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Improving HIV prevention programs: the role of identity in shaping healthy sexual behavior of rural adolescents in South Africa

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A large body of literature highlights the role of culture and identity in how individuals manage and maintain health. Disappointingly there was no statistically significant decline in HIV prevalence in the 15–24 years age group in South Africa since 2007, Millennium Development Goal 6 indicator. This warrants a new approach to youth HIV prevention, which considers identity and culture, in male-dominant environments. We used identity-based motivation theory, which predicts that possible identities have a crucial influence on health-promoting behavior, to argue that girls are not currently attaining their low risk possible identities because sociocultural factors influence their behavior and compromise their health and economic outcomes. This study employed a cross-sectional survey among 285 rural black South African adolescents (mean age 16.7 years; 48.8% boys) to determine the salient social identity and the associated possible identities. We then tested whether youth behave in accordance with their possible identities. The dependent variables are non-risky behavior, risky behavior, and confidence to discuss sex. The independent variables are age, previous sex experience, and poverty. The adolescents chose gender as the most prominent social identity. Girls chose a safer possible identity than boys did, and girls do not actualize their possible identities while boys do. For girls, no dependent variables were significant. These results show that sociocultural barriers prevent the girls from actualizing their non-risky possible identity. Future adolescent HIV prevention programs aimed at reducing HIV should promote rights and responsibilities and consider cultural norms and beliefs to create a more gender-equal society that embraces less risky sexual behavior, in line with the idealized identity of girls. This to convince both male and female adolescents of the benefits, risks, and social harms embedded in certain traditional practices in a high HIV-prevalent environment.

Keywords: HIV prevention; adolescent behavior; risky sexual behavior; identity-based motivation; social identity

Introduction

The health status of a person is influenced by a combination of sociocultural, economic, biological factors as well as by social and health policies that most often affect the socially marginalized or disempowered segment of the society (Pieterse, 2008). With the move of the HIV epidemic from the first to the third world, the epidemic moved from gay white men to poor black women (specifically young girls) and from a focus on individual rights

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to the more global and social concerns of poverty and inequality (Albertyn, 2000). The HIV epidemic continues to rob South Africa of the future economically productive segment of the population and to erode the social fabric that weaves communities together. The stubborn high prevalence of HIV in the 15–24 years age group reflects vulnerability of adolescent girls specifically. The adolescent 15- to 24-year-old female population has an HIV prevalence of 20.5% (Department of Health, 2012); females are four times more likely than males of the same age to have HIV and become HIV-positive about 5 years earlier than males (Department of Health, 2010).

A systematic, analytical review of HIV prevention interventions targeting youth in South Africa since 2000 found that the effects of most interventions on reported sexual risk behavior or biological indicators of HIV infection were limited (Harrison, Newell, Imrie, & Hoddinott, 2010). An exception is the Stepping Stones intervention, a gender equity-based program that showed positive results after 2-year follow-up in reducing intimate partner violence (Jewkes et al., 2006) and reduced transactional sex (Jewkes et al., 2008) but no reduction in HIV infection.

This suggests that large-scale HIV prevention interventions are not successful in achieving the behavior change required to address the pandemic effectively (Department of Health, 2011). The design of effective adolescent prevention interventions is therefore a critical national priority.

Adolescent identity in the South African context

Historically, black South African culture has been male-dominated, with the dominant ideal of manhood demanding toughness, strength, and sexual success (Jewkes & Morrell, 2010). The cultural ideal of femininity has been female behavior that complies with subordination and a tendency to accommodate the interests and desires of men (Connell, 1987), with women expecting to be rewarded with gifts or money for sexual compliance. Forms of sexual compliance almost always focus on ways to improve sexual pleasure for partners, in an effort to secure fidelity and to exercise agency and control in their relationships (Scorgie et al., 2009) and usually exclude condom use that increases vulnerability to HIV infection.

Black adolescents in South Africa have been prescribed conflicting identity roles that are on the one hand consistent with rural custom and on the other a western value system (Delius & Glaser, 2002). The westernized framework embraces a world view informed by American individualism, competition, and individualistic ideals, which may alienate the youth from their more traditional African social realities (Stevens & Lockhat, 1997). A trend among female youth is the “modern girl” identity that is associated with female independence, high fashion, and explicit sexuality (Barlow, Dong, Poiger, Ramamuthy, & Thomas, 2005).

