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EXPANDING THE THEORY OF PLANNED BEHAVIOUR: THE INFLUENCE OF PERSONAL NORMS ON CONDOM USE AMONGST YOUNG PEOPLE IN GHANA

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ABSTRACT

Personal norms are standards and values (e.g. moral values) that the individual uses to evaluate the worth of behaviours. Research suggests that people are inclined to behave in ways that are in accordance with these norms, and to avoid behaviours that are discordant. This study investigated the role of personal norms in explaining intended condom use in a sample of 460 young people in Ghana, aged 15-28. Participants completed a questionnaire that assessed the subjective norm, perceived behavioural control and attitudes (i.e. the standard components of the theory of planned behaviour). It also assessed personal norms, intended condom use, and previous actual condom use. Intended condom use was significantly correlated with actual condom use; and personal norms explained a significant amount of the variance in intended condom use over and above that explained by the standard components of the TPB. Programmes that seek to promote the use of condoms amongst young people should address the issue of the norms that young people use to evaluate condom-related behaviours.

Key words: *HIV/AIDS, condoms, personal values, sexual risk taking, theory of planned behaviour*

Encouraging greater use of condoms by young people is viewed by many as an important part of the battle to contain HIV infections. Young people aged 15–24 accounted for 45% of all new HIV infections in 2007 (UNAIDS, 2008); and correct and consistent condom use has been found to be more than 90% effective in preventing the transmission of HIV (UNAIDS, 2010). However, in a review of research that evaluated HIV prevention programmes in African schools, Gallant and Maticka-Tyndale (2004) reported a relative lack of success in increasing condom use compared to other outcomes of the programmes. They attributed this partly to the unwillingness of the programme leaders to promote condom use because of personal and community disapproval. Others have suggested the lack of success in such programmes may also be due to the failure of many programmes to be guided by a theoretical understanding of why young people do, or do not, use condoms (Bryan, Kagee, & Broaddus, 2006; Kirby, 2000; Schaalma, Aaro, Flisher, Mathews, Kaaya, Onya et al., 2009).

In Western contexts, the theory of planned behaviour (TPB) (Ajzen, 1991) has often been applied to an understanding of condom use. The theory suggests that intentions to behave in a certain way are important determinants of actual behaviour. Behavioural intentions are, in turn, considered to be influenced by three factors:

- Attitudes towards the behaviour: These are determined, in turn, by the person's expectations about what will happen if they engage in the behaviour (e.g. if I take this medicine, it will reduce my pain) and their motivation to achieve (or avoid) the

expected outcomes (e.g. I can't cope with this pain and really need some relief from it).

- Subjective norm: This refers to the person's appraisal of the social pressure to engage in the behaviour. It is determined, in turn, by their beliefs about whether other people would wish them to engage in the behaviour (e.g. my parents want me to stop smoking) and their motivation to comply with the wishes of others (e.g. it's important to me that I'm obedient to my parents).
- Perceived behavioural control: This refers to the person's belief that they will be able to carry out the behaviour, even in the face of obstacles (e.g. I am confident that I can stick to this diet).

When applied to condom use in Western societies, the TPB has generally received good support. In a meta-analysis involving 96 sets of data (N=22 594), Albarracin, Johnson, Fishbein and Muellerleile (2001) found that intentions to use condoms were related to actual condom use (weighted mean r=.45); and that intentions were, in turn, related to attitudes (r=.58), subjective norms (r=.39) and perceived behavioural control (r=.45). The TPB has less often been applied to condom use in African societies. However, a growing body of research has provided support for the use of the theory in this context (Boer & Mashamba, 2005 and 2007; Bosompra, 2001; Bryan, Kagee, & Broaddus, 2006; Fekadu & Kraft, 2001 and 2002; Giles, Liddell, & Bydawell, 2005; Heeren, Jemmott, Mandeya, & Tyler, 2007; Jemmott et al., 2007; Lugoe & Rise, 1999; Schaalma et al., 2009; Taffa, Klepp, Sundby, & Bjune, 2002). For example, in a recent large scale study involving over 15 000 school students from South Africa and Tanzania, Schaalma et al. (2009) reported that the three components of the TPB, together with several demographic variables, explained 77% of the variance in the intention to use condoms and that each TPB component made a significant unique contribution to explaining the variance.

