories, and feelings on sex education. On a larger scale, this research

has the potential to be useful for resource poor communities. It is clear that teen pregnancy is a huge issue in the Western Cape, and that there needs to be a widespread effort to address the issue. The first step to addressing it lies in establishing why the problem emerges, and where it originates. While many factors influence teen pregnancy, such as years of education, SES, or parental education, less attention is paid to the interaction between young women and the sexual education and information they are receiving. By adapting such a perspective this research hopes to show where improvements in the delivery of health information might lie, and why.

By addressing the issue of health and sexual education in Freedom Park specifically, this research may suggest weaknesses in the current scenario. If the research represents a school system that is failing to effectively engage and educate youth, this can encourage local participation in health education, NGO involvement, and the growth of the community center. Parents and children alike may not be aware of the impact their words and pressures may have on the quality of and engagement with the sexual education they are providing and receiving. This research can clarify the areas that are most problematic. The exploratory nature of the research may uncover areas where health education in Freedom Park is both succeeding and failing in its goals to provide information to youth, and create a framework for an improved and more integrated system of education.

This research also has the potential to be replicated in other areas, specifically other townships that are equally resource poor, and contain marginalized populations. If the results show that health education is failing to be understood and applied by the youth, then this could inspire health education reform. This research also has the potential for small-scale immediate impact in Freedom Park, This is an important step in better understanding and listening to the voices of pregnant adolescents in South Africa, and examining the relationship between formal and informal health information, and pregnancy.

### **Informed Consent Process**

Verbal and written consent will be obtained from the participants showing that they agree to participate in the demographic screening tool. I will explain the questions that the screening tool will ask them, and the length of time they should expect to be busy. I will also explain that they may be asked to participate in a further interview, and that they are welcome to refuse. Each participant will also be given a copy of the consent form to take home after being screened, explaining the purpose of the project, the information that they agreed to, contact information for an emergency hotline, and my own contact information. This will be providing the young women with all the information, and the opportunity to choose if they are willing to participate or not, as well as making sure they have access to the resources I offered. I will make it clear that they are by no means pressured to do the screening process and the decision is entirely up to them. The consent will be sought on an individual basis so the youth do not feel pressured by their friends and acquaintances.

Consent will be sought separately for the interviews. Some interviews will take place directly after the participant is screened, and some may be scheduled for a later date. In the case of the former, I will explain further the concept of the interview and the



type of questions that will be asked, and obtain further written consent. I will also obtain their consent to record the process. Anyone uncomfortable with this process will be told that they may either ask that I only take notes, or to not participate in the interview. They will also be given a second document detailing what the interview consists of, and what will be done with the audio recordings and information they provide me with. This document also contains all my contact information.

For those who are scheduling a later date for the interview, I will again explain the interview process and provide them with the detailed sheet with my contact information. All consent documents will be available in both English and Afrikaans.

### **Capacity to Consent**

All young women asked to participate in this study will be over the legal age of majority. Because of the explanations provided for them, the consent documents, and the minimal level of risk, I feel that the young women will have every capacity to consent or not without feeling pressured. If the participant is unable to read or write, an independent witness will also be asked to sign the consent form, showing that the participant fully understood and agreed to participate in the screening tool or interview.

### **Comprehension of Information**

In order to be sure that each participant fully understands the consent that is required of them and what we will be doing, I will take several measures. The first is to make sure the information is available in the preferred language of the participant. Secondly, they will not be asked to simply read the consent forms but rather to go through it with me. This means that they must converse about the subject, ask any questions they may have, and confirm through discussion that they understand what is being asked of them. This will also be replicated when they are asked to call parents or guardians and ask for their consent, as they will be forced to explain what they are doing.

### **Withholding information**

No information will be withheld from the participants.

### **Consent and Assent Forms**

See appendix. All forms will be in English and Afrikaans.

### **Privacy and Confidentiality**

All printed data (screening tools) will be stored in a locked room in my private residence until they can be scanned and transferred to a password-protected computer to which only I have access. Interviews will be uploaded to said computer, and all field notes will be typed. When the results are written up, pseudonyms will be used in order to protect any specific details that may have been given. Only I will have access to the data unless it is being translated. In the case of translation, one translator will have access to the information. It will be given to them with the pseudonym, and they will be asked to sign a non-disclosure agreement, and keep the data in a secure location.

### **Reimbursement for Participation**

Participants will not be reimbursed for the screening tool, however they will be informed that if they participate in the interview they will receive reimbursement for their time. This will be in the form of refreshments (cookies, tea, etc.) as well as a **15 rand airtime voucher**. I feel that offering these incentives is a non-coercive method fore preventing major loss to follow-up.

### **Emergency Care and Insurance for Research**

There are no anticipated research related injuries.

### **What Happens at the End of the Study**

At the end of the study the youth leader and the community organizer will be given gifts of thanks for helping me make the connections I otherwise would not have been able to make. When a synopsis of the data has been written in understandable language, and translated into Afrikaans, this will also be given to both of them. This is in order to make sure that the community feels I value their participation and acknowledge that the work I did could not have been accomplished without them. If possible, I would like to organize a meeting of the young women who were interviewed and/or screened, and go over the information collected with them. Rather than being a new method of data collection this would be a form of member checking, to ensure that what I understood truly represents what they meant. This may or may not be feasible due to organizational or time constraints, however I feel it is important to funnel the research back into the community.

I also hope to reach out to the UCT community. I would like the relationship between myself and Freedom Park to extend not only into other members of the MPH program, but also specifically to anyone interested in doing research there. I feel an ongoing relationship between the communities would be mutually beneficial. This research is also being done in the hopes of being published. I feel that disseminating the information and results can lead to important follow up projects as well as being used as evidence for change and development in South Africa.

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# **Structured Literature Review**

## **Objectives**

The purpose of this literature review is to gain a deeper understanding of research that examines how vulnerable young women understand, engage with, internalize, and act upon all of the facets of reproductive health information available to them in South Africa. This literature review provides background information on the critically important issue of how formal and informal information regarding adolescent pregnancy is imparted and understood, as well as detailing the various sources of information available to adolescent women. Additionally, this review discusses the literature on the range of beliefs held by adolescent women, and contextual factors that impact internalization of information, and how this is related to adolescent use of information. This review finds that while research on adolescent pregnancy is well developed, there is a gap in existing research with respect to the relationship between access to reproductive health knowledge on the one hand, and internalization and use of said knowledge on the other.

## **Search Strategy**

In order to identify the articles used in this literature review I conducted a multi-step process of research and review. The primary challenge was to find research that covered topics of adolescent engagement with and use of reproductive health information. To begin, I used the extensive bibliography of a pertinent article by Gevers et al that focused on similar topics.<sup>48</sup> From that point of departure, I used the Worldcat database to develop an extensive listing of articles on relevant topics. Search terms included: Adolescent, pregnancy, South Africa, health information, life orientation, school, peers, media, parents, internalize, internalization and use of information. Having found approximately 40 articles on these topics, the abstracts were then read to determine relevance and usefulness to the topic. Those articles which did not examine the experiences of adolescents were not utilized. Almost all articles not based in South Africa were also discarded, although those few that dealt with the internalization of information were retained given the paucity of comparable research within South Africa. Each retained article was examined further to determine relevance to the topic and explore the quality of the research. To further deepen the pool of applicable literature, the bibliographies of each article were used to collect further articles where deemed necessary. Thirty articles were then included in for this literature review.

## **Summary and Interpretation**

Teenage pregnancy as an outcome of risky sexual behaviour is a major issue in South Africa, as elsewhere. It has negative impacts not only in community health and economic well-being broadly speaking but also in the education, health, social status, and poverty levels of the mother, child, and their family.<sup>49</sup> Low levels of accessible

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<sup>48</sup> Gevers, Anik, Rachel Jewkes, Cathy Mathews, and Alan Flisher. "I think it's about experiencing, like, life': a qualitative exploration of contemporary adolescent intimate relationships in South Africa." *Culture, Health, & Sexuality* 14, no. 10 (2012): 1125-1137

<sup>49</sup> Jewkes, Rachel, Caesar Vundule, Fidelia Maforah, and Esmé Jordaan. "Relationship dynamics and teenage pregnancy in South Africa ." *Social Science and Medicine* 52 (2001): 733-744.

reproductive health information mean that adolescents do not have the ability to make informed decisions regarding sex and contraception, which places them more at risk for pregnancy and other outcomes.<sup>50</sup> One area in which this age group has a particularly poor understanding involves the outcomes of unprotected sex. An inability to perceive the consequences of sexual activity due to lack of knowledge is a critical indicator of how a lack of internalized and acknowledged information can place adolescents further at risk.<sup>51</sup> Research indicates that poor dissemination of health information is a critical problem, as is the manner in which available information is understood and utilized. It is this latter issue of internalization and use of the available information that is the primary focus of this literature review. For the purposes of this review, internalization is the process through which norms are understood by an individual and gain value. Only after internalizing can external norms be assigned personal meaning.<sup>52</sup> Since risky sexual behaviour among adolescents and the resultant early pregnancies have such significant consequences, it is important to understand how vulnerable young women in South Africa internalize and use the health information on basic health and reproductive issues that is available to them.

This review is organized into four sections. First, I have compiled literature regarding the origins of risky sexual behaviour that lead to teenage pregnancy. Next, the review examines the literature on the sources of information and knowledge on health information available to adolescents. Third, studies on the utilization of this information and barriers to services are analyzed. Finally, I will assess the existing literature on the disconnect between available knowledge and its utilization; that is how and why vulnerable adolescents have difficulty internalizing, believing, or engaging with the reproductive health information they are being presented. This four-part examination reveals some gaps in the existing research, which my own research aims to fill.

## Origins

It is important to explore the literature regarding the origins of risky sexual behaviour and adolescent pregnancy in order to understand how well these behaviours are being addressed through knowledge dissemination of health information and adolescent practice. Research on the causes of and pathways to risky sexual behaviour are often divided into three distinct factors- proximal, intermediate, and distal factors. This analytic framework, as presented by Brook et al.<sup>53</sup> will be used to organize the wide variety of recent research on the causes of adolescent pregnancy in South Africa. The proximal factors are personal and emotional behaviours displayed by adolescents. Intermediate factors are those which adolescents experience in their relationships with the people and things around them, and finally the distal factors represent the degree to which the larger context in which the adolescents live impacts their actions.

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<sup>50</sup> Bearinger, L.H., R.E. Sieving, J Ferguson, and V. Sharma. "Global Perspectives on the Reproductive Health of Adolescents: Patterns, Prevention, and Potential." *The Lancet* 369 (2007): 1220-31.

<sup>51</sup> Holt, K., et al. "Assessment of Service Availability and Health Care Workers' Opinions about Young's Sexual and Reproductive Health in Soweto, South Africa." *African Journal of Reproductive Health* 16, no. 2 (2012): 283-294.

<sup>52</sup> Keeley, B.J. *Sociological Analysis* 34, no. 3 (1973): 236-238.

<sup>53</sup> Brook, David W., Neo K. Morojele, Chenshu Zhang, and Judith S. Brook. "South African Adolescents: Pathways to Risky Sexual Behaviour." *AIDS Education and Prevention* 18, no. 3 (June 2006).