Intervention programs that do not speak to the particular configuration of modernity and ongoing traditional gender scripts will therefore not be able to change sexual conduct of young males and females. However, social identity is a complex construction that relates to age, gender, ethnicity, biography, and popular culture. Its development is a central life task of adolescence as one’s future identity begins to solidify during adolescence (Erikson, 1968). The primary task of adolescence is to determine a balance between self-image and role confusion (Erikson, 1963). Gender roles are important in shaping the youth’s social identity since these are particularly prominent during adolescence (Eccles, 2009), when sexuality is explored and gender identities are shaped.

Social identities influence beliefs about in-group goals and strategies for possible identities (Oyserman, Fryberg, & Yoder, 2007), where possible identities refer to the prospects one might hold for himself/herself in the future. Possible identities are associated with real and important behavioral consequences including motivating and incentivizing future-oriented action. Possible identities explain for instance why individuals often adopt unhealthy habits because these habits are attuned with a valued identity (Oyserman & James, 2011). When a girl is assessing whether a possible identity is plausible, the girl is posing both a personal identity and social identity question: “can a girl like me insist on using a condom?” The third person perspective considers how others might view her possible identity and contains the sociocultural norms that could be very persuasive and influential on the decision-making of girls specifically and collectivist cultures (Knox, 2006; Oyserman & Markus, 1998). Although condoms are generally perceived to prevent HIV, the male condom is also perceived as unreliable, causing illness and physical discomfort, reducing sexual pleasure, and engendering mistrust in intimate relationships (Stadler & Saethre, 2011). These contradictory views demonstrate how local knowledge of health and illness can intersect with biomedical knowledge and how individuals form biomedical constructs to find an acceptable fit with cultural norms (Stadler & Saethre, 2011).

Persistent masculinities in South Africa prescribe ideal male behavior and legitimate gender-inequitable practices (Auvert et al., 2001; Glynn et al., 2001; Gregson et al., 2002; Jewkes & Morrell, 2010; Laga, Schwärlander, Pisani, Salif Sow, & Caraël, 2001) that reinforce poor sexual negotiation dynamics for girls and double standards in behavior that increases risk for early (unwanted) pregnancy and sexual and reproductive health complications, including HIV infection (Varga, 2003). High risk behaviors obstruct the girls’ right to education and long-term economic independence. Not only could these social constructs limit the girls’ ability to attain their possible identities, but also make girls more vulnerable to HIV infection and pregnancy at a younger age.

In addition, HIV has a strong link with low income, high unemployment, violence, and poor education and in all of these correlations; young African women are the worst affected (Gilbert & Walker, 2002). Because of economic and educational marginalization, girls are dependent on boys for gifts and money, not only to survive but also to follow popular trends in beauty and fashion. Also, the economic and development crises in contemporary South Africa resulted in male adolescents having multiple partners instead of previous expressions of manhood that included working, marrying, and building an independent household (Hunter, 2004). Prevention campaigns must therefore recognize that biomedical knowledge is embedded in experience and cultural understanding, and prevention programs should embrace this construct to improve future prevention interventions.

The present study

This study contributes to health education and promotion literature with a new conceptualization of motivation for HIV prevention in adolescents. Because sociocultural factors influence the adolescents’ own perception of how they should behave (Webb, Sheeran, & Luszczynska, 2009), we assume that sociocultural factors prevent girls from realizing their possible identities. Similarly, we predict that boys achieve their possible identity as social norms view sexual conduct through a local lens that results in compromising sexual behavior.

Hypotheses

- (1) Adolescents identify with gender as their most salient social identity
- (2) Girls and boys have different possible identities
 - (a) Girls have a non-risky possible identity, and
 - (b) Boys have a more risky possible identity than girls
- (3) These possible identities will
 - (a) be reflected in the actual behavior of boys
 - (b) not be reflected in the actual behavior of girls

Method

Participants and procedure

Ndlovu Care Group, a non-governmental organization conducted the Community Health Awareness Motivation and Prevention (CHAMP) study in a rural township in Moutse, South Africa, in 2010. The CHAMP is based on an adapted version of the Stepping Stones program, developed by Alex Welbourne in 2008, and uses a gender-based approach to improve assertiveness, address gender inequality, and explain sexual and reproductive rights.

The institutional review board at the University of Pretoria, Faculty of Health Sciences, approved this study. The convenience sample consisted of black learners from Grades 8–12 in two secondary schools with no previous exposure to behavior change interventions. Poverty, limited infrastructure, and unemployment are common in the township. Master students from Utrecht University, and Life Skills Facilitators, facilitated the completion of the questionnaires at the schools. The trained Life Skills Facilitators explained the questionnaire to the learners in indigenous languages. The school principals consented to the research, and the learners signed informed consent for voluntary participation. The learners completed the questionnaire in a single session and received stationery and candy as tokens of appreciation.