Although this research in Western and African contexts has shown that the three constructs of the TPB can predict the use of condoms, it is clear that they do not provide a full explanation. For example, in the meta-analysis by Albarracin et al. (2001), behavioural intention explained, in terms of the weighted mean, only 20% of the variance in actual condom use; and the three constructs only explained 50% of the variance in behavioural intention. The need to expand the TPB and incorporate other explanatory concepts has long been recognised (Conner & Armitage, 1998). Indeed, some of the studies conducted in an African context have included other constructs in their work and found that they explained some of the variance in intended and actual condom use over and above that explained by the TPB (Boer & Mashamba, 2005; Bryan et al., 2006; Fedaku & Kraft, 2002). For example, Fedaku and Kraft (2002), in a study of women in Ethiopia, reported that whether or not the participant's circle of friends used contraception explained part of the variance in intended contraceptive use that was not explained by the TPB variables. One proposed extension to the TPB concerns *personal norms* (Conner & Armitage, 1998). The standard *subjective norm* component of the TPB concerns the individual's perception of whether important others want them to engage in the behaviour, and the importance they place on the views of those others. By contrast, personal norms address the individual's own evaluation of the behaviour in relation to values and aspirations that are important to that individual; and the suggestion is that

these evaluations may influence behavioural choices (Cialdini, Kallgren, & Reno, 1991; Conner & Armitage, 1998). There are a range of evaluative frameworks that the individual might use to assess behaviour. One important framework involves the individual's ethical evaluation of the behaviour (the so-called *moral norm*) (Ajzen, 1991). As a general rule, it is suggested that people are less likely to engage in behaviour that they perceive to be morally wrong, and more likely to engage in behaviour that they perceive as morally acceptable. Indeed, most of the research on personal norms has focused on the moral norm. However, there are other evaluative frameworks, encompassed by the idea of personal norms, that also merit investigation. For example, there are norms relating to self- and social-identity. Being an exciting and dynamic person may be an important aspect of self- and social-identity for some individuals; and this may sway them towards courses of action which are perceived to promote this identity.

Research has shown that the moral norm can explain additional variance in health-related intentions and behaviour over and above the variance explained by the traditional components of the TPB (e.g. Belanger et al., 2002; Parker, Manstead, & Stradling, 1995). In a meta-analysis, Conner and Armitage (1998) found that the addition of the moral norm significantly enhanced the explanatory power of the TPB in nine of the 11 studies reviewed. They reported that the moral norm added an average of 4% to the prediction of intention. Research addressing the non-moral aspects of the personal norms is less extensive. Conner and Armitage (1998) identified six studies that investigated the relationship between beliefs about self-identity and intentions to perform behaviours in accordance with that identity. On average, these beliefs added 1% to the prediction of intention.

Although sexual behaviours are often the focus of strong moral evaluations, there are relatively few studies of the role of the moral norm in understanding sexual behaviour. A small number of studies have investigated its role with specific reference to condom use (Conner, Graham, & Moore, 1999; Godin, Maticka-Tyndale, Adrien, Manson-Singer, Willms, & Cappon, 1996; Godin, Savard, Kok, Fortin, & Boyer, 1996; Godin, Fortin, Michaud, Bradet, & Kok,1997; Godin, Gagnon, & Lambert, 2003; Godin, Gagnon, Lambert, & Conner, 2005; Godin, Bah, Sow, Minani, Morin, & Alary, 2008; Myklestad & Rise, 2007). All eight of these studies reported that the moral norm explained a significant amount of the variance in intended and actual condom use over and above that explained by the standard constructs of the TPB. However, all the studies were conducted in a Western context, apart from Godin et al. (2008) who investigated condom use by sex workers and their partners in three West African countries.

The aim of the present study was to investigate the influence of personal norms on condom use amongst young people in Ghana. It was hypothesized that personal norms would explain a significant amount of the variance in intended condom use over and above that explained by the standard components of the TPB. In contrast to earlier studies, the present study investigated the broader construct of personal norms, rather than just the moral norm. It also addressed the issue in an African context, which, with the exception of Godin et al. (2008), has not been done previously.