### Proximal Factors

Risky sexual behaviour among adolescents often leads to pregnancy, disease, and other negative outcomes. Proximal factors that influence adolescent pregnancy outcomes are primarily defined by the behaviours and feelings displayed by at risk youth. In particular, high levels of rebelliousness and poor social-emotional control as well as alcohol and substance abuse are proximal factors most associated with these outcomes.<sup>54</sup> Especially relevant to this study is the literature indicating that the emotional need for strong peer relationships and the value placed on the opinions of peers has a direct impact on sexual behaviour. For example, peer disapproval of condom use has a strong negative impact on use of contraception.<sup>55</sup> Despite existing knowledge on contraceptive use, peer pressure surrounding contraception and misinformation about its use among adolescent peers can negatively impact usage levels and lead to more cases of adolescent pregnancy.<sup>56</sup>

The need for adolescents to impress their peers, and in doing so construct a negative perception of appropriate contraceptive use is a theme that appears often in the literature on contraceptive use among adolescents in South Africa. The strong internal desire to be a part of a social group, the research indicates, pushes girls to be more sexually active, and boys to assert their masculinity by having multiple partners.<sup>57</sup> Knowing that peer groups are a source of peer pressure and emotional decision-making is key to understanding how best to target behaviour change and improved understanding of safe sex among adolescents.

Other proximal factors impacting adolescent pregnancy that are noted in the research include a lack of awareness about personal risk associated with unprotected sexual activity, meaning that adolescents feel they are immune from the negative consequences of unsafe sex. Such attitudes suggest that health information from schools, for example, is not seen as relevant by youth, and is not internalized for later use. Other factors impacting the use (or non-use) of contraception include intentions and self-efficacy. Those who intended to use condoms were more likely to do so, just as adolescents with high levels of self-efficacy are more likely to use contraception.<sup>58</sup> This points to a need to communicate with adolescents in a way that seeks to strengthen their decision-making processes, empowers them, particularly by improving their feelings of self-efficacy, adequacy and strong decision making.

### Intermediate Factors

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<sup>54</sup> Amoateng, Acheampong Yaw, Ishmael Kalule-Sabiti, and Yaw Johnson Arkaah. "The Effect of Socio-Demographic Factors on Risky-Sexual Behaviours of Adolescents in the North West Province of South Africa ." *African Population Studies* 28, no. 1 (2014).

<sup>55</sup> Brook et al. *AIDS Education and Prevention*.

<sup>56</sup> Selikow, Terry-Ann, Nazeema Ahmed, Alan J Flisher, Catherine Mathews, and Wanjiro Mukoma. "I am not "umqwayito": A qualitative study of peer pressure and sexual risk behaviour among young adolescents in Cape Town, South Africa ." *Scandinavian Journal of Public Health* 37, no. Supplement 2 (2009).

<sup>57</sup> *ibid*

<sup>58</sup> Eaton, Liberty, Alan J Flisher, and Leif E Aaro. "Unsafe sexual behaviour in South African youth ." *Social Science & Medicine* 56 (2003): 149-165.

Intermediate factors include the ways that relationships among adolescents and with others in their community can play a strong role in increasing the likelihood of engaging in risky sexual behaviour that results in pregnancies. Research clearly indicates that parent-child relationships play an important role in governing future adolescent sexual behaviour.<sup>59</sup> Not only do open relationships with parents help disseminate important information about sex that adolescents found believable, but the value placed in the child by the parent plays a key role- low value reduces self worth, while high value encourages self-efficacy. The importance of parental involvement is found throughout the literature on adolescent pregnancy and sexual risk taking. This same bond is found between appreciation of education among adolescents and risk-taking- high perceptions of the importance of school reduced the frequency of risky sexual behaviours.<sup>60</sup>

Another important intermediate factor that plays a role in adolescent pregnancy is that of power relations. In South Africa, as in much of the world, unequal gender relations can lead to a lower ability of women to negotiate condom use during sex. Furthermore, coercive male relationships<sup>61</sup>, the unwillingness to confront a sexual partner, and forced sexual initiation (and subsequent sex), can all lead to increased levels of pregnancy.<sup>62</sup> The inequality of gender relationships as a contributor to high levels of adolescent pregnancy only further cements the importance of building self-efficacy and empowerment particularly amongst vulnerable young women, as well as the importance of providing health information in a gender sensitive or transformative manner. The research in this area suggests that the development of positive, supportive inter-personal relationships is a crucial pathway to counteracting risk-inducing societal pressures on adolescent women.

### Distal

Distal factors influencing adolescent sexual practice are the larger scale factors that represent the context in which these adolescents are raised and live, factors that extend beyond their immediate family, community, friendships, and school. One of the reasons that teenage pregnancy continues to be so prevalent in South Africa is that it is cyclically entrenched. The cycle begins with overwhelmingly negative attitudes towards teenage pregnancy which mold how adolescents are taught about sexual health. Parents and teachers alike display aversion for risky adolescent sexual behaviour, and nurses often refuse to discuss the issue or provide care. This makes adolescents fear the negative judgment of adults and repercussions for even asking questions; as a result they are reluctant to seek out more information. Social norms and fears around teen pregnancy then lead to insufficient discussion on the topic which in turn perpetuates higher pregnancy rates.<sup>63</sup> This cycle ultimately has taken the form of a negative feedback loop- the greater the perception of adolescents that such discourse will be

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<sup>59</sup> Brook et al. *AIDS Education and Prevention* (2006).

<sup>60</sup> Amoateng et al. *African Population Studies* (2014).

<sup>61</sup> Eaton et al. *Social Science & Medicine* (2003).

<sup>62</sup> Jewkes et al. *Social Science and Medicine* (2001).

<sup>63</sup> Mkhwanazi, Nolwazi. "Understanding teenage pregnancy in a post-apartheid South African township ." *Culture, Health & Sexuality* 12, no. 4 (2010): 347-358.

viewed negatively, the greater the reluctance of these key sources of health information to freely and openly discuss it.

Other important distal issues that factor into high levels of adolescent pregnancy are socio-economic status generally, and more specifically the poverty levels of the adolescents family.<sup>64</sup> High poverty levels are associated with higher adolescent pregnancy rates, as are other socio-demographic features.<sup>65</sup> Research indicates that an adolescent's broader cultural environment is also a factor. Adolescents growing up in an urban or rural environment face different conditions which may impact the likelihood of engaging in risk-taking behaviours. Those in a rural environment may have less access to contraception or more concentrated social pressures, while those in an urban area may be subject to higher poverty rates, or peer pressure.<sup>66</sup> Overall, the lack of economic security many South African adolescents face, combined with societal pressures discussed above, and the governments continuing failure to provide adequate health support for risk taking youth, result in high levels of adolescent pregnancy.<sup>67</sup>

Research on teenage pregnancy in South Africa has changed over the last few decades. Of late there is an increase in work examining the causes of risky sexual behaviour, and it is becoming evident that the pathways to engaging in risky sexual behaviour among adolescents are influenced by both personal and community factors. The correlations between teenage pregnancy and broad environmental factors such as poverty, social relationships, gender roles, and contraceptive access are also being more systemically examined. This represents a shift in the field of South African research away from a focus on the obstetric outcomes of teen pregnancy, toward research that explores the pressures faced by young women as they reach adolescence, a point at which intervention in the form of health information and services are generally assumed to play a key role in modifying risky sexual behaviour.

An overview of adolescent pregnancy research conducted by Macleod and Tracy emphasizes these trends in the field, as well as existing gaps in the research. They point out the failure of recent research to examine the link between available health knowledge and the factors influencing risky sexual behaviour that might explain failures to internalize and believe that information.<sup>68</sup> It is this gap that is of the central focus of my study.

### **Sources of Information**

In the literature there is general agreement about the common sources of information used to educate South African adolescents about safe sexual practices, particularly contraception. Parents, largely mothers, and other relatives are a major source of information, as are teachers, peers, and the media. Most studies that look at sources of information test young adults on their general knowledge of contraception.

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<sup>64</sup> Brook et al. *AIDS Education and Prevention* (2006).

<sup>65</sup> Amoateng et al. *African Population Studies* (2014).

<sup>66</sup> Eaton et al. *Social Science & Medicine* (2003).

<sup>67</sup> Macleod, Christina. "Economic Security and the Social Science Literature on Teenage Pregnancy in South Africa." *Gender & Society* 16, no. 5 (October 2002): 647-664.

<sup>68</sup> Macleod, Catriona Ida, and Tiffany Tracey. "A decade later: follow-up review of South African research on the consequences of and contributory factors in teen-aged pregnancy." *South African Journal of Psychology* 40, no. 1 (2010): 18-31.

The general results show that South African adolescents show a high level of knowledge. The issue is when and how they choose to use this knowledge, and it is clear from high pregnancy rates that use is infrequent.<sup>69</sup> What most of these studies fail to do however, is examine the disconnect between knowledge and use; that is why there is a failure to internalize information.

Recent research also suggests that adolescents are fearful to apply their knowledge about contraception, or to ask for more, because of the potential negative response, a bad experience, or the general social stigma around adolescents who are sexually active.<sup>70</sup> Research indicates that adolescents often experience a lack of discourse from their parents on issues such as sex and contraception, and feel they are unable to ask them for information, especially regarding condoms and condom use. Research indicates that adolescents often experience a lack of discourse from their parents on issues such as sex and contraception, and feel they cannot ask them for information, especially regarding condoms and condom use. Where there is a discourse with parents, female adolescents are more comfortable talking to mothers, and males are more comfortable talking to fathers, but many adolescents of both genders feel they are not receiving as much information as they need.<sup>71</sup> These findings underscore how important parental relationships are in informing adolescents about sex, and sexuality, especially amongst women who are at risk for teen pregnancy.<sup>72</sup> As a result, research on potentially effective programming has concluded that parents should be targeted as useful allies in reducing adolescent pregnancy.

There is further evidence that when parents are educated on how to communicate with children, it improves their ability to effectively impart health information. The research indicates that this success stems from the fact that parents are a believable source, and because comfort levels between parents and children are increased.<sup>73</sup> We can conclude from the research that parents as a source of health information are integral. We must implement programs that assist mothers in talking to their daughters, just as we must improve father's ability to talk to sons around non-risky sexual behaviour. Such relationships demonstrably improve adolescents' sense of confidence and self-efficacy around contraceptive use. Parents are seen as a reliable and believable source of information, which then improves internalization and utilization of the health information provided by them.

Another key source of information on sex and sexuality are the Life Orientation courses provided by South African schools. There is a surprisingly small body of

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<sup>69</sup> James, S, SP Reddy, M Taylor, and CC Jinabhai. "Young people, HIV/AIDS/STIs and sexuality in South Africa: the gap between awareness and behaviour." *Acta Pædiatr* 93 (2004): 264-269.

<sup>70</sup> Lince-Deroche, Naoimi, Adila Hargey, Kelsey Holt, and Tara Shochet. "Accessing Sexual and Reproductive Health Information and Services: A Mixed Methods Study of Young Women's Needs and Experiences in Soweto, South Africa." *African Journal of Reproductive Health* 19, no. 1 (March 2015).

<sup>71</sup> Lince-Deroche, et al. *African Journal of Reproductive Health* (2015)., Namisi, Francis Sande, et al. "Sociodemographic variations in communication on sexuality and HIV/AIDS with parents, family members and teachers among in-school adolescents: A multi-site study in Tanzania and South Africa ." *Scandinavian Journal of Public Health* 37, no. supplement 2 (2009): 65-74.