In total, 309 learners took part in the study; 24 (7.8%) were excluded from the sample because they fell outside the targeted age of 15–18 years. This target group corresponds at the lower end with Millennium Development Goal 6 and at the upper end with the definition of a child (SA Government, 2005).

Measures

Background variables

Several questions were used to collect demographic characteristics such as gender, age, whether they had sex before (yes/no), and poverty levels.

Social identity

Two questions were adopted from the 2001 Centenary Project (Barrett, 2002) to assess the youth's social identity. These items examined adolescents' self-categorization with a dominant social identity and the ranking of identities in order of importance.

Self-determined social group. The first question investigated the participants' centrality of different personal, racial, linguistic, and national identities (if you were asked what group you belong to, which would best describe you? (1) Young people, (2) Boys, (3) Girls, (4) Sepedi/isiZulu/Ndebele, (5) Black South African, (6) South African).

Relative importance of components of identity. The second question requested the learners to rank identities in order of importance when describing themselves: (imagine you have to describe yourself to someone. How important are the following aspects? (1) Age, (2) Gender, (3) Language, (4) Race, (5) Being South African).

Possible identity

Twenty questions identified the possible identity of the in-group. Factor analysis was conducted to determine the relevant dimensions involved. The initial results indicated five factors, which explained 62.83% of the variance in the possible identity variable. The results of the scree plot indicated three factors for consideration: (1) "risky possible identity", (2) "non-risky possible identity", (3) "confidence to discuss sex". The factor "risky possible identity", explaining 16.95% of the variance, measured the degree to which learners felt that risky possible identity is typical for their group (1 = strongly disagree, 5 = strongly agree; Cronbach's $\alpha = 0.79$), with five statements: "It is typical for people in my group to (1) use drugs, (2) smoke cigarettes, (3) have unprotected sex, (4) have sex in exchange for money, (5) hit/kick a girl". The factor "non-risky possible identity", explaining 17.98% of the variance, measured the degree to which learners felt that non-risky possible identity is typical for their group (1 = strongly disagree, 5 = strongly agree; Cronbach's $\alpha = 0.81$), with six statements: "It is typical for people in my group to (1) exercise, (2) use a condom, (3) be faithful to one partner, (4) talk about HIV with your girlfriend/boyfriend, (5) talk about HIV with your friends, (6) talk about HIV with your parents". The factor "confidence to discuss sex", explaining 11.39% of the variance, measured the degree to which learners felt that their group has the ability to discuss sex (1 = strongly disagree, 5 = strongly agree; Cronbach's $\alpha = 0.71$), with four statements: "It is typical for people in my group to talk about (1) sex with your girlfriend/boyfriend, (2) sex with your friends, (3) sex with your parents, (4) condoms with your girlfriend/boyfriend".

Self-reported sexual behavior

A factor analysis was conducted to validate the previously established factor structure of the 23-item Safe Sex Behavior Questionnaire (SSBQ), which is generally considered as a reliable and valid measure of assessing sexual behavior in youth (DiIorio, Parsons, Lehr, & Adame, 1992).

The scree plot indicated two factors, explaining 47.7% of the variance. Two scales were constructed: safe sex behavior with 11 items and unsafe sex behavior with 6 items. Safe sex behavior is measured with: (1) I insist on using a condom when I have sex; (2) I stop sex long enough to put on a condom; (3) I avoid direct contact with my sexual partner's sperm/vaginal fluids; (4) I do not have sex when I do not know my partner's sexual history; (5) I do not have sex when I have sores/irritation in my genital area; (6) I carry a condom with me when I think I might have sex; (7) if I disagree with my partner on safer sex practices, I will give my opinion; (8) if I know I might have sex, I make a plan to get/use a condom; (9) if my partner insists on sex without a condom, I refuse to

have sex; (10) I avoid direct contact with my sexual partner's blood; (11) I take the initiative of talking about safer sex with my partner. Unsafe sex behavior is measured with: (1) I have sex on a first date; (2) I have oral sex without using protection; (3) when I am very sexually aroused, I have sex without a condom; (4) I have sex with someone who I know is gay; (5) I have anal sex without a condom; (6) I drink alcohol before/during sex. Six items did not load onto these two factors (loadings < 0.5) and were not used in the analysis (Cronbach's α s: 0.86 and 0.79).

