

Hiv Prevention Among University Students In Sudan

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SUMMARY

HIV represents an important public health problem globally. The public concerns about HIV are not only due to its physical impact but also because of the social, psychological and economic impacts on the affected individuals and communities. Sudan has the highest HIV incidence in the MENA region. Besides, the country is suffering from a lack of finance and political instability, which have resulted in a decline in HIV prevention services, including harm reduction and condom promotion in 2019. Although previous studies identified university students in Sudan as a high-risk group, they are not well covered with HIV prevention programs. Therefore, this dissertation aims to inform the development of a comprehensive HIV intervention by identifying the psychosocial determinants of two of the important HIV prevention strategies: abstinence from premarital sex and consistent condom use.

Chapter 1 provides a general introduction to the studies presented in this dissertation. Initially, the global, regional and local HIV epidemiology is described with special emphasis on the negative impact of the political instability and financial constraints on the future of HIV epidemiology in Sudan. Then, the rationale for targeting university students in Sudan is discussed. Local and international research findings explaining why this population is to be targeted with HIV prevention programs are presented. Next, the different HIV prevention strategies commonly used are discussed, considering the local situations in Sudan. These include both behavioural and biomedical strategies such as abstinence from premarital sex and consistent condom use. The importance of identifying the psychosocial determinants of these behaviours with reference to the Intervention Mapping protocol is discussed. Besides, the advantages of using mixed research methods and theoretical frameworks to identify these determinants are presented. This is followed by a brief description of the I-Change model for behavioural change, which has been used as a theoretical framework for all the studies in this dissertation. Finally, a review of the current literature about the psychosocial determinants of premarital sex and condom use among university students in general and Sudan is presented. It has been concluded that a paucity of research exists outlining the psychosocial determinants of premarital sex and condom use in Sudan in general and among university students in particular. These identified research gaps highlight the importance of the current studies.

Chapter 2 aims to explore the university students' beliefs about abstinence and premarital sex using a qualitative approach. For this purpose, thirty semi-structured individual interviews were conducted based on the Integrated Change (I-Change) Model constructs. The study sample included 16 (53%) male and 14 (47%) female university students, whose average age was 21.2 years (Range 18-27 and SD 2.5). Data were analysed using Nvivo 10. The findings indicated that both the abstainers and the sexually active students perceived HIV severity and susceptibility and most of them had a positive attitude towards abstinence. However, the sexually active students also perceived some advantages of engaging in sexual practices, such as sexual pleasure and proving adulthood. In addition, sexually active

students more often mentioned to be influenced in their sexual practices by their peers than by their families. Besides, the sexually active students reported lower self-efficacy to refrain from sex than abstainers. Based on these findings, we conclude that interventions seeking to promote abstinence among those willing to achieve this should stress the advantages of abstinence from sex until marriage, offer tools to resist peer pressure and enhance self-efficacy to abstain. It was also recommended to adopt a more comprehensive approach and consider promoting condom use and other safer-sex practices among those who are sexually active. Given the observed gender differences in these determinants, it was also recommended that these interventions should be gender-sensitive to address the needs of both male and female students.

In Chapter 3, findings from a study that aimed to identify the psychosocial determinants of premarital sex among university students are outlined. Using a cross-sectional design, a sample of 257 students, between 18-27 years old, was recruited from randomly selected public and private universities in Khartoum. The participants filled out an online questionnaire based on the Integrated Change Model (ICM) to assess their beliefs and practices about abstinence from premarital sex. The analysis of variances (MANOVA) showed that sexually active students differed significantly from abstainers in having more knowledge about HIV/AIDS, higher perception of susceptibility to HIV, more exposure to cues that made them think about sex and a more positive attitude towards premarital sex. The abstainers had a significantly more negative attitude towards premarital sex, higher self-efficacy to abstain from sex until marriage and perceived more peer support and norms favouring abstinence from sex until marriage. These findings suggest that promoting abstinence from sex until marriage among university students in Sudan, which aligns with the Sudanese religious values and social norms, requires health communication messages addressing these psychosocial determinants. However, given that sexual encounters still may occur, the importance of a comprehensive approach to address the need for condom use for those not willing to refrain from sex was highlighted.

Chapter 4 describes the findings of a qualitative study that was carried out to gain a broad insight into the psychosocial determinants of condom use among university students. Therefore, we conducted 30 semi-structured individual interviews with male and female students to explore these determinants using the I-Change Model as a theoretical framework. The study sample included 16 (53%) male and 14 (47%) female university students. Their age ranged from 18 to 24 years (mean age 19). Data were analysed using Nvivo 10. The results suggested that barriers to condom use among university students included misconceptions about condoms use, negative attitudes towards condom use, lack of social support, low self-efficacy to use condoms and poor action planning. It was concluded that sexual health promotion should address these aspects to successfully promote condom use among sexually active students and subsequently reduce the risk of HIV transmission.

In chapter 5, a quantitative study of the psychosocial determinants of consistent condom use among university students in Sudan is described. The Integrated Change Model (ICM)

was applied to identify which items need to be addressed in a prevention program. A cross-sectional design was used and a sample of 218 students, 18-25 years old, was recruited from randomly selected public and private universities in Khartoum. Data were collected online and analysed with SPSS 24. The findings of the analyses of variance indicated that condom users differed significantly from non-condom users in having more HIV and condom use-related knowledge, higher perception of susceptibility to HIV and reporting more exposure to condom use cues, having a less negative attitude towards condom use (attitude cons), experiencing social support and norms favouring condom use and having higher condom use self-efficacy. Binary logistic regression also showed that peer norms favouring condom use in addition to HIV-related knowledge, condom use cues, negative attitude and self-efficacy were the factors uniquely associated with consistent condom use among university students in Sudan. It was concluded that to promote consistent condom use among sexually active students; interventions could benefit from increasing knowledge about HIV transmission and prevention, raising HIV-risk perception, using condom use cues, addressing perceived condom disadvantages and enhancing students' self-efficacy to avoid unprotected sex. Moreover, such interventions should enhance positive peer influence and seek health care professionals' and religious scholars' support for condom use.

Chapter 6 provides an overview and discusses the findings of the studies included in this dissertation. Initially, a summary of the main findings of the qualitative and quantitative studies on premarital sexual practices and consistent condom use was presented. This summary discussed the most salient psychosocial determinants of these behaviours in addition to the role of parents' and religious leaders' influence on the students' behaviours. Gender differences in behavioural determinants were also highlighted. Next, the methodological strengths and limitations of the studies included in this dissertation were presented. Then, the recommendations for future research to fill the identified knowledge and research gaps were provided. Finally, the practice implications of our studies were discussed. Based on the findings, an abstinence-plus intervention has been recommended as a suitable choice because abstinence-plus programs aim to promote abstinence from sex until marriage, which is in line with the prevailing religious values and social norms, but also seek to promote consistent condom use among the sexually active single students. Recommendations for the development of both components of such a program were provided. Considering the influence of religious values and cultural norms prohibiting all types of extramarital sexual practices and the high level of stigma associated with such behaviours in Sudan, the need for cultural adaptation of future interventions was discussed. Besides, suggestions about the suitable communication channels and intervention adoption and implementations were presented. Finally, the impact paragraph highlighted the practical, scientific and societal relevance of this dissertation.