<sup>72</sup> Namisi et al. *Scandinavian Journal of Public Health* (2009)

<sup>73</sup> Phetla, Godfrey, et al. ""They Have Opened Our Mouths": Increasing Women's Skill and Motivation for Sexual Communication with Young People in Rural South Africa." *AIDS Education and Prevention* 20, no. 6 (December 2008).

research on the impact of Life Orientation on adolescent sexual practices. The limited research available shows that it is an imperfect tool. There is no set curriculum, teachers often promote their own values and morals (such as abstinence) in the classroom and as a result the educational process strikes a negative tone towards sex and its outcomes. Adolescents are most often taught what not to do rather than what they should do. This negative outlook on sex and sexuality dissuades teenagers from positively engaging with the information, understanding it, and applying it to their own lives. Often the information, while factually accurate, is not internalized because it does not apply to the experiences or activities of adolescents.<sup>74</sup> Studies also show that Life Orientation classes are seen as uninteresting, and irrelevant by the adolescents taking them. As engagement with information is cemented in clearly students will struggle to engage with Life Orientation classes. This undermines the extent to which health information is internalized by adolescents.<sup>75</sup> Research suggests that Life Orientation often fails to acknowledge the variety of needs and sexualities that participants may experience. Gendering sexual education, so it alienates half the class, and at the same time making it distant from the experience of the learners fails to involve them in the learning process. Finally, research found that communication between teachers and students is uni-directional. There is strong evidence to suggest that with improved effective and reflexive communication, students are more inclined to take a hand in their own education, leading to improved capacity for internalization and belief in health information.<sup>76</sup>

Adolescents also acquire health information from peers and friendships. As adolescents become involved in romantic relationships, peers influence their judgments, knowledge, and sexual path.<sup>77</sup> Peer pressure can also lead to risky sexual behaviour with adolescents feeling they must fulfill gender-based roles, or acting to gain status acceptance within a group.<sup>78</sup> Similarly, information passed between adolescents around the utilization, feeling, effectiveness, and side effects of contraceptives can be a limiting factor for use.

Particularly important regarding adolescent pregnancy is the fact that many educational services fail to provide targeted information for young women with gender sensitive information on risky sexual behaviour or contraceptive methods.<sup>79</sup> In this way, critical health information becomes essentially inaccessible and difficult to

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<sup>74</sup> Shefer, Tamara, and Catriona Macleod. "Life Orientation sexuality education in South Africa: Gendered norms, justice and transformation ." *Perspectives in Education* 33, no. 2 (2015).

<sup>75</sup> Jearey-Graham, Nicola, and Catrion Macleod. "A discourse of disconnect: young people from the Eastern Cape talk about the failure of adult communications to provide habitable sexual subject positions ." *Perspectives in Education* 33, no. 2 (2015).

<sup>76</sup> Mthatyana, Andisiwe, and Lousie Vincent. "Multiple femininities in a 'single sex' school: Re-orienting Life Orientation to learner lifeworlds ." *Perspectives in Education* 33, no. 2 (2015).

<sup>77</sup> Harper, Gary W, Christine Gannon, Susan E Watson, Joseph A Catania, and M Margaret Dolcini. "The Role of Close Friends in African American Adolescents' Dating and Sexual Behavior ." *The Journal of Sex Research* 41, no. 4 (November 2004): 351-362.

<sup>78</sup> Selikow, Terry-Ann, Nazeema Ahmed, Alan J Flisher, Catherine Mathews, and Wanjiro Mukoma. "I am not "umqwayito": A qualitative study of peer pressure and sexual risk behaviour among young adolescents in Cape Town, South Africa ." *Scandinavian Journal of Public Health* 37, no. Supplement 2 (2009).

<sup>79</sup> Lince-Deroche, et al. *African Journal of Reproductive Health* (2015)

internalize. Adolescents do have the information around contraception and pregnancy prevention available, but given the way it is imparted, do not act on it. This again represents the fundamental disconnect that can occur between knowledge and use. In part this may be because adolescents do not know why the information is important, but in part it is due to the relationship the adolescent has with the source of the information. There is, in conclusion, considerable research on the multiple sources of health information and how adolescents engage and interact with it. This research lays a solid foundation for understanding how adolescents ultimately believe the information, internalize it, and most importantly, use it.

### **Utilizing Information**

The literature on use of health information reveals that despite the high levels of knowledge on some topics such as how STIs are caused or spread, how to prevent and treat them, and appropriate contraceptive use<sup>80</sup>, condom use is infrequent among adolescents.<sup>81</sup> This shows that behaviour change is not conforming to high levels of knowledge. Research has focused on factors that can predict use of health information among adolescents. These include feelings of self-efficacy, optimism,<sup>82</sup> the ability to talk to sexual partners about use, being employed and educational status. Similarly, the ability to communicate with parents and high levels of school affiliation improve the ability of adolescents to internalize health information, and are strongly associated with use of contraception.<sup>83</sup>

Poor use of available information is an understudied issue in health information and sexual health studies. It is possible that an absence of the above-mentioned factors, such as feelings of self-efficacy can diminish use, as can the barriers to use discussed below. What follows below is an exploration of barriers to utilization, which aims to guide research in the direction of discussing the disconnect between knowledge and information dissemination, and its later internalization and desire for use.

### Barriers to Utilization

Use or non-use of contraceptive information is associated with certain key factors mentioned above. Using the information available is often challenging for adolescents for a number of reasons. I have divided those reasons into two categories. First, there are internal, or endogenous, barriers to access, meaning those beliefs and norms that are not influenced by acquired information. Secondly, there are external, or exogenous, barriers, where environmental factors prevent adolescents from making use of the knowledge and information they have on pregnancy and contraceptive use. While the differences between internal and external barriers are perhaps not so easily

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<sup>80</sup> James, S, SP Reddy, M Taylor, and CC Jinabhai. "Young people, HIV/AIDS/STIs and sexuality in South Africa: the gap between awareness and behaviour." *Acta Pñdiatr* 93 (2004): 264-269.

<sup>81</sup> MacPhail, Catherine, Audrey E Pettifor, Sophie Pascoe, and Helen V Rees. "Contraception use and pregnancy among 15–24 year old South African women: a nationally representative cross-sectional survey ." *BMC Medicine* 5, no. 31 (2007).

<sup>82</sup> Hendriksen, Ellen Setsuko, Audrey Pettifor, Sung-Jae Lee, Thomas J Coates, and Helen V Rees. "Predictors of Condom Use Among Young Adults in South Africa: The Reproductive Health and HIV Research Unit National Youth Survey ." *American Journal of Public Health* 97, no. 7 (2007).

<sup>83</sup> MacPhail, et al. *BMC Medicine* (2007)

differentiated as stated here, it is still an important distinction to make within this discussion.

### *Internal Barriers*

Internally held beliefs that health information fails to influence may create barriers to appropriate use of contraception. Research suggests that misinformation or misconceptions, or even exceedingly low levels of knowledge about contraceptives form substantial internal barriers to use of health information.<sup>84</sup> For example, many young South African women fear that contraception can cause infertility (particularly from hormonal birth control<sup>85</sup>), or have no working knowledge of certain forms of contraception, particularly injectables. This, combined with a poor knowledge of female anatomy, a perceived lack of personal risk,<sup>86</sup> and fear of judgment from providers of contraception may serve as internal barriers to adolescents, preventing them from using appropriate contraception.<sup>87</sup>

Some of the more important endogenous factors that prevent adolescent women from appropriately using the reproductive health information they have on contraception and safe sex are feelings of self-efficacy and acceptance.<sup>88</sup> Low feelings of self worth and ability are therefore directly correlated with poor contraceptive use. This points to the importance of providing early social-emotional support to help internalization of contraceptive knowledge.

Gender roles also form a major internal barrier to contraceptive use. Gender roles are often replicated in adolescent relationships, which means that women feel they cannot (or do not have the right to) assert themselves on condom usage.<sup>89</sup> This lack of decision-making autonomy stops adolescent females from demanding contraceptive use in a relationship.<sup>90</sup> These issues are representative of what Jewkes and Morrell refer to as three versions of restricted agency for women-- agency that is constrained in a relationship, agency that sees surrendering agency to men as culturally relevant, and finally agency through accommodating male power to pursue a more peaceful relationship. This approach replicates the emphasis of other research about individual and communal influences on adolescents' inability to realize full agency. This

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<sup>84</sup> Williamson, Lisa M, Alison Parkes, Daniel Wight, Mark Petticrew, and Graham J Hart. "Limits to modern contraceptive use among young women in developing countries: a systematic review of qualitative research ." *Reproductive Health* 6, no. 3 (2009).

<sup>85</sup> *ibid*

<sup>86</sup> MacPhail, Catherine and Campbell, Catherine. "I think condoms are good but, aai, I hate those things': condom use among adolescents and young people in a Southern African township ." *Social Science & Medicine* 52 (2001): 1613-1627.

<sup>87</sup> Wood, Kate and Jewkes, Rachel. "Blood Blockages and Scolding Nurses: Barriers to Adolescent Contraceptive Use in South Africa ." *Reproductive Health Matters* 14, no. 27 (2006): 109-118.

<sup>88</sup> Boer, Henk and Mashamba, M. Tshilidizi. "Gender power imbalance and differential psychosocial correlates of intended condom use among male and female adolescents from Venda, South Africa ." *British Journal of Health Psychology* 12 (2007): 51-63.

<sup>89</sup> O'Sullivan, Lucia F, Abigail Harrison, Robert Morrell, Aliza Monroe-Wise, and Muriel Kubeka. "Gender dynamics in the primary sexual relationships of young rural South African women and men ." *Culture, Health & Sexuality* 8, no. 2 (2006): 99-113.

<sup>90</sup> Harrison, Abigail, Nonhlanhla Xaba, and Pinky Kunene. "Understanding Safe Sex: gender narratives of HIV and pregnancy prevention by rural South African school-going youth." *Reproductive Health Matters* 9, no. 17 (May 2001).

inability to pursue full agency limits women's ability to demand appropriate contraceptive usage, again showing the importance of emphasizing agency and personal empowerment as a tool for internalizing and using important sexual health information.

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### *External Barriers*

External barriers to use of health information often come from similar sources to those of internal barriers, but reflect use of individual or institutional power rather than internally held beliefs. For example, young women may feel pressure to not use contraception as a result of negative adult attitudes, such as family members or nurses, who either desire proof of fertility, or are promoting abstinence. Nurses may actively prevent adolescent women from utilizing contraception because of their personal opinions (that individuals were too young, or that contraceptive information promoted early sexual encounters). These negative experiences with adults and health professionals often make young women reticent to ask about contraception again.<sup>92</sup>

Economic deprivation of adolescents also plays a role as an external barrier. Certainly the limited availability of condoms in poor communities represents a barrier to use.<sup>93</sup> In another facet of power roles negatively affecting adolescent women, the negative attitudes of partners (and other males) towards women's autonomy reduces contraceptive use,<sup>94</sup> as does the inability to discuss use with a partner.<sup>95</sup> Therefore it is clear that effective, dissemination of information on contraception needs to change the beliefs of not only adolescent women, but also the important actors in their lives such as partners, family members, or health professionals. In this, as in other research fields cited above, the causes of the disconnect between the information available to adolescents and its internalization and application remains under-researched, which is the focus of my own research.

### **Failure to Internalize**

The research detailed in this review reveals a gap in the literature on adolescent pregnancy in South Africa. There is a disconnect between levels of knowledge available to teens, and their utilization of said knowledge and services. While the bodies of work on sources of teenage pregnancy, information, and utilization create a strong framework for discussion of teenage pregnancy, it is clear that more research needs to be done on how young women internalize information and form strongly held beliefs that allow them to use health information to their best benefit. How can we learn what encourages adolescent women to internalize and engage with important sexual reproduction knowledge?

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<sup>91</sup> Jewkes, R, and R Morrell. "Sexuality and the limits of agency among South African teenage women: Theorising femininities and their connections to HIV risk practises ." *Social Science & Medicine* 74 (2012): 1729-1737.

<sup>92</sup> Wood, Kate and Jewkes, Rachel. "Blood Blockages and Scolding Nurses: Barriers to Adolescent Contraceptive Use in South Africa ." *Reproductive Health Matters* 14, no. 27 (2006): 109-118.

<sup>93</sup> C. a. MacPhail *Social Science & Medicine* (2001)

<sup>94</sup> Boer. *British Journal of Health Psychology* (2007).

