WORKING PAPER

Social approval and condom use with casual partners among youth in Cameroon, 2000-2003

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Abstract

HIV prevention programs targeting youth often accord an important role to peers, assuming that youth will model their behavior after their peers. We challenge this view, and argue that adopting a given behavior requires social approved, and youth do not turn to peers for such approval. Using three survey waves among urban Cameroonian youth (aged 15-24) we enquired whose opinions youth value, and what the effect of this person's approval of condom use is on the respondents' attitude towards condoms and condom use with casual partners. The data showed that only 3% mentioned valuing their friends' opinions, while 93% mentioned family members. The approval of condom use by these persons had a significant positive effect on the frequency of condom use. These results suggest that interventions should not focus exclusively on peers but should also include other groups, such as parents and community leaders.

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Introduction

Peer education is considered an effective technique for HIV prevention programs to reach and influence youth (Y-Peer, 2005). The basic idea is that the adoption of safer reproductive health behaviors is affected by the perceived normative environment and the individual's willingness to conform (Gage, 1998), and that for youth this normative environment is primarily shaped by other youth. This paper examines the effects of perceived social approval on condom use with casual partners among Cameroonian youth, and argues that peers may be less effective in bringing forth behavior change than often assumed. Behavior change requires social approval, and peers may simply not be the salient reference group for that.

As elsewhere in sub-Saharan Africa, many Cameroonian youth engage in risky sexual behaviors, including sex with casual partners, which may lead to unplanned pregnancies and STIs, including AIDS (