METHOD

Approval for the study was granted by the ethics committees of the University of Birmingham (U.K.) and of the Ghana Health Service. The Ghana Education Service also gave their authorization for the study to be carried out. The research was not funded by any external body, and participants received no money or other recompense for their participation. The data were collected over a two-month period spanning 2006 and 2007; and formed part of a larger study, the results of which have been reported elsewhere (Riley& Baah-Odoom, 2010). Participants were recruited from four secondary schools and one university in Accra, the capital city of Ghana. Participants were required to be at least 15 years of age and unmarried. Information leaflets were distributed to all students meeting the age requirement and those interested in taking part were invited to data collection sessions. The questionnaires were completed in the classrooms. Each class of students completed the questionnaire at the same time and a researcher was on hand to answer any questions. The questionnaire was presented in English, which is the primary language used in the secondary education system in Ghana.

Seventy university students and 390 school students took part (N = 460). Fifty-one percent were male, and ages ranged from 15 to 28 (mean = 18). Just under a third of the sample (N = 146) reported that they had had sexual intercourse at least once in their life-time, and 11% (N=49) reported knowing someone with HIV. The majority of the participants were Christians (91%), with another 8% being Muslims. The three main ethnic groups represented in the sample were Akan (48%), Ewe (24%) and GaDangme (21%). Compared to the general population (Ghana Statistical Service, 2005), Christians were over-represented and the Mole-Dagomba ethnic group under-represented. The sample was also better educated than the general population, since secondary education is not compulsory in Ghana. Many also came from relatively affluent homes (e.g. 35% of participants' fathers worked as professionals, but only 4% of the general population work in professions).

The questionnaire was developed using the 'etic-emic' approach described by Godin et al. (2008). Using theory-based questionnaires standardized in one particular culture in another cultural context is problematic because the manifestations of the measured construct may well vary across cultures (Davidson, Jaccard, Triandis, Morales, & Diaz-Guerrero, 1976). For example, what are considered negative aspects of condom use may vary across cultures. As a solution to this, the etic-emic approach recommends using qualitative approaches to gather information about how a particular theoretical construct may manifest itself in a particular cultural context, and then using this qualitative data to generate a questionnaire that is sensitive to the cultural context. With this aim in mind, fourteen focus groups (each with between 6 and 9 participants) were run prior to the main study. Participants were recruited from schools similar to those used in the main study and were required to be at least 15 years of age. The groups were facilitated by the first author, and discussed a range of issues concerning HIV/AIDS and sexual behaviour. Transcripts of these discussions were coded using thematic analysis (Braun & Clarke, 2006). This analysis provided information about what issues were important and relevant to the targeted population, and about the language and concepts used to express their opinions about these matters. This material was then used to devise the questionnaire. The final questionnaire contained 45 items and 6 subscales. Items were

answered 'yes/no', 'true/false' or 'good/bad', and given a score of zero or one. Items across each subscale were summed to give a total score for that subscale. The *subjective norm* subscale concerned the opinions of three groups highlighted as important by the focus groups – parents, friends and religious leaders. For each one, the participant was asked whether that group would want a condom to be used if the participant were having sex and whether this would influence the participant's decision to use a condom. The two responses were multiplied and the products were then summed across the three items to yield the total score. A high score indicated that the participant reported that several of these important others would favour condom use and that this would influence their decision to use condoms. The *attitudes* subscale included statements about the advantages of using condoms (e.g. "Using condoms will protect me against HIV") and the disadvantages (e.g. "I would feel ashamed buying condoms") that had been highlighted by the focus groups. A high score indicated that the participant's attitudes were in favour of condom use. The *perceived behavioural control* subscale was again based on the data from the focus groups. The items presented a range of hypothetical scenarios in which the participant was asked to assume that they had decided to use condoms to protect themselves against HIV and were going to have sex, but that a potential barrier to condom use had arisen. For each scenario, they were asked whether they might go ahead and have sex without a condom (e.g. "Might you go ahead and have sex without a condom: If the other person made fun of you for wanting to use a condom?"). The measure thus involved a conceptualization of perceived behavioural control that is close to the construct of self-efficacy (Ajzen, 1991). A high score indicated that the participant felt able to overcome potential barriers to condom use.