<sup>95</sup> Williamson, et al. *Reproductive Health* (2009).



Research shows that different sources of information relate to adolescent beliefs in different ways. For example learning about sex from parents, grandparents, and religious leaders is likely to delay sex, while learning from friends and the media can lead to sex at an earlier age.<sup>96</sup> This connects with other research on beliefs and behaviour change, which show that the source of the information is integral in influencing behaviour change. This same research shows that acquiring information can change knowledge levels among adolescents, but does not provide enough motivation to actually change behaviours, attitudes, or beliefs.<sup>97</sup> Real behaviour change among adolescents is associated with personally relevant, realistic, and identifiable themes. While logic-based education may impart knowledge, it is not as effective in encouraging changes in belief and behaviour as information sources that are enjoyable, and comparable with the life of the adolescent.<sup>98</sup>

The research already done on adolescent pregnancy goes a long way towards answering many of the most important questions around sources of teenage pregnancy; where vulnerable young women are learning about sex, why they are or are not using condoms, and more. The gap in the research lies in connecting these different factors surrounding adolescent pregnancy. Research on how internalization happens and in turn affects adolescent sexual behaviours is lacking, and it is here that this research can be of use. While using the underlying structures that are presented by existing research on adolescent pregnancy, as well as understanding the gaps and failures in utilization of information, this research will examine the failure to internalize information, and how adolescent women's beliefs about sexual behaviour and contraception are key in promoting effective condom use and reducing pregnancy rates.

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<sup>96</sup> Bleakly, Amy, Michael Hennessey, Martin Fishbein, and Amy Jordan. "How Sources of Sexual Information Relate to Adolescents' Beliefs About Sex." *American Journal of Health Behaviour* 33, no. 1 (2009): 37-48.

<sup>97</sup> Krahé, Barbara, Charles Abraham, and Renate Scheinberger-Olwig. "Can safer-sex promotion leaflets change cognitive antecedents of condom use? An experimental evaluation ." *British Journal of Health Psychology* 10 (2005): 203-220.

<sup>98</sup> Andsager, Julie L, Erica Weintraub Austin, and Bruce E Pinkleton. "Questioning the Value of Realism: Young Adults' Processing of Messages in Alcohol-Related Public Service Announcements and Advertising ." *Journal of Communication* , 2001: 121-142.

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# **Engagement and Understanding: Pregnant adolescents and health information in Freedom Park**

## **Abstract**

**Background:** Teenage pregnancy is a major sexual health issue for vulnerable young women in South Africa. This study examines how adolescent women in the South African township of Mitchells Plain understand and engage with information about sexual and reproductive health. Using qualitative research techniques, the article examines the factors that influence how vulnerable young women internalize, believe, and ultimately use this health information. By exploring this under-studied area of reproductive health, this research provides important insights into the causes of adolescent pregnancy and risky sexual behaviour among vulnerable adolescents.

**Methods:** Participants were adolescent women (ages 18-20), who were residents of Freedom Park, (a neighbourhood in Mitchells Plain, Cape Town) and were either pregnant or had a child. Demographic screening tools (n=31) were used to select eligible participants for semi-structured interviews (n=30). Interviews were later transcribed verbatim, and analyzed using NVIVO.

**Results:** In this Freedom Park sample, the ability of young women to internalize and act upon information about sexuality and health varied depending on who proffered that information and how those individuals were perceived by the recipient. In the research, three key factors emerged as impacting the internalization and later use of reproductive health information. First, for both sources of health information and for recipients, life experiences played a critical role in making information more relatable and therefore easier to internalize, believe and use. Second, the perceived trustworthiness of the source of information made the knowledge more believable and relevant to the recipient. Finally, high levels of comfort in discussing sexual health with the source of information made information more easily internalized, while fear of negative judgment from sources reduced comfort and discussions of sexual health.

**Conclusion:** The research suggests that efforts to reduce instances of adolescent pregnancy in South Africa should pay close attention to who delivers information about health and sexuality. To be effective, young women should feel they share experiences with, trust in, and are comfortable with sources of information. Future research should pursue how improving adolescent's engagement with health information through feelings of belonging, self-efficacy, and empowerment can improve understanding, trust, and utilization of health information.

**Keywords:** Adolescent pregnancy, South Africa, health information, sexual education, experience, belief, trust, comfort

## **Background**

Adolescent pregnancy has become a major global health issue, targeted by the United Nations Millennium Development Goals and other international initiatives. Pregnant teens face much higher risk of complications in pregnancy and birth, as well as health risks for the baby. While potentially affirming for some young women, pregnancy amongst young mothers can also have a negative impact on their economic security and future risk-taking behaviours, as well as increasing population growth, which can lead to significant negative economic and social outcomes.[1] In 2003, 15% of South African adolescents (15-19) had been pregnant at least once[2] a level which indicates the issue of adolescent pregnancy is of great significance in South Africa. While reliable statistics do not exist for Freedom Park or Mitchells Plain, the area near Cape Town where this research took place, anecdotal evidence indicates that adolescent pregnancy rates are elevated. This evidence is supported by the high levels of poverty, unemployment, and domestic violence, suggesting that teen pregnancy is a pressing issue that bears examining.

It is common for teen pregnancy to be discussed as an outcome of a variety of factors, including but not limited to; socioeconomic status [3], relationship with parents [3], years of education, and risky sexual practices.[4] When it comes to the relationship between health information and teen pregnancy, research has largely focused on tested factual knowledge, or the impact of sexual education within the school system on contraceptive use and reducing levels of adolescent pregnancy.[2][5][6] Other research focuses on additional sources of information about teen pregnancy, such as the media [7][8], parents and peers [9, 10], or social norms.[11, 12]

What has been less examined is how adolescents in resource poor communities internalize, understand and engage with this information on sex and pregnancy, and how this impacts their use of contraceptives, sexual activity, and ultimately pregnancy itself. There is a strong evidence base of research that discusses where young women learn about sex, and their use or non-use of this information. This research is designed to fill a gap in the literature by discussing how various factors influence the extent to which reproductive health information from various sources is internalized and believed, and how this in turn impacts adolescent sexual behaviour.

For the purposes of this study, internalization represents the missing link between formal or informal health education and use of said knowledge, a topic that is generally ignored by much of the existing research. Here, internalization follows the guidelines of John Finley Scott, who defines internalization as the process through which norms are understood by an individual and gain value. It is only after this process of internalization that an individual assigns external norms or information a personal meaning and value. [13] While external behaviours are not always constant with internalized norms, the process of internalization is what allows an individual to make choices based on personal beliefs. In this instance, it could be the difference between an adolescent being *told* to use contraception when having sex, but not necessarily doing so, and an adolescent believing personally that contraceptive use is important, and trying their best to comply. As intent is positively correlated with use, it is clear that internalizing information is preliminary to any higher usage of sexual education and health information. Parson shows that internalizing information helps to create new beliefs within individuals, which in turn affects behaviour change. This is especially important in the formative years, during an adolescents' education. Behaviour change is perceived as a result of trying to reach a balance among



several factors; seeking approval, avoiding disapproval, and committing to following ones own personally held norms and ideals. [14]

Access to formal and informal education (such as school, family, friends, or media) on health, sex and contraceptive use is not a catchall solution for preventing risky sexual practices and adolescent pregnancy. Just because young women are made aware of the risks and ways to avoid negative outcomes does not mean that teen pregnancy will be avoided. Researchers must remember to look at health education in the specific social, physical, and emotional context in which young women are expected to use this knowledge.[3] Difference in power structures and gender relations for example can transform or even undermine any learned knowledge about sexual behaviours.[15] It is crucial, when determining the link between information and ultimate utilization, to understand how young women learn and talk about sex and health, and in turn, act in relation to this information. Examining how young women collect and comprehend health information will lead to important insights about how they put such information to use within the existing structures, as well as permitting systematic comparisons between acquired knowledge and practice.

This research was conducted in Freedom Park, a subsection of Mitchell's Plain township, just outside of Cape Town. This township struggles with a variety of complex issues, resulting from a combination of intense poverty, high unemployment, lack of infrastructure, and a densely settled and vulnerable population. In the last census of the area conducted in 2015, Mitchells Plain, which is largely Coloured\*, had a 24% unemployment rate, and a population that was slightly more than half (51%) female. It is a predominantly young population, with 45% of its residents under the age of 25. [16] Only recently have formal buildings been constructed for some of the 280 households in Freedom Park, but residents continue to live in fear of gangsterism, hunger, and physical abuse. This community also struggles with high levels of gender-based and domestic violence (as does much of South Africa).[17]

This research delves into the manner in which pregnant adolescents interact with both formal and informal health education in South African townships. The research examines how pregnant adolescents in resource poor areas understand and engage with sources of health education and information on sexual activity and contraception, and how these young women navigate the relationship between sexuality, norms and health information. Through qualitative data collection, this research uncovers how at-risk adolescents internalize and use health information about sex and contraception. It develops a three-part framework of factors that influence adolescent relationships with sources of information, impacting the extent to which they internalize and believe health information.

## **Methods**

This exploratory research was conducted in a flexible manner, allowing for changes in research and focus based on ongoing results. In part, the research was ethnographic, and based on my interactions and relationships with community members. Over the course of the research process, relationships with the gatekeepers provided critical entry into the

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\* In South Africa, Coloured applies to individuals of a mixed racial background, as well as those who can trace their ancestry back to the Khoisan people. This is one of five potential races acknowledged by the South African census: Black African, Coloured, White, Indian or other Asian, or Other.

community, which led over time to in-depth conversations with them on a variety of relevant issues. The same evolution was true of my relationship with the community's youth and project participants, all of which provided a rich context for the collected data. Participants were adolescent cis-gendered females intended to be between the ages of 18 and 20 who were either currently pregnant or had already given birth. In practice the participant pool included several women older than 20, but who had given birth within the requisite age range. Wide variety in age range helped to highlight the fact that women of different ages, even across generations, struggled with similar issues. Participants could not be under the legal age of consent as ethics approval and permission to speak to underage women in this environment were too complex given the confines of this study. See Table 1 for the complete age range of the participants as well as age of first childbirth. Participants also had to reside within Freedom Park, a neighbourhood of the Cape Town township of Mitchells Plain. Freedom Park is considered a high-risk community given its high poverty rate, and levels of drug abuse, gang violence, and teenage pregnancy.

Table 1: Age range of participants, and age of first childbirth

<b>Age of Participant</b>	<b>Age at First Birth</b>	
<b>Age</b>	<b>Number of Participants (n)</b>	<b>Number of Participants (n)</b>
15	-	1
16	-	4
17	-	5
18	3	5
19	3	4
20	3	6
21	5	1
22	3	1
23	3	1
24	4	1
25	2	1
26	2	-
29	1	-
31	1	-
<b>Total</b>	<b>30</b>	<b>30</b>

To identify respondents, community members were asked to complete a demographic screening tool that asked questions about their age, religion, school attendance, children, and family. This tool was then used to select interview participants, and shape the subsequent semi-structured interview with questions tailored to their demographic characteristics. All participants gave written informed consent for both the screening tool and interview, and all interviews were recorded. 30 interviews were administered. All participants have been given a pseudonym.

Ethics approval to conduct human research and interviews was obtained from the University of Cape Town Human Research Ethics Committee (605/2015).