Results

Descriptives

Of the 285 learners, 48.8% were boys and 51.2% girls. Mean age was 16.74 years (standard deviation (SD) = 1.142); 52% had sex previously. For poverty, 16.5% of the learners indicated they did not have enough money for food; 18.3% had money for food but not for clothes; and 43.2% had money for food and clothes but not for other things.

Self-categorized social identity

Gender was the preferred identity, both when asked to rank identities in order of importance and when probed to choose the identity that best described them. These findings confirm Hypothesis 1: gender is the most salient social identity during adolescence (Table 1).

Possible identity for in-group behavior

An analysis of variance (ANOVA) with gender as the independent factor and non-risky possible and risky possible identities, respectively, as the dependent variables showed that

Table 1. Self-determined social group and relative importance of components of identity.

| Identity | Percentage |
|---|------------|
| Percentage respondents that indicated the identity that they most belong to (add up to 100%) | |
| Gender (boys and girls) | 31.5 |
| South African | 24.3 |
| Age | 18.7 |
| Language | 13.9 |
| Race | 11.6 |
| Percentage respondents that rated the identity as extremely and very important | |
| Gender (boys and girls) | 62.3 |
| South African | 45.3 |
| Age | 48.4 |
| Language | 46.4 |
| Race | 53.5 |

- (1) Non-risky possible identity differs statistically significant at the 5% level between boys and girls ($F(df = 1281) = 4.485, p = 0.035$) with girls scoring higher ($M = 3.9, SD = 0.97$) than boys ($M = 3.65, SD = 1$).
- (2) Risky possible identity differs statistically significant at the 10% level of significance between boys and girls ($F(df = 1279) = 3.148, p = 0.077$), with boys scoring higher ($M = 1.99, SD = 0.92$) than girls ($M = 1.79, SD = 0.95$).
- (3) We can conclude that when learners are asked to assign characteristics typical to their gender to describe in-group possible identities, girls assigned less risky behavior to their possible identity than boys. This confirms Hypotheses 2a and 2b: girls and boys have different possible identities: (a) girls have a non-risky possible identity, and (b) boys have a more risky possible identity.

Effect of gender and possible identity on reported actual behavior

Hierarchical regression analyses determined the specific effect of the independent variables (Step 1: age, sex experience, and poverty; Step 2: self-categorized identity; Step 3: possible identity) within each gender group on actual reported behavior.

The hierarchical regression analysis results for boys indicate that age is statistically significant and negatively related to safe sex behavior: the younger the boys, the more they display safe sex behavior (Table 2). Previous sex experience, a non-risky possible

Table 2. Boys: effects of gender identity for non-risky and risky behavior.

| | Model 1: age, sex experience, poverty | Model 2: self- categorized identity | Model 3: possible identity |
|--|--|--|-------------------------------|
| (a) Boys: effects of self-categorized gender identity for actual non-risky behavior | | | |
| Demographics Age | -0.256** | -0.289** | -0.333** |
| Sex experience | 0.359** | 0.382** | 0.292** |
| Poverty | -0.024 | -0.019 | 0.003 |
| Self-categorized identity | | -0.133 | -0.111 |
| Non-risky possible identity | | | 0.298** |
| Risky possible identity | | | 0.056 |
| Confidence to discuss | | | 0.212** |
| R^2 | 0.144 | 0.161 | 0.349 |
| $F(p\text{-value})$ | 6.808(0.000) | 5.752(0.000) | 8.947(0.000) |
| (b) Boys: effects of self-categorized gender identity for actual risky behavior | | | |
| Demographics Age | -0.023 | -0.038 | -0.077 |
| Sex experience | 0.121 | 0.131 | 0.180* |
| Poverty | -0.029 | -0.026 | -0.052 |
| Self-categorized identity | | -0.062 | -0.146 |
| Non-risky possible identity | | | -0.079 |
| Risky possible identity | | | 0.439** |
| Confidence to discuss | | | -0.115 |
| R^2 | 0.015 | 0.019 | 0.247 |
| $F(p\text{-value})$ | 0.624(0.601) | 0.573(0.683) | 5.445(0.000) |

Notes: Standardized beta-coefficients are presented. * $p < 0.05$, ** $p < 0.01$.