The *personal norms*, *intended condom use* and *actual condom use* subscales all addressed the same four topics – keeping condoms at home; taking condoms to situations in which there was an increased possibility of sex (e.g. a party); using a condom with a steady girlfriend or boyfriend; and using condoms in casual sex. For *actual condom use*, participants were asked if they had ever kept condoms at home or taken them to situations such as a party; and if they had always used a condom when having sex with boyfriend/girlfriend or when having casual sex. A high score indicated that the participant had made greater use of condoms. For *intended condom use*, the questions were modified to refer to intentions to carry out these behaviours. A high score indicated more intention to use condoms. For *personal norms*, the questions took the form of "What do you think of someone who [description of one of the four condom-related behaviours]?" Participants were given two response options: 'generally good' or 'generally bad'. Each option was accompanied by a list of adjectives that had been provided by participants in the focus groups to describe such behaviour. For example, one question was: "What do you think of someone who has sex without a condom with someone they don't know very well?" and the response options were: 'generally good (e.g. exciting, sexy, hard core)' or 'generally bad (e.g. stupid, irresponsible, foolish)'. As is evident from this example, the aim was to include a range of terms that referenced not only the moral evaluative framework, but also other frameworks that constituted the personal norms of the participants in the focus groups. A high score indicated that the participant gave favourable evaluations of condom use.

RESULTS

Table 1 lists the subscales and provides descriptive statistics for each one. The internal reliability of each subscale was assessed using Cronbach's alpha, and these are also given in Table 1. The low internal consistency for the condom use variables and for *personal norms* should be noted.

[Insert Table 1 about here]

Table 2 presents the correlations between the variables. As expected, the constructs of the TPB and *personal norms* all correlated significantly with intended condom use. Apart from *subjective* norm, these variables also correlated significantly with *actual condom use*. Consistent with the TPB, *intended condom use* was significantly correlated with *actual condom use*. The relationship between condom use and the demographic variables was also examined. In respect of actual and intended condom use, there were no significant differences in terms of gender, age, parental occupation, ethnicity, religion or knowing someone with HIV. These demographic variables were accordingly not entered into further analyses. Participants from one of the schools used in the recruitment did score significantly less than other participants on *intended condom use*, and participants from another school did score significantly less than others on *actual condom use*. However, this variable was not entered into further analysis because it is not possible to draw general conclusions on the basis of what was happening in specific schools.

[Insert Table 2 about here]

The hypothesis was that the *personal norms* scores would explain a significant amount of extra variance in *intended condom use* over and above the standard components of the TPB. This was addressed by means of a hierarchical regression analysis: The outcome variable was *intended condom use*; the predictors entered into the first block were *subjective norm*, *perceived behavioural control* and *attitudes*; and the predictor entered into the second block was *personal norms*. The first block explained 11% of the variance in *intended condom use* scores (R-squared = 0.106; F = 13.75; $p<.001$). The second block explained an additional and significant 11% of the variance, thereby supporting the hypothesis (change in R-squared = .109; F = 47.21; $p<.001$). In the complete model, which explained 22% of the variance, only *attitudes* and *personal norms* made significant unique contributions to the explanation of the variance (standardized beta coefficient for *attitudes* = 0.181; p = .001; for *personal norms* = .346; $p <.001$). The relationships amongst the variables are summarized in Figure 1.

[Insert Figure 1about here]

DISCUSSION

As hypothesized, personal norms accounted for a significant amount of the variance in intended condom use over and above the standard components of the TPB. Indeed, they explained an additional 11% of the variance not explained by these standard components. This result is consistent with other studies of condom use intention that have likewise reported that the moral norm added significantly to the explanatory power of the TPB (Conner et al., 1999; Godin et al., 2008; Godin et al., 1997; Godin et al., 2003; Godin et al., 2005; Godin, Maticka-Tyndale et al., 1996; Godin, Savard et al.,1996; Myklestad &

Rise, 2007). The results of the present study suggest that the finding applies to a broader conception of the personal norms that references evaluative frameworks other than just the moral one; and, along with Godin et al. (2008), that the finding applies in an African context. It adds to the growing body of evidence indicating the need to include personal value judgments within the TPB, especially for behaviours, such as sexual behaviour, that elicit strong evaluative reactions.