## Analysis

Each interview was transcribed verbatim from the recordings. The resulting interview transcripts were qualitatively analyzed both deductively, looking for themes of engagement and understanding, and inductively, through emerging themes in the research. Thorough and repeated readings of screening tools and interviews allowed the researcher to uncover themes surrounding engagement with and understanding of safe sex and adolescent pregnancy in Freedom Park. A qualitative data management program, NVIVO, was used to facilitate coding, and ease the process of comparing factors. Table 2 provides an important illustration of how NVIVO was used to compare themes and sources of information. Using this data management system, it was possible to compare the number of times responses were coded synonymously with one another- e.g. belief was discussed most with information coming from mothers, much as ‘unrelatability’ was most commonly referred to when discussing school

Table 2: Example of NVIVO Coding

	Clinic	Friends	Internet	Father	Mother	School	Significant Other	TV
<b>1: Belief</b>	2	2	0	2	12	4	1	2
<b>2: Unrelatable</b>	0	1	0	0	0	14	0	0

It was important during the process of analysis for the researcher to acknowledge her position during both the administration of interviews and reading of transcripts. The researcher used a field journal to note both her existing feelings around adolescent pregnancy, her opinions and observations during the process of interviewing, as well as the roles of power relationships between the researcher and the participants.

## Results

Through the interviews conducted in this study, I determined that internalization of health information is shaped by three principal factors which are explored at length below. These factors all involved the impact of a young woman’s relationship with the sources of information. Each factor had a strong influence on sexual practice and forthcoming adolescent pregnancy. It is important to note that aside from the main themes addressed here, an influencing factor in sexual behaviour and levels of adolescent pregnancy in Freedom Park is the quality of health information that adolescents are receiving.

Before examining the principal factors affecting internalization, some further context about health information in Freedom Park is required. It became clear during the research that it is quite rare for an older adolescent (or even an adult) in this community to have an accurate and complete understanding of the reproductive system, how to prevent pregnancy, and the ways in which contraceptive devices work. High dropout rates in Freedom Park, and many high-need communities across South Africa, lead to incomplete sexual education. Of the participants interviewed, only 20% matriculated from high school. (See Table 3 for levels of education of participants.) Among those in school, quality of student learning is clouded if not distorted by the personal beliefs of the teachers regarding

adolescent sexual activity as well as by the poor quality of Life Orientation classes impacted quality of learning.[18]

The poor levels of health education also have a negative impact on the information communicated by trusted sources such as peers or parents. Beliefs surrounding issues of sexual health and pregnancy are informed by knowledge, so it is important to keep in mind that while a woman’s relationship with the sources of information plays an important role in internalization and belief, there is an underlying issue of substandard health education for adolescent women in Mitchell’s Plain.

Unsatisfactory health education within the community is replicated in low levels of contraceptive use reported by the participants. Table 4 below indicates the number and percentage of participants that said they had used each common form of contraception. Only 50% reported ever using a condom. The most commonly used form of contraception was the “injection”. This is a colloquial method of referring to a 2-month hormonal contraceptive known as Nur-Isterate, or a 3-month preventative called Depo-Provera. Among the young women interviewed, 80% reported having used it. However, information reported in interviews indicates that almost every participant who used the injection received it immediately *after* the birth of her first child, while still in the clinic, rather than seeking it out as a preventative measure.

The three factors that were determined to have a strong influence on belief and internalization are discussed in some detail below. Within the interviews conducted in this study, the themes of experience, trustworthiness, and comfort emerged consistently. I believe that analyzing and exploring these topics will lead to a deeper understanding of how health information is internalized, and therefore becomes more likely to be used, as an important part of efforts to lower adolescent pregnancy rates and improve education of teens in townships such as Freedom Park.

Table 3: Educational Attainment Levels of Participant

<b>Grade Participant Left School</b>	<b>Number of Participants</b>	<b>% Of Total</b>
<b>3</b>	1	3%
<b>4</b>	-	-
<b>5</b>	-	-
<b>6</b>	1	3%
<b>7</b>	-	-
<b>8</b>	5	17%
<b>9</b>	5	17%
<b>10</b>	6	20%
<b>11</b>	6	20%
<b>12</b>	6	20%
<b>Total</b>	<b>30</b>	<b>100%</b>

Table 4: Contraceptive Use Among Adolescents

<b>Contraceptive Methods</b>	<b>Reported Use (n)</b>	<b>Reported Use (%)</b>
<b>Condoms</b>	15	50%
<b>Pills</b>	6	20%
<b>Implant</b>	4	13%
<b>Natural Remedies</b>	2	7%
<b>Pulling Out</b>	5	17%
<b>Abstinence</b>	6	20%
<b>IUD</b>	-	-
<b>Injection (2 or 3 month)</b>	24	80%
<b>Other</b>	-	-

### **Key Features of the Source of Health Information**

#### The Importance of Personal Experience

The theme of experience emerged in two major categories that influenced the sexual practice of adolescent women. The first is the experience of the source of health information, which was seen as either relatable and therefore more believable, or too alien to relate to the adolescent’s lifestyle. Secondly, experience emerged as a theme of personal exploration. That is, only through experiencing certain sexual practices themselves could young women then internalize and believe the health information they had been given.

#### *Source of Information*

It is clear that the more easily young women can relate to the life experiences of the source of health information, the more they will believe the information being presented to them, and as a result internalize it for future use. The sources of information that were discussed by young women with the greatest regularity include family (specifically mothers), school, peers, and television. The more proximate the life experience of the source to their own, the more likely adolescent women are to use the tools and information provided by these sources.

Research has shown that adolescent women who are at risk of teenage pregnancy are most likely to turn to their mothers for advice and information. [19] They are especially likely to listen to their mothers on topics surrounding health and sex information, despite the fact that they may feel they are not learning as much as they need.[20] Research participants were clear that they felt they could believe their mothers because they had the same life experiences, and the same kind of life style. As Jo-Ann said, she found it easy to believe and use the information her mother gave her because *“she made the same mistakes I was making.”* Tansey said she would always go to her mother for help or with questions about sex because *“I can talk to her more than any other people. She is aware of what I am going through, and she did it too, much as anybody else, so I would go to her.”* Most young women felt more comfortable talking to their mothers about sexual health than they did with other sources of information. This was partially due to the fact that they had high levels of trust in their mothers. More than one respondent stated that they would believe their mother *“because she is my mom, she would never lie”* (Liesel). In contrast, fathers were

far less likely to be referred to as a believable and experienced source of information, most likely because their life experiences were gendered and therefore in the area of reproductive health, quite different.

Similar to the lived experience of parents, peers play an important role in transmitting information and often have direct influence over the course of sexual relationships.[21] While referred to less frequently than parents, friends were seen by respondents as believable sources of information, largely because of similar life experiences. Friends and peers were going through similar experiences and feelings as the young women themselves. For example it was suggested that if a sexual experience such as a condom breaking could happen to their peers, it could just as easily happen to them. As Geenah said *"It could, it could happen to me also, so like I had friends tell me, 'I had sex with this guy and whatsoever, but I got pregnant' and I understood this was going to happen to me also."* While the information that adolescent women received from their peers was not necessarily reliably accurate, it was still internalized and believed to a great extent because the young women were essentially 'seeing it happen' in the form of friends becoming pregnant, or relating stories about unforeseen or high-risk circumstances. This is evident in the remarks of Raeesah, who stated she rarely used condoms because *"My boyfriend wants to use condoms but I said no, because many people they are telling me the condoms they is breaking."* Friends, however, were directly consulted far less often than mothers. Many young women felt that relationships with other women, and the resulting gossip that was spread within the small community of Freedom Park were so negative that they felt uneasy about sharing their personal sex lives with other women their age.

A final source of information that women found relatable because of their proximity to the sources experience was television. While the majority of adolescent women interviewed in Freedom Park did not watch TV, and did not see it as a source of health information, there were those who stated that they learned from it because of programming that replicated their lifestyle in Mitchell's Plain and the everyday situations they witnessed and were involved in. Relatable and entertaining media that is rooted in the lifestyle of the targeted adolescent can be an effective method for changing behaviour.[22] Therefore it is unsurprising that those young women who had access to televised media that mirrored their lives found it easy to both believe and internalize the information provided. Ishani referenced a well-known soap opera called *Mi Casa*, claiming it was a good source of health information when she said *"...because they have things that are happening now now, like in your area, you would always see. There was this one in a shebeen [township pub] and something happens, but then in real life it has also happened. But what is happening- the program that is coming on TV is happening in your life."*

Unfortunately, young women were far less likely to internalize, believe, and later use information disseminated by other major sources. This was because the experiences these sources represented were either impersonal or unrelatable. Information that had no real life applicability and was hard to relate to was far less likely to be implemented in daily life. School was a prime example of this. One participant (Ishani) discussing Life Orientation classes, remarked that *"No one would talk about [sex] face to face, about my life and stuff. It would be like a lesson and he would teach you and that was it."* Most young women felt that reproductive health lessons in school merely repeated information straight from their books, which they knew, understood, and usually trusted to be accurate. However, while they may have believed the information, they routinely failed to apply it to

their lives because school felt like it was “...really just talk. Didn't seem like it was for me.” (Justine) Often, young women also felt that the experiences of their male teachers were not relatable, as these experiences were gendered and not relevant. Kayleigh said she failed to learn much from her male Life Orientation teacher because “*I didn't pay attention. It was a man teacher, he was talking just about boys. He never made girls understand why, because he said he is a boy he can't tell you that is that with the girls, because he hadn't gone through it before. That's why I never understand or listen in the class because it was boy stuff the whole day.*”

While most adolescent women expressed certainty that school and teachers would not mislead them, they at the same time expressed concern that the information was not something that applied to them. Most students also felt that teachers would not talk to them about issues of importance to them, such as how to engage with significant others. To the researcher it seems possible that the educators' experiences and training had not prepared them to give advice that was age, gender, and context appropriate. In addition, the participants seemed to express that much of the advice was targeted towards STI and HIV prevention. While important, students could benefit from learning more on other reproductive health topics. These classes provided no background information on the reproductive system, or pregnancy. Thus, even if young women were given information about condoms, it may not have been connected to pregnancy prevention. Finally, many respondents were off-put by a discourse of being told by sex educators what they must *not* do, rather than what they *should* do. Negative outlooks and discourses on sex and sexuality can discourage engagement and understanding among adolescents, as well as making them less comfortable with asking questions, an issue that will be discussed in a later section. [23]

### *Personal Experience*

Experience was posited as a positive factor in internalization of and engagement with information. Participants expressed a ‘do it yourself’ attitude towards sexual health. A theme that was often expressed was that young women needed to experiment for themselves with the information they were being given in order to understand what was true, and how to apply it in practice. In short, the best source of information was their own experience. Saajidah reported feeling that health information was most reliable when she “*Did it myself, to see, and practice.*” Many other women felt that their youth was the time when you “*want to explore*” (Kadeejah) or when “*you're young, you think no, it's time to party now.*” (Sharissa) Simply being instructed to use contraception or to avoid teenage pregnancy was insufficient, they had to learn by doing and experience it themselves. Ayisha comparing her school classes to experience-based lessons said, “*The children- they don't want to learn things, the class is just to lecture them, they want to do it themselves!*” This is indicative of the high level of trust placed in personal experience- they felt there is no better way to internalize information than through action and learning the lesson for yourself.

Participants indicated that personal experience provided a pathway for acquiring sexual information through unplanned sex. Infrequent contraceptive use when engaging in intercourse with partners was often justified with the saying ‘sex just happens’. Many young women reported that when they were about to have sex, contraception was something that they did not think about or talk about at the time, or that it was unavailable

to them at that moment. More than one woman repeated the same words as Mariam and Bisma “*Because we just do it, we just do it.*” and “*It just happened!*” It was not that contraceptive practices were unknown to these respondents, rather that sex had to have been planned ahead of time in order to actually make the best use of protection, particularly ‘the first time’. While most were dismissive of the idea of planning before their first sexual encounter to use condoms, those in relationships said that after the first time they were more free to talk about using condoms or other contraception, and in fact did so, albeit sporadically.