Table 3. Girls: effects of gender identity for non-risky and risky behavior.

| | Model 1: age, sex experience, poverty | Model 2: self- categorized identity | Model 3: possible identities |
|--|--|--|------------------------------------|
| (a) Girls: effects of self-categorized gender identity for actual non- risky behavior | | | |
| Demographics Age | 0.243** | 0.233* | 0.243* |
| Sex experience | 0.174 | 0.179 | 0.177 |
| Poverty | -0.058 | -0.052 | -0.047 |
| Self-categorized identity | | -0.035 | -0.034 |
| Non-risky possible identity | | | 0.167 |
| Risky possible identity | | | 0.017 |
| Confidence to discuss | | | -0.153 |
| R^2 | 0.128 | 0.129 | 0.145 |
| $F(p\text{-value})$ | 6.421(0.000) | 4.827(0.001) | 3.079(0.005) |
| (b) Girls: effects of self-categorized gender identity for actual risky behavior | | | |
| Demographics Age | 0.029 | 0.040 | 0.050 |
| Sex experience | 0.169 | 0.165 | 0.149 |
| Poverty | 0.217* | 0.211* | 0.192* |
| Self-categorized identity | | 0.035 | 0.036 |
| Non-risky possible identity | | | 0.040 |
| Risky possible identity | | | 0.087 |
| Confidence to discuss | | | -0.070 |
| R^2 | 0.083 | 0.085 | 0.095 |
| $F(p\text{-value})$ | 3.947(0.010) | 0.981(0.022) | 1.879(0.078) |

Notes: Standardized beta-coefficients are presented. * $p < 0.05$, ** $p < 0.01$.

identity, and the confidence to discuss sex are positively and statistically significantly related to non-risky actual behavior for boys.

A risky possible identity and previous sex experience are positively and statistically significantly related to risky actual behavior for boys.

The results show that boys with both a non-risky possible identity and a risky possible identity have the ability to behave according to their possible identities.

This confirms Hypothesis 3a: boys realize their possible identity.

Hierarchical regression analyses for girls indicate that age is positively and statistically significant for non-risky actual behavior; this might indicate that younger girls have less power to negotiate non-risky behavior (Table 3).

Poverty level is positively and statistically significantly related to risky actual behavior for girls, indicating low SES girls are more vulnerable to transactional sex.

Neither non-risky possible identity nor risky possible identity predicted the girls' actual behavior. These findings confirm Hypothesis 3b: girls do not actualize their possible identity.

Discussion

South African sexually active youth run a high risk of contracting HIV, but despite this, the youth disregard the risk and engage in compromising behavior. The results show although girls idealize a less risky identity, they are unable to assert this. Contrary, results

for boys show that they are indeed able to actualize their possible identities as this is driven by male-dominated social norms that dictate risky behavior for girls. Previous HIV prevention programs recommending non-risky behavior to girls may have met limited success, because social norms dictate risky behavior for girls. Current conditions in South Africa – high unemployment rates, poor living conditions, and high HIV prevalence, now render already vulnerable girls even more vulnerable to contracting HIV, young motherhood, and lack of attaining education.

Future prevention programs should therefore focus less on changing individual *behavior* but should instead focus on creating an understanding within communities, and adolescent boys specifically, around the implications for health contained in *sociocultural norms* and sexual freedom. This can be accomplished with gender-transformative interventions that create awareness around the rights and responsibilities of both sexes under the South African legal framework. Age-appropriate interventions should include both separated and mixed gender workshops that address patriarchal stereotyping, gender-based violence, and other practices that increase risk for HIV and create understanding of the associated social harms. This will change the expectations of boys regarding risky sexual demands and improve assertiveness of girls. This must be communicated in programs that not only promote gender equality and sexual fulfillment for both genders, but also enable girls to stay in school to better future economic prospects. For as long as girls remain vulnerable, they will be obliged to comply with unsafe sexual practices because of the high social, economic, and cultural costs of refusing these practices.

Achieving an accommodating gender-equal setting will remove the discordance between the girls' possible identity and their actual behavior and will enable girls to act in line with their non-risky possible identity. If gender inequality is addressed, then girls will be closer to achieving behavior that resonates with their idealized possible identities. Similarly, if boys are not pressurized by social norms to display risky behavior, they will adopt less risky behavior resulting in prevention programs achieving its objective of reducing HIV incidence. Possible identity approaches against a gender-equal background and within the sociocultural setting have not been applied or evaluated for the youth and should be researched further. At the same time, future research on the gap between the aspired behavior and actual behavior will identify topics for informing gender-congruent and culturally congruent youth communication campaigns.

With the knowledge on possible identities, non-judgmental youth motivational campaigns will address the barriers to safe behavior. To exploit the opportunities that possible identities create, prevention programs for youth must expose the benefits of gender equality vs. the social harms contained in certain accepted practices. Focusing on sexual and reproductive health rights within the cultural context will reduce new HIV infections.

Disclosure statement

No potential conflict of interest was reported by the authors.

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