These conclusions need to be considered in the light of some limitations of the present study. The cross-sectional and correlational nature of the study makes it difficult, of course, to draw any definite conclusions about the causal nature of the relationship between the personal norms and sexual behaviour. A particular problem is that the relationship between intended and actual condom use was investigated with reference to actual condom use in the past. The relationship is more effectively examined in a longitudinal design that investigates whether intention predicts future behaviour, because one's current intentions may be influenced by one's past behaviour (Albarracin et al., 2001). There are also some limitations relating to the measures used. Although the use of the etic-emic approach may have resulted in a culturally more sensitive measure, the questionnaire was designed specifically for the study and so there is no independent evidence of its reliability and validity. The internal consistency of some of the subscales was rather low, particularly for actual condom use. Reliance on self-report is problematic because some participants may have given social desirable rather than honest answers, particularly given the sensitivity of the topic.

Although all the participants were volunteers, it may be that not all of them gave a carefully considered response to every item. The size of the contribution of the *personal norms* scores to intended condom use may have been exaggerated, relative to the standard TPB variables, because they addressed the same situations that were addressed by the *intended condom use* subscale; whereas the standard variables were more indirect and non-specific measures of likely responses to these situations. The indirect and non-specific relationship of the standard variables may partly explain why the amount of variance in condom use intention explained by these variables was relatively modest (11%) compared to figures that have been reported elsewhere (e.g. Schaalma et al., 2009). Finally, one should be cautious about generalizing the findings. The sample was self-selected; it was biased towards younger, less sexually-experienced people in the mainstream of society; it was drawn from those with a better education and higher socio-economic status than others in that society; and it represented a specific cultural background. Despite these limitations, the study suggests that programmes that seek to promote condom use amongst young people in Africa should address any negative evaluations that those young people might make in relation to various practices relating to condom use; and should promote more positive evaluations of those practices. For example, people who view someone who keeps a supply of condoms at home as 'immoral', 'not to be trusted' and 'desperate' (the terms supplied by the focus groups and used for this item on the questionnaire) are unlikely to respond to suggestions that they should keep a supply of condoms unless these negative evaluations of the practice are tackled. The programmes need to promote the practice as 'wise', 'good' and 'sensible'. Similarly, those who feel that someone who wants to use a condom within a steady relationship is 'silly', 'dull', 'cowardly' and 'untrustworthy' are unlikely to respond to

appeals to engage in this practice until they are persuaded to evaluate it in a more positive light as 'sensible', 'responsible' and 'considerate'.

REFERENCES

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50,* 179-211.

Albarracin, D., Johnson, B.T., Fishbein, M., & Muellerleile, P.A. (2001). Theories of reasoned action and planned behaviour as models of condom use: A meta-analysis. *Psychological Bulletin, 126,* 142-161.

Belanger, D., Godin, G., Alary, M., & Bernard, P. (2002). Factors explaining the intention to use condoms among injecting drug users participating in a needle-exchange program. *Journal of Applied Social Psychology, 32,* 1047-1063.

Boer, H., & Mashamba, M.T. (2005). Psychosocial correlates of HIV protection among black adolescents in Venda, South Africa. *AIDS Education and Prevention, 17,* 590-602.

Boer, H., & Mashamba, M.T. (2007). 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,* 51-63.

Bosompra, K. (2001). Determinants of condom use intentions of university students in Ghana: An application of the theory of reasoned action. *Social Science and Medicine, 52,* 1057-1069.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3,* 77-101.

Bryan, A., Kagee, A., & Broaddus, M.R. (2006). Condom use among South African adolescents: Developing and testing theoretical models of intentions and behavior. *Aids and Behavior, 10,* 387-397.

Cialdini, R.B., Kallgren, C.A., & Reno, R.R. (1991). A focus theory of normative conduct: A theoretical refinement and reevaluation of the role of norms in human behavior. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 24, pp. 201-234). New York: Academic Press.

Conner, M, & Armitage, C.J. (1998). Extending the theory of planned behaviour: A review and avenues for further research. *Journal of Applied Social Psychology, 28,* 1429-1464.

Conner, M., Graham, S., & Moore, B. (1999). Alcohol and intentions to use condoms: Applying the theory of planned behaviour. *Psychology and Health, 14,* 795-812.

Davidson, A.R., Jaccard, J.J., Triandis, H.C., Morales, M.L., & Diaz-Guerrero, R. (1976). Cross-cultural model testing: Toward a solution of an etic-emic dilemma. *International Journal of Psychology, 11,* 1-13.