### Trust

The second theme that emerged over the course of the interview process was the likelihood of young women trusting what they were being told from each source of information. There was a distinct line drawn by participants between knowledge and trust. For them, trust levels were related to their belief in the information. Belief seemed to be correlated with other factors, such as experience. Trust and belief had a strong positive impact on the inclination of adolescents to use the information imparted by that source, more so than the participants’ high levels of knowledge or information. Even those who felt they learned a great deal about sexual health and pregnancy were reluctant to apply it unless they trusted the source. There is, therefore an apparent pathway from trust, to belief, to internalization and finally use.

It is important to make a clear differentiation between belief, knowledge, and trust. For the purposes of this research, belief is the process of being convinced of the value of information. Belief in information can indirectly or directly lead to its use. Knowledge is when the subject learns certain information, however learning it is no guarantee of internalization or belief. Finally, trust is a sense or conviction that the source of information has one’s best interests at heart and is providing correct information. Trust is more likely to increase belief in information, but is not the same.

There were a number of sources of information considered untrustworthy, essentially ensuring that the information would fail to be internalized. Primarily, school was a place where information was learned, but not applied by students. While seen as a source of knowledge, as discussed above, much of the information from this source was disregarded as not relevant to everyday life. There were similar attitudes towards sisters at the clinics, who often provided information that was not used. This is especially applicable to the young women who failed to return for follow-ups on contraceptive injections at recommended times, or had the bar method of contraception removed or replaced. Conflicting information from a variety of sources, as well as a poor base of knowledge on sexual and reproductive health meant that many young women are told a great deal of information about sex and contraception, but preferred to rely on experience (often personal) to verify the information before it was trusted, believed and internalized.

For these young women trust and belief emerge from experience and personal relationships. However, for a source of information to be truly trusted, it must also be seen as credible. Therefore, young women are most likely to trust and believe their parents. While participants were willing to trust and believe nurses at the clinics, that trust was easily broken by negative experiences, at which point young women ceased to trust the source, and no longer internalize and use the information imparted by the sisters.[11]



As seen above, parents were the most likely to be trusted by adolescent women, largely because of their common experiences, lifestyle and relationship. As Raeesah said *"She was never going to tell me a lie. She would always tell me this is the right thing to do, I trust her."* Clinics were also largely trusted, at least initially, as they were a 'certified' source of information. However, as noted above, belief and trust in information from nurses or clinics was more easily eroded than that of parents. Stories from friends, or bad personal experiences that young women had at clinics easily eroded trust, and led young women to avoid returning to care, or failing to engage with the information they had learned. Ayisha and a few other young women interviewed struggled with side effects from contraception which they blamed on the nurses faulty information. She said, *"When she told me there by the clinic if I am on the injection and I have sex there's not going to come a baby, I believed her! But so afterwards, here she [her daughter] is now popping out, now I must never going to believe her. She lied! [laughs]."* While for the most part women felt comfortable asking questions at the clinic after they gave birth, it was clear that other negative experiences subsequently broke that trust.

Adolescents expressed similarly high levels of trust in school, as an institution, and did not think that teachers would mislead them. In her interview, Ishani said that she trusted her teachers *"Because I know they won't tell lies, they are the teacher. But what I believed most of the time was my friends."* As is evident in this statement, school does not seem relevant to personal lives and experiences of these young women; nonetheless it is perceived as a true source. In this case trust with an absence of belief leads to low levels of internalization and poor follow through on information, and low levels of internalization.

As we see in Ishani's interview, among others, young women have high levels of belief in peers, most likely linked to shared experiences. Trust in their peers, however, was often lacking. Many young women reported having very few friends their own age, especially women. These adolescents felt that *"because of gossip and jealousy"* (Afsheen) they could not discuss sexuality and safe sex with their peers. While some information coming from their peers was deemed believable because it was grounded in experience, exchanges and close personal relationships that built trust were rare.

Finally, adolescents had high levels of belief in media that mimicked real life, was amusing and presented in a manner relevant to young women. To a great extent, adolescents regarded television shows and other mass media reports as institutionalized authorities worthy of their trust.

In addition to trust in others, self-confidence and trust in oneself substantially influenced engagement with and use of health information. Many participants revealed a low sense of self-efficacy, trust and belief in self, as well as a failure to believe in their personal empowerment; these adolescent women expressed a diminished ability to insist on contraceptive use during sex, leading to higher pregnancy rates.[15] Some women felt a low sense of trust with their partners, lacking the capacity to talk about contraceptive use. They reported that when they tried to broach the subject boys would say *"You don't eat sweets with wrappers on"* or as Justine reported *"It's complicated man, you see when you are pressured you just go and do some stuff that you are not supposed to do."*

Women who had a strong sense of self-efficacy and self-trust often expressed a low self-perception of risk, one that represents a denial of the likely consequences of risky sexual behaviour. Young women were adamant that it was not possible for them to get pregnant, despite not using contraceptive devices the way they knew they should. Many felt

their wombs were too strong, or that it was simply not possible, even going so far as to reassure partners that they could not be at risk for pregnancy. For example Kayleigh did not use protection because *"I didn't think I would get pregnant. I thought I was strong."* It is clear from the research that issues of trust and belief in the sources of information, as well as in personal capabilities play an important role in engagement with, internalization of, and use of health information.

### Comfort and Discomfort

The final theme that revealed itself over the course of the research was one of comfort. Levels of comfort or discomfort with sources of health information led to different outcomes in sexual practice.

As previously discussed, adolescent women felt most comfortable discussing issues of sex and contraception with their mothers. At the same time however, they also felt great discomfort. Young women indicated they are often reluctant, even frightened to ask questions about sexual behaviour if the topic had not first been broached by their parent. They were concerned about being reprimanded for being too young to be sexually active. Learning from experiences of siblings and friends, adolescent women reported they were afraid of the their mothers' reactions if they admitted to having sex by asking questions about it. Sabrina expressed her own concerns about talking to her mother about sex *"For me I was just afraid to talk to my mother about sex, because my mother, maybe I don't know what she is going to think when I tell her 'mommy you know what, I have sex now!' I don't know how she is going to react when I tell it to her because we are young. Some mother is different."* Other sources of discomfort participants indicated included concern because of the religious status of their family; that they would be in trouble for having sex or getting pregnant. Others knew their parents wanted them to stay in school, and not repeat their own mistakes. These sources of discomfort lay bare an essential tension regarding health information- even while adolescent women were most comfortable discussing these matters with their mothers, they had profound reasons to also be reluctant to do so.[24]

Similar issues of comfort and discomfort surrounded sharing health information with peers. While young women felt that they could talk about anything with those with whom they had the most in common, there was also a deep seated distrust of peers, and a concern that discussion on sexual health would lead to gossip and rumors. Participants concluded that their peers often did not have their best interests at heart, resulting in a sense of discomfort, as well as shyness and awkwardness in discussing reproduction and sexuality with other women their age.

Participants expressed a measure of comfort with learning from school, as noted above. While there were certain levels of trust invested in that institution, it was tempered with concerns about its limitations- its impersonality, gendered nature, and repetition of information from textbooks. Many young women expressed particular discomfort discussing reproductive health with their teachers, as they did with their parents, but with the added level of concern that this was a stranger who might not believe in them. Many young women feared that they would be harshly treated for being too young, and turned away without any helpful information. Ramsha remembered *"If a child or a teenager asks them [the teachers] these kinds of questions they will scream at you and yell at you and tell you you are too young for this kind of thing."* Occasionally young women acknowledge they had a special teacher, particularly in Life Orientation, that they felt close to and comfortable

enough with to ask them important health related questions. Mareea recalled having such a relationship with a male teacher who allowed her to have frank and open discussions: *“He would give you advice, and after school he would speak to you if he had time, and you learn from it, and sometimes if you feel down or you don’t know what you were feeling he could identify what you were feeling.”* It is clear however, that Mareea’s experience was the exception and far from the norm. In general, young women were fearful of adverse experiences with teachers that included intolerance, rejection, and hostility.

Similar issues of institutional discomfort were replicated when it came to young women making use of the clinic. Often, after childbirth, young women felt comfortable asking the sisters for information as a trusted resource. This was often because the danger of being scolded for being too young to have sex was already removed. That being said, many young women still were uncomfortable asking for information because they felt it was an overly hectic public space with little opportunity for privacy.

Finally, it is important to consider the level of comfort young women had in using the health information at their disposal. How comfortable were they in asserting the need to use contraception, or in demanding use by their partners? Primarily, respondent’s levels of knowledge on contraception and its appropriate use seem to be limited. Adolescent women were understandably uncomfortable with the fundamentals of contraception. Secondly, this lack of comfort limited their intention to use contraception, and as intention is directly correlated with use, this diminished contraceptive use.[15] Third, even with intention to use, many of these young women expressed low levels of self efficacy, and did not feel comfortable demanding use of contraception with a significant other or partner, as mentioned above. Fourth, relationship with sexuality played a key role. While some of the participants felt at ease discussing contraceptive use and other health information with a partner, others did not have confidence raising the subject, while still others deemed it unnecessary. Finally, we must remember that all other considerations are mediated by the individual and personal decision of adolescent women to use condoms or other contraceptive devices. Some were concerned with the comfort of condoms- some said they itched, or burned. Others worried that hormonal devices would render them infertile. Still others were actually seeking to become pregnant. It is clear that improving contraceptive use requires action on multiple fronts. Much needs to be done to improve personal empowerment and self efficacy, to promote intention to use contraception with the objective of preventing pregnancy, as well as to provide sources of information that target the specific doubts of these adolescent women thereby serving to improve internalization, belief, and usage of health information.

## **Discussion**

This research reveals a number of important factors that play an important role in influencing how young women in Freedom Park internalize, believe, and use health information. It is clear that high levels of teen pregnancy in at risk areas across South Africa are related to the problem of poor access to accurate and comprehensive information about sexual health, alongside low levels of relatable, trusted, and comfortable sources of information. While there has been a great deal of research on the various sources of adolescent pregnancy, as well as sources of health information, and use of said information, there is a failure within the research to investigate the gap between knowledge and use, a gap which is deeply affected by internalization and belief. What is needed is research that

examines how various relationships to sources of information impact internalization and believability, and what are the pathways that both promote and prevent the transition from understanding and acknowledgement to the ultimate use of health information by adolescents in South African townships.

One key finding of this research is that the ability to relate to information because of the experiences of the source of information is a key factor for promoting internalization and later use. When young women felt they could relate to the source of information this acted as a strong positive influence for adolescents in Freedom Park to use contraception, reducing the risk of teen pregnancy. The field of examining the importance of life experiences of sources of information the extent to which that engenders belief and trust is a limited one, but this research shows a clear relationship between experiences of key sources, particularly mothers, and internalization of health information by adolescents.

The desire of participants to 'figure it out' on their own, can be seen as a reflection of the lack of reliable sources of information about sexual health who have experiences comparable to that of the adolescents. It also helps explain the current high rates of adolescent pregnancy in South Africa. In terms of sexual experience, research shows that the primary source of information around sexual activity for adolescents is personal experience. [25] Without a source of information that gives knowledge that can be internalized, believed, and later used, young women feel the need to work out the problems themselves, and without a strong background in sexual health this leads to a variety of adverse consequences, one of which is high levels of teen pregnancy.

Levels of trust in the sources of information also played a strong role in the internalization and use of health information. Without high levels of trust, adolescent women learn information without later using it. Based on this, trust, belief, and experience appear to be inextricably linked. Young women are more likely to believe information from sources that they trust, and trust often stems from past experiences and close relationships. Therefore parents, namely mothers, are the source most believed when it comes to sexual health. Existing research demonstrates that the source of sexual and health information often has a measurable impact on adolescent beliefs around sex and its outcomes. Mothers specifically impact beliefs about negative physical outcomes, just as was represented here.[26] Research on this subject however, infrequently includes experience as a key criterion for identifying trusted sources of information.

