HIV prevention

VALORISATION

Relevance

HIV/AIDS is a global problem that impacts millions of lives each year. In sub-Saharan Africa, the region hardest hit by the pandemic, one in every twenty adults is estimated to be HIV-positive (UNAIDS, 2014). Roughly 25 million people are living with HIV in sub-Saharan Africa, an estimate that translates to over 70% of the global HIV burden (UNAIDS, 2014). Even for those who are not HIV-positive, the social consequences of the pandemic may be severe. Children for example, may suffer greatly, when family or parents are infected. Malnutrition, neglect and maltreatment are some of the things young children may encounter when important family members succumb to AIDS. For this reason, it is not only important to stimulate condom use, or delayed sexual debut, but also to create an environment for these adolescents that foster awareness, knowledge, norms and beliefs that are in line with healthy sexual practices.

Prevention programmes for young adolescents are an important part of the puzzle, since they have the potential to change behavioural patterns and cognitions across large samples of their generation. We may all remember the programmes that were implemented at our own primary and high schools when we were young. The content often sticks in one way or the other. So even without any immediate behavioural effect, these HIV prevention programmes may prime these adolescents in a positive way. Programmes that specifically target youngsters are needed, since they constitute 50% of the South African population (SSA, 2011), and almost 50% of the South African people living with HIV (UNAIDS, 2012). Moreover, young women (15-24 years of age) account for one out of every four new infections in sub-Saharan Africa (UNAIDS, 2014). Thus, preventing HIV/AIDS among adolescents will have a significant effect for many years to come.

Studying socio-cognitive theory to aid the development of such interventions is therefore highly relevant and needed. Although it is generally recommended in health promotion to rely on theories as a starting point (Bartholomew, Parcel, Kok, Gottlieb, & Fernandez, 2011), there is also evidence that suggests applying theory may be of limited

importance. For example, a review by Michielsen et al. (2012) into the theoretical basis of HIV prevention programmes for adolescents in sub-Saharan Africa shows that 25 of the 34 studies included, mentioned the use of a socio-cognitive theory to inform content or to evaluate the programme. However, the authors were unable to detect any differences in efficacy between theory-based and non-theory-based interventions. Even though absence of evidence does not mean evidence of absense, it remains puzzling since theory-based interventions are generally thought to be superior over non-theory based (Bartholomew, Parcel, Kok, Gottlieb, & Fernandez, 2011; Glanz & Bishop, 2010; Johnson et al., 2011; Webb, Joseph, Yardley, & Michie, 2010). An earlier review of 28 HIV prevention trials for youngsters in sub-Saharan Africa by Michielsen and colleagues (2010) also reported that no significant effects on sexual behaviour could be detected, apart from an increase in condom use at last intercourse among males. Given that most HIV prevention programmes are grounded in socio-cognitive theory and given their relative ineffectiveness to change behaviour, it is of great importance to find out whether the assumed theoretical underpinnings are actually valid for sexual behaviour, and for the sub-Saharan African region, specifically. In addition, more recent integrated socio-cognitive models may outperform their predecessors in terms of predictive value and could therefore provide a more integral and effective approach for HIV-prevention in sub-Saharan Africa.

Target groups

This dissertation contains valuable information surrounding the processes, impact and pitfalls of applying socio-cognitive theory in the field of sexual reproductive health. As such, future researchers who are interested in testing and developing cognitive processes and theories in this particular field may use the findings and suggestions of this dissertation as a guiding principle. Future studies could for example, assess different modes of measurement, or assess conditions that stimulate or inhibit the execution of an intention under certain conditions. This dissertation also provides an overview of previous applications and studies of socio-cognitive theory for promoting sexual reproductive

health. It may therefore aid scholars who want to familiarise themselves with the existing literature concerning HIV prevention in sub-Saharan Africa.

Similarly, this dissertation provides didactic and contextual information about sexual health issues that young adolescents encounter in sub-Saharan Africa and which cognitions or approaches may be useful to tackle these issues. Such information may be of importance to teachers and educational boards. HIV prevention programmes in sub-Saharan Africa may benefit for example, from the student-centred approach that was used, or by particular components such as photo voice to stimulate awareness and empowerment among the students.

Scholars with little experience working in Africa will find this dissertation useful in particular, as it pinpoints some of the differences between implementing socio-cognitive theories in developed versus undeveloped countries. Not only on the theoretical level, but also practical. For example, giving student's food or drinks when handing out questionnaires greatly improved response and involvement, a finding which would probably be less profound when executed in developed countries. In addition, out of school activities on Saturdays were very much appreciated since many parents had to work on Saturdays, leaving their children unattended and craving for activities.

Product

The studies included in this dissertation were mostly part of large scale randomised controlled trials, so the main product is the development and implementation of these trials. These trials have led to increased insights and practical recommendations for future prevention programmes and even the school system. The photo voice activities in Cape Town for example, meant that students and parents were actively involved with the school principle to assess and potentially improve dangerous situations in the vicinity of the school. It led to several improvements such as increased police presence and renewed fences. These can be considered side-effects of the main interventions. Tools such as the booklets, questionnaires and role plays were specifically developed and are likely to be used for years to come. The PREPARE programme as implemented in Cape Town, Dar es Salaam, Kampala and Polokwane, was already building on previous curricula and

programmes (e.g. SATZ). This continuation of knowledge transfer from programme to programme and from study to study is an important part of scientific progress.

In addition, the theoretical findings of this dissertation led to validation of some of the hypothesized pathways of the Integrated Change Model. This provides a stronger theoretical basis for future studies into cognitive processes that trigger motivation or behaviour. Finally this dissertation may serve as an introduction to students and scholars into socio-cognitive theory and into HIV-associated problems among adolescents in Southern and Eastern Africa.

Innovation

Previous studies in sub-Saharan Africa often applied regular linear and logistic regression to understand intervention effects. They also commonly assumed that cognitions are relatively stable over time, even among adolescents. To our knowledge, no previous study has directly assessed whether there are significant differences in motivational processes between regions which subsequently may explain differences in condom use and HIV prevalence. The assessment of measurement invariance between the sites was therefore an important aspect to rule out the possibility that differences in coefficients were caused by different interpretations of the items. In sum, a lot of the innovation lies in the statistical techniques used and in the attempt to define and validate theoretical assumptions such as measurement invariance and temporal stability of cognitions. In addition, the lessons learned concerning the mediating effect of motivational factors on awareness factors such as risk perception increased our theoretical understanding by explaining why awareness factors often contribute so little to the explanation of behaviour.

Planning and Realisation

The PREPARE study was built upon an earlier HIV prevention programme (i.e. SATZ). Extensive formative research was executed to clarify some of the issues noted in this previous trial. Collaborations between European and African universities led to a valuable mix of influences consisting of both practical and theoretical knowledge which were

brought together during several development and evaluation sessions that were organised across Europe and Africa. These sessions were well organised and followed intervention building principles such as the intervention mapping approach and the ABC approach (Aarø et al., 2014; Bartholomew et al., 2011). It also allowed for familiarisation with one another and thereby greatly enhanced our understanding of the potential problems to be encountered. Several teams were paired and Maastricht University collaborated mainly with the University of Cape Town. Additional meetings were set up to implement follow-up measurements and to plan the statistical analysis of the programme and its elements.

The implementation and the planning of the programme was difficult at times. Not all agreements were being met and post hoc solutions were not uncommon. Although most goals were eventually realised, it must be said that the content and the time frame were not always up to par with the initial planned approach. Most notably, a large proportion of the programme in Cape Town had to be moved to out-of-school sessions. This led to a reduction in the amount of students present at the intervention, which reduced statistical power to find any intervention effect.