Eaton, L., Flisher, A.J., & Aaro, L.E. (2003). Unsafe sexual behaviour in South African youth. *Social Science & Medicine, 56,* 149-165.

Fekadu, Z., & Kraft, P. (2001). Predicting intended contraception in a sample of Ethiopian female adolescents: The validity of the theory of planned behavior. *Psychology and Health, 16,* 207-222.

Fekadu, Z., & Kraft, P. (2002). Expanding the theory of planned behaviour: The role of social norms and group identification. *Journal of Health Psychology, 7,* 33-43.

Gallant, M., & Maticka-Tyndale, E. (2004). School-based HIV prevention programmes for African youth. *Social Science and Medicine, 58,* 1337-1351.

Ghana Statistical Service. (2005). *2000 population and housing census of Ghana.* Accra, Ghana: Author.

Giles, M., Liddell, C., & Bydawell, M. (2005). Condom use in African adolescents: The role of individual and group factors. *AIDS Care, 17,* 729-739.

Godin, G., Bah, A.T., Sow, A., Minani, I., Morin, D., & Alary, M. (2008). Correlates of condom use among sex workers and their boyfriends in three west African countries. *AIDS and Behavior, 12,* 441-451.

Godin, G., Fortin, C., Michaud, F., & Bradet, R. (1997). Use of condoms: Intention and behaviour of adolescents living in juvenile rehabilitation centres. *Health Education Research Theory and Practice, 12,* 289-300.

Godin G., Gagnon H., & Lambert L.D. (2003). Factors associated with maintenance of regular condom use among single heterosexual adults: a longitudinal study. *Canadian Journal of Public Health, 94,* 287-91.

Godin, G., Gagnon, H., Lambert, L.D., & Conner, M. (2005). Determinants of condom use among a random sample of single heterosexual adults. *British Journal of Health Psychology, 10,* 85-100.

Godin, G., Maticka-Tyndale, E., Adrien, A., Manson-Singer, S., Willms, D., & Cappon, P. (1996). Cross-cultural testing of three social cognitive theories: An application to condom use. *Journal of Applied Social Psychology, 26,* 1556- 1586.

Godin, G., Savard, J., Kok, G., Fortin, C., & Boyer, R. (1996). HIV seropositive gay men: Understanding adoption of safe sexual practices. *AIDS Education and Prevention, 8,* 529-545.

Heeren, G.A., Jemmott, J.B., Mandeya, A., & Tyler, J.C. (2007). Theory-based predictors of condom use among university students in the United States and South Africa. *AIDS Education and Prevention, 19,* 1-12.

Jemmott, J.B., Heeren, G.A., Ngwane, Z., Hewitt, N., Jemmott, L.S., Shell, R., & O'Leary, A. (2007). Theory of planned behaviour predictors of intention to use condoms among Xhosa adolescents in South Africa. *AIDS Care, 19,* 677-684.

Kenny, D.A. (2010). Mediation webpage. Retrieved on October 3, 2010 from http://davidakenny.net/cm/mediate.htm.

Kirby, D. (2000). School-based interventions to prevent unprotected sex and HIV among adolescents. In J.L. Peterson & R.J. DiClemente (Eds.). *Handbook of HIV prevention* (pp.83-101). New York: Plenum.

Lugoe, W., & Rise, J. (1999). Predicting intended condom use among Tanzanian students using the theory of planned behaviour. *Journal of Health Psychology, 4*, 497-506.

Myklestad, I., & Rise, J. (2007). Predicting willingness to engage in unsafe sex and intention to perform sexual protective behaviours among adolescents. *Health Education & Behavior, 34,* 686-699.

Parker, D., Manstead, A.S.R., & Stradling, S.G. (1995). Extending the theory of planned behaviour: The role of personal norms. *British Journal of Social Psychology, 34,* 127-137.

Riley, G.A., & Baah-Odoom, D. (2010). Do stigma, blame and stereotyping contribute to unsafe sexual behaviour? A test of claims about the spread of HIV/AIDS arising from social representation theory and the AIDS risk reduction model. *Social Science & Medicine, 71,* 600-607.

Schaalma, H., Aaro, L.E., Flisher, A.J., Mathews, C., Kaaya, S., Onya,H., Ragnarson, A., & Klepp, K.I. (2009). Correlates of intention to use condoms among sub-Saharan African youth: The applicability of the theory of planned behaviour. *Scandinavian Journal of Public Health, 37 (supplement 2),* 87-91.

Taffa, N., Klepp, K.I., Sundby, J., & Bjune, G. (2002). Psychosocial determinants of sexual activity and condom use intention among youth in Addis Ababa, Ethiopia. *International Journal of STD and AIDS, 13,* 714-719.

UNAIDS (Joint United Nations Programme on HIV/AIDS) (2008). UNAIDS report on the global AIDS epidemic – 2008. Retrieved on March 14, 2010 from UNAIDS website: http://www.unaids.org/en/KnowledgeCentre/HIVData/GlobalReport/2008/2008_Global_report.asp

UNAIDS (Joint United Nations Programme on HIV/AIDS) (2010). UNAIDS report on the global AIDS epidemic – 2010. Retrieved on May 23, 2011 from UNAIDS website: http://www.unaids.org/globalreport/global_report.htm

Table 1. Descriptive statistics for the six subscales

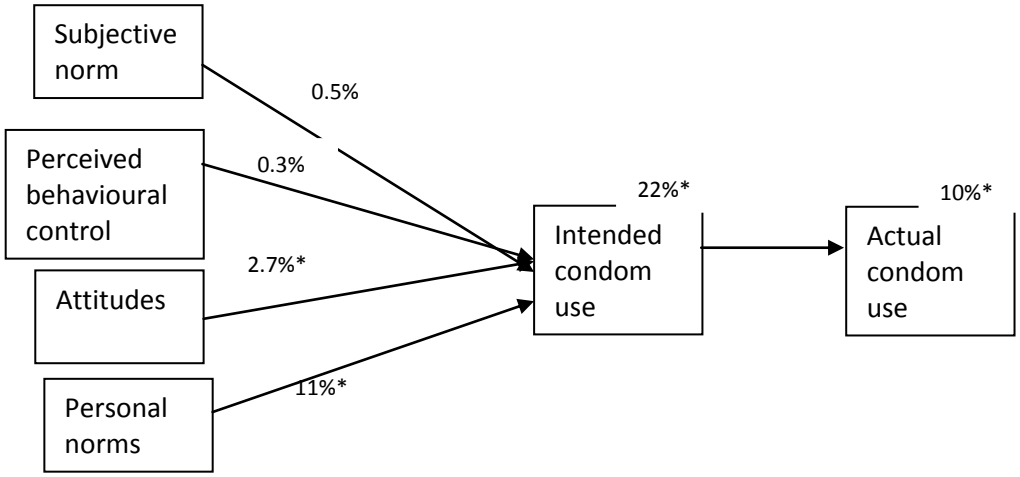
	Number of items	Cronbach's alpha	Mean	Standard deviation	Possible range	Obtained range
Subjective norm	3 x 2	.73	1.77	1.17	0-3	0-3
Perceived behavioural control	8	.81	5.59	2.36	0-8	0-8
Attitude	22	.79	11.70	3.92	0-22	2-22
Personal norms	4	.56	2.87	1.06	0-4	0-4
Intended condom use	4	.59	2.72	2.21	0-4	0-4
Actual condom use	4	.30	2.05	1.12	0-4	0-4

Table 2. Correlations between the variables

	Subjective norm	Perceived behavioural control	Attitudes	Personal norms	Intended condom use
Perceived behavioural control	.062 (.220)				
Attitudes	.116* (.024)	.328*** (.000)			
Personal norms	.146** (.004)	.033 (.496)	.283*** (.000)		
Intended condom use	.163** (.001)	.106* (.026)	.300*** (.000)	.407*** (.000)	
Actual condom use	.165 (.063)	.191* (.023)	.216* (.010)	.259** (.002)	.318*** (.000)

* p<.05; **p<.01; ***p<.001 (actual p-values in brackets)
N=146 for correlations involving actual condom use; N=460 for all other correlations

Figure 1. Unique contributions of each variable to intended condom use, and contribution of intended condom use to actual condom use



Figures next to lines are based on the squared part correlations in the full regression model, and show the amount of variance in *intended condom use* uniquely explained by that variable. Figures above boxes show the total amount of variance in that variable explained by the preceding variable(s). Significant effects are indicated with an asterisk.