Studies of the relationship between belief and self-efficacy show that family members have the strongest impact on issues of self-efficacy with regard to sexual behaviours. Mothers especially increased adolescents' belief in the possibility of negative outcomes from risky sexual behaviour. [26] While self-efficacy was not the central focus of this study, the research does indicate that low levels of self-efficacy and distrust in their own ability to assert the knowledge they do have limited adolescent use of health information. It is clear that more research is needed to empower young women to make use of whatever information is accessible to and internalized by them.

A final factor that influenced internalization and belief of health information was comfort. Higher levels of comfort with a source of information made that source more likely to be internalized, believed, and trusted. While published research shows that young women are most comfortable talking to their mothers, [20] as was also indicated by this study, adolescents still struggled to use them as a resource because of fear of reprimands from their parents about their age, or the risk of pregnancy. Clearly pervasive norms about

sexuality and sex information need to be addressed in order to make both parents and children more comfortable having such conversations. This same issue applies to comfort with other sources of information such as peers, with whom most young women felt a certain level of distrust. Comfort or discomfort with institutions also had important consequences; it took little in the way of negative experiences (or even accounts of negative experiences) to make young women uncomfortable pursuing information from sources such as school, or clinics. Young women also felt discomfort in their capabilities to make use of the information they already had. Either they were unsure of their knowledge or their relationship, or they had low levels of self-efficacy or empowerment, or they simply felt that they had insufficient knowledge about the subject.

This study did suffer from some limitations. Interviews with women were often conducted while family members or significant others were in the vicinity, which may have impacted responses. Language barriers also presented an issue in getting thorough responses. The participant and researcher also approached this topic from widely different backgrounds in religion, race, and class, which added to the complexity of discussing and interpreting this issue. The researcher may have been seen as an expert which may have impacted the results collected. The position of the interviewer as an outsider may have allowed participants to speak freely, without concern for gossip within the community, while at the same time encouraging caution. Closeness in age may also have had an impact on the comfort of participants, while very different life experiences set them apart. In short, the wide range of differences certainly elicited a mixture of curiosity, comfort, camaraderie, and caution. The researcher made an effort through time spent and relationships built in Freedom Park to position herself as an individual who was interested and involved in the community, rather than an individual who was not invested in the research. It is hard to say to what extent the researcher was successful in creating a safe space for the participants to speak freely, given the wide variety of differences and challenges faced by all involved. It was felt, however, that the efforts put towards building trust and proximity with the participants was successful, and resulted in a great deal of liberal participation and personal contributions to the research, by the participants. The researcher feels that her background and consciousness of her privilege shaped the research both in context and in content, as well as in the ways that she attempted to increase comfort and acceptance of the participants. Freedom Park is a small community within Mitchells Plain, and there is little doubt that comparison with another community would have provided greater clarity of outcomes. However, the constraints of time and resources necessitated that this case study be confined to one community. These constraints also limited research to one round of interviews. There is little doubt that the research would have benefitted from follow-up interviews which would have permitted exploration in greater depth of central themes and issues raised by respondents, as well as including other questions that may have expanded upon and improved the quality of collected data.

## **Conclusion**

The experience of sources of health information, adolescent's trust in these sources, and their comfort or discomfort in discussing health information- each plays a critical role in the ability of young women to internalize and make use of the information available to them. This is an area of promising research that has not been explored by scholars working on the dissemination and impact of information about sexual health and reproduction.

This research helps lay a foundation for improving educational programming on health information and sexual health in South African townships. Using the results on internalization of information from this research as a framework, further research can be done on how to increase levels of trust and belief in sources of information, leading to higher levels of internalization and later use of information, in turn lowering levels of teen pregnancy.

Future research on this topic should also focus on the extent to which the interplay between trust and experience leads to improved comfort with sources, and internalization. The importance of parents, particularly mothers, in discussing pregnancy and sexuality is a topic that has been examined, but the findings of this project indicate there should be a new focus on ways to improve mothers ability to communicate with their adolescent daughters without undermining trust or creating discomfort, thereby improving knowledge acquisition. Similarly, it is critical that research be conducted in order to understand how to minimize gender based divides and discomfort in the classroom which will improve levels of internalization of health information among young women.

It is hoped that research in this field can be used to show how to improve levels of health education for vulnerable young women in areas such as Freedom Park, and through this research create evidence-based programming to benefit the communities that need it most. High rates of teenage pregnancy are having a negative impact on areas such as Mitchells Plain that already face so many other structural disadvantages. As an already under-served area of South Africa, we cannot afford to disregard that avoidable adolescent pregnancy is presenting yet another hurdle for successful and sustainable development. The author hopes that through use and extension of this research on the pathways to belief, internalization, and utilization of health information, that high-risk areas of South Africa may soon benefit from effective and sustainable risk-reduction solutions to the problem of high teenage pregnancy rates.

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## **Questionnaire Consent Form**

### **Who am I?**

My name is Maya Stevens-Uninsky and I am a student at the University of Cape Town. Today I will be asking a few questions about your education and knowledge on sex and contraception. You may choose to take the questionnaire or not.

### **Risks and Benefits**

I will be using the results of this survey for my research, but I will not be using names. I will use the information in my paper, but nothing will be written that could identify anyone, so there will never be any danger. There is no direct benefit resulting from this study. If you feel unsafe or uncomfortable we can stop at any time. No one else will see any names or answers to these questions. All questionnaires will be kept in a locked room and in a password protected computer.

### **Why this study is important**

This research is to understand how women in your community learn about and use information on health, sex, and contraception (like condoms). Young women often don't get asked their opinions on these topics, which means not a lot is known about how women understand and use information about pregnancy. In order to be able to improve the way people learn and are taught about sex contraception, we first need to know how they understand and use this information. At the end of the study we should be able to better understand how women in Freedom Park learn about sex and contraception, and how to improve the services that people want and need in the future.

### **What is the questionnaire?**

This questionnaire is a set of 11 questions. I will read the questions, and write down your answers. When it is done I might ask if we can do an interview. If you say yes I will give you more information about it, and we can discuss whether or not you want to do it.

### **How you can reach me, my supervisor, or the Ethics Committee**

If you have any questions or concerns about your rights and welfare from participating in this study, please contact the ethics committee (HREC). If you want to talk to me, my supervisor, about the research, or have decided you don't want me to use your answers you can contact me here:

**Me:** Maya Stevens-Uninsky  
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**HREC: Human Research Ethics Committee**  
(021) 406 6338  
nosi.tsama@uct.ac.za

**In case of emergency**

Contact numbers if there is an emergency, or for help: (021) 372 0022- Family and Marriage Society of South Africa, (021) 392 6060- NICRO Women's Support Center, Mitchells Plain, or (021) 392 2000, Mitchell's Plain Crisis Line

Consent to participate in the study:

If you agree to take the questionnaire, please sign your name below. Signed consent forms will be kept confidential.

Signing your name below shows that you have had the study explained to you, have had a chance to ask questions, and you have freely agreed to take part.

Name \_\_\_\_\_ Signature \_\_\_\_\_

Date \_\_\_\_\_

Name of person taking consent \_\_\_\_\_ Signature  
\_\_\_\_\_

Date \_\_\_\_\_

If illiterate:

I have witnessed the accurate reading of the consent form to the potential participant and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

Print name of witness: \_\_\_\_\_

Signature of witness: \_\_\_\_\_

Date: \_\_\_\_\_

Day/month/year



## **Interview Consent Form**

### **Who am I?**

My name is Maya Stevens-Uninsky and I am a student at the University of Cape Town. Today I will be doing an interview about education and knowledge on sex and contraception based on questionnaire answers. You can choose to not do the interview. If you are uncomfortable with any questions you do not have to answer them.

### **Risks and Benefits**

I will be using the things we talk about in this interview for my research, but I will not be using names. I will use the information in my paper, but nothing will be written that could identify anyone, so there will never be any danger. There is no direct benefit resulting from this study. If you feel unsafe or uncomfortable we can stop at any time. No one else will see any names or anything you tell me.

### **Why this study is important**

This research is to understand how women in your community learn about and use information on health, sex, and contraception (like condoms). Young women often don't get asked their opinions on these topics, which means not a lot is known about how women understand and use information about pregnancy. In order to be able to improve the way people learn and are taught about sex contraception, we first need to know how they understand and use this information. At the end of the study we should be able to better understand how women in Freedom Park learn about sex and contraception, and how to improve the services that people want and need in the future.

### **What is the interview?**

The interview will be less than an hour. I will be giving you tea and cookies, as well as an airtime voucher for 15 rand. We will be talking about health information, where it comes from and how it is used. I will be using a recorder so I can listen to the interview later, but if you don't want me to record our conversation just ask and I will turn it off.

### **How you can reach me, my supervisor, or the Ethics Committee**

If you have any questions or concerns about your rights and welfare from participating in this study, please contact the ethics committee (HREC). If you want to talk to me, my supervisor, , about the research, or have decided you don't want me to use your answers you can contact me here:

**Me:** Maya Stevens-Uninsky  
(072) 842 4233  
[accidentally.maya@gmail.com](mailto:accidentally.maya@gmail.com)

**Supervisor:** Professor Christopher J. Colvin

(021) 406 6706  
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Consent to participate in the study:

If you agree to participate in the FGD, please sign your name below. Signed consent forms will be kept confidential.

Signing your name below shows that you have had the study explained to you, have had a chance to ask questions, and you have freely agreed to take part.

Name \_\_\_\_\_ Signature \_\_\_\_\_

Date \_\_\_\_\_

Name of person taking consent \_\_\_\_\_ Signature  
\_\_\_\_\_

Date \_\_\_\_\_

If illiterate:

I have witnessed the accurate reading of the consent form to the potential participant and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

Print name of witness: \_\_\_\_\_

Signature of witness: \_\_\_\_\_

Date: \_\_\_\_\_

Day/month/year

## Freedom Park Demographic Screening Tool

Contact Information:

Demographic Information

1. How old are you?
2. What school do you/did you go to?
3.
 

	How well do you speak each language? (Fill only one O for each row)																				
	Very well	Okay	A Little	Not at all																	
a.	English	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>																
b.	Afrikaans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>																
c.	Other (say what other)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>																

4. How old were you when your first child was born?  9 or younger  10  11  12  13  14  15  16  17  18  19  20

5. Are you in a relationship?  
(Fill only one O)
 

<input type="radio"/>	Single
<input type="radio"/>	Boyfriend
<input type="radio"/>	Girlfriend
<input type="radio"/>	Dating more than one person
<input type="radio"/>	Married
<input type="radio"/>	Divorced

6.

How strong are your religious beliefs?  Very strong  Strong  Not very strong  Not strong at all

If you are in school, what grade are you in?	<input type="radio"/> Grade 1	<input type="radio"/> Grade 2	<input type="radio"/> Grade 3	<input type="radio"/> Grade 4	<input type="radio"/> Grade 5	<input type="radio"/> Grade 6	<input type="radio"/> Grade 7	<input type="radio"/> Grade 8	<input type="radio"/> Grade 9	<input type="radio"/> Grade 10	<input type="radio"/> Grade 11	<input type="radio"/> Grade 12
	If you are not in school, what grade did you leave?											

**Home Life**

<input type="radio"/>	<b>I live with the following</b> (check all that apply)
<input type="radio"/>	I live alone/by myself
<input type="radio"/>	Mother
<input type="radio"/>	Father
<input type="radio"/>	Brothers and sisters
<input type="radio"/>	Uncle
<input type="radio"/>	Aunt
<input type="radio"/>	Cousins
<input type="radio"/>	Boyfriend/husband/partner
<input type="radio"/>	Other

**Media and Internet Access**

<input type="radio"/>	<b>Do you have access to a library or internet café?</b>	<input type="radio"/> Never	<input type="radio"/> Rarely	<input type="radio"/> Sometimes	<input type="radio"/> Often
-----------------------	--	-----------------------------	------------------------------	---------------------------------	-----------------------------

**Contraceptive Use**

<input type="radio"/>	<b>Have you ever used any of the following contraceptive methods?</b> (check all that apply)
<input type="radio"/>	a. Condoms
<input type="radio"/>	b. Birth Control Pills
<input type="radio"/>	c. Implant
<input type="radio"/>	d. Natural remedies (herbs, medicine)

<b>e.</b>	Pulling out	0
<b>f.</b>	Abstinence	0
<b>g.</b>	Injection (2 or 3 month)	0
<b>h.</b>	Other	0

Conclusion

	How important were each of these sources of health information in teaching you about sex and contraception? (Fill only one 0 for each row)	Not important	A little important	Somewhat important	Very Important
<b>a.</b>	School	0	0	0	0
<b>b.</b>	Internet /TV	0	0	0	0
<b>c.</b>	Family and Friends	0	0	0	0
<b>d.</b>	Other	0	0	0	0



## Potential Interview Questions

Each interviewee will be chosen based on criteria from the survey. The selection criteria will be based on the demographic information in order to give me a broad base of information from a variety of participants. Therefore these sample questions are divided by some of these demographic statistics. The end interview will be semi structured- these questions will be used to form a basis for the interview, using the ones relevant to characteristics that the participant has, but much of the interview process will be based in conversation and the willingness of the participant to talk about these subjects. These questions are merely guidelines for the direction I hope this interview will follow.

### Age of first sex

- How do you define having sex and losing your virginity?
- How old were you when you first had sex?
- How old were you when you first got pregnant?
- Were you in a relationship with the person you had sex with?
- Do you think you were young, old, or the same age as many of your friends?

### Drug and alcohol use (if answer yes)

- Have you ever had a drink or gotten drunk?
- Have you ever taken any drugs?
- How often do you drink or do drugs?
- Did you do either of these before having sex?
- Did the person you were having sex with drink or do drugs?

### Relationship status

- If answer is Yes:
  - o How old is your boyfriend/husband/etc?
  - o How long were you together before you had sex?
  - o Are you staying with your boyfriend/husband?
  - o Are they going to help with the child?
- If answer is No:
  - o How do you know the person/people you were having sex with?
  - o Were they older or younger than you?
  - o Do they know you are having a baby by them?

### Religion

- Do you think religion affects the things you know about sex and contraception?
- If say they are religious:
  - o Do you talk about sex and contraception in your place of worship?
  - o Are many people around you religious?

### Years of school

- What are your reasons for leaving school?
- Did you enjoy your time in school? Do you want to go back?
- Did you talk about sex at school with your friends?
- Did you take life orientation/life skills in school?
- Do you enjoy going to school?

#### Life orientation

- how many years did you take life orientation?
- Did you enjoy your class?
- Do you feel like you learned a lot about sex and contraception?
  - o What kind of things did you learn about?
  - o Ask about specific topics

#### Gender of teacher

- What was the gender of your teacher?

#### Quality of class

- Did you think this class was taught well?
- Did you feel like the teacher treated you the same as the male students?
- How much did you learn about the following topics?
  - o Abstinence, condoms, safe sex, sexually transmitted diseases, HIV and AIDS, biology of reproduction, consent
- Do you feel like you have a good knowledge of:
  - o Power relationships between genders
  - o Puberty
  - o Male and female reproductive systems
  - o Sexual abuse and rape

#### Mothers age

#### Internet access

- How often do you use the internet
- How often do you use a phone to access the internet?
- Do you look at information about sex on the internet?
- Do you watch a lot of TV
  - o Do you get information about sex and contraception from television?
  - o What kind of TV do you watch?

#### Talking about sex with parents/friends

- Do you talk to your mother about sex and contraception? How often? What do you talk about?
  - o Same question about father, siblings, friends, significant other
  - o Are you comfortable talking about sex with your family?
  - o What did you learn about from your family/friends?

#### Knowledge of contraception devices

- How much do you feel you know about:
  - o Condoms, birth control pills, implants, natural remedies, pulling out method, abstinence, IUD, or other contraceptive methods?
- How much do you feel you know about emergency/after-sex contraception?
  - o Morning after pill/escapelle/E-gen-C, abortion, natural remedies, other

#### Use of contraception devices

- How often do you use contraception during sex?

- Do you feel like you can talk about contraception and sex with your partner?
- Do your sexual partners respect your wishes to use contraception if you want to?
- Have you ever had an abortion?
  - Where did you learn about it, where you could get one?
- Do many women get abortions?

#### Importance of each source of information

- How important was school/internet/family and friends/other as a source of health information for you?

#### Internalization and Engagement with Information

- What do you find as a more believable source of information?
- If something is contradictory what makes you more inclined to believe it?
  - Why do you listen to this person?
- Does what you learn in school about sex and contraception impact your behaviour and attitudes?
  - When you talk about sex in school, do you use that information at home?

#### Engagement and sexuality

- How do you feel when you talk about sex and contraception with your family/friends/in school/see it on the internet?
  - Which of these do you trust more?
- Do you enjoy having sex with your partner? How does it make you feel?
- How do you feel about having this baby? Are you excited?
- How does what you learn about sex and contraception change the way you act?
  - What did you learn about sex or contraceptive devices that helped you?
  - Where did you learn this information?
- Depending on type of birth control they have used:
  - Who told you how to use it?
  - Who told you where to get it?
  - Does your boyfriend feel the same way about using it?
  - Have you talked to your partner about using birth control?
- How does talking to your friends/family/partner/internet/school make you feel about sex?
  - Where do you feel most comfortable talking about sex and contraception, and with who?
  - Who would you ask any questions you had about sex and contraception?



**UNIVERSITY OF CAPE TOWN**  
**Faculty of Health Sciences**  
**Human Research Ethics Committee**



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17 September 2015

**HREC REF: 605/2015**

**A/Prof C Colvin**  
Public Health & Family Medicine  
Falmouth Building

Dear A/Prof Colvin

**PROJECT TITLE: ENGAGEMENT AND UNDERSTANDING: PREGNANT ADOLESCENTS AND HEALTH INFORMATION IN FREEDOM PARK (MMed-candidate-M Stevens-Uninsky)**

Thank you for your response to the Faculty of Health Sciences Human Research Ethics Committee received on 10<sup>th</sup> September 2015.

It is a pleasure to inform you that the HREC has **formally approved** the above-mentioned study.

**Approval is granted for one year until the 30<sup>th</sup> July 2016.**

Please submit a progress form, using the standardised Annual Report Form if the study continues beyond the approval period. Please submit a Standard Closure form if the study is completed within the approval period.

(Forms can be found on our website: [www.health.uct.ac.za/fhs/research/humanethics/forms](http://www.health.uct.ac.za/fhs/research/humanethics/forms))

**We acknowledge that the student M Stevens-Uninsky will be involved in this study.**

**Please quote the HREC REF in all your correspondence.**

Please note that the ongoing ethical conduct of the study remains the responsibility of the principal investigator.

Yours sincerely

  
**Signed**

**PROFESSOR M BLOCKMAN**  
**CHAIRPERSON, FHS HUMAN RESEARCH ETHICS COMMITTEE**

Federal Wide Assurance Number: FWA00001637.

Institutional Review Board (IRB) number: IRB00001938

This serves to confirm that the University of Cape Town Human Research Ethics Committee complies to the Ethics Standards for Clinical Research with a new drug in patients, based on the Medical Research Council (MRC-SA), Food and Drug Administration (FDA-USA), International Convention on Harmonisation Good Clinical Practice (ICH GCP), South African Good Clinical Practice Guidelines (DoH 2006), based on the Association of the British Pharmaceutical Industry Guidelines (ABPI), and Declaration of Helsinki guidelines.

HREC 605/2015

# BMC Public Health: Instructions to Author for Research article

## Criteria

Research articles should report on original primary research, but may report on systematic reviews of published research provided they adhere to the appropriate reporting guidelines which are detailed in our [editorial policies](#). Please note that non-commissioned pooled analyses of selected published research will not be considered.

## Preparing your manuscript

### Title page

The title page should:

- present a title that includes, if appropriate, the study design e.g.:
  - "A versus B in the treatment of C: a randomized controlled trial", "X is a risk factor for Y: a case control study", "What is the impact of factor X on subject Y: A systematic review"
  - or for non-clinical or non-research studies a description of what the article reports
- list the full names, institutional addresses and email addresses for all authors
- if a collaboration group should be listed as an author, please list the Group name as an author. If you would like the names of the individual members of the Group to be searchable through their individual PubMed records, please include this information in the "Acknowledgements" section in accordance with the instructions below
- indicate the corresponding author

### Abstract

The Abstract should not exceed 350 words. Please minimize the use of abbreviations and do not cite references in the abstract. Reports of randomized controlled trials should follow the [CONSORT](#) extension for abstracts. The abstract must include the following separate sections:

- **Background:** the context and purpose of the study
- **Methods:** how the study was performed and statistical tests used
- **Results:** the main findings
- **Conclusions:** brief summary and potential implications
- **Trial registration:** If your article is a systematic review or reports the results of a health care intervention on human participants, it must be registered in an appropriate registry and the registration number and date of registration should be in stated in this section. See our [editorial policies](#) for more information on trial registration

### Keywords

Three to ten keywords representing the main content of the article.

## **Background**

The Background section should explain the background to the study, its aims, a summary of the existing literature and why this study was necessary or its contribution to the field.

## **Methods**

The methods section should include:

- the aim, design and setting of the study
- the characteristics of participants or description of materials
- a clear description of all processes, interventions and comparisons. Generic drug names should generally be used. When proprietary brands are used in research, include the brand names in parentheses
- the type of statistical analysis used, including a power calculation if appropriate

## **Results**

This should include the findings of the study including, if appropriate, results of statistical analysis which must be included either in the text or as tables and figures.

## **Discussion**

This section should discuss the implications of the findings in context of existing research and highlight limitations of the study.

## **Conclusions**

This should state clearly the main conclusions and provide an explanation of the importance and relevance of the study reported.

## **Declarations**

### **List of abbreviations**

If abbreviations are used in the text they should be defined in the text at first use, and a list of abbreviations should be provided.

### **Ethics approval and consent to participate**

Manuscripts reporting studies involving human participants, human data or human tissue must:

- include a statement on ethics approval and consent (even where the need for approval was waived)
- include the name of the ethics committee that approved the study and the committee's reference number if appropriate

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If your manuscript does not report on or involve the use of any animal or human data or tissue, this section is not applicable to your submission. Please state “Not applicable” in this section.

### **Consent for publication**

If your manuscript contains any individual person's data in any form (including individual details, images or videos), consent to publish must be obtained from that person, or in the case of children, their parent or legal guardian. All presentations of case reports must have consent to publish. You can use your institutional consent form or our [consent form](#) if you prefer. You should not send the form to us on submission, but we may request to see a copy at any stage (including after publication).

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### **Funding**

All sources of funding for the research reported should be declared. The role of the funding body in the design of the study and collection, analysis, and interpretation of data and in writing the manuscript should be declared.

### **Authors' contributions**

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### **Acknowledgements**

Please acknowledge anyone who contributed towards the article who does not meet the criteria for authorship including anyone who provided professional writing services or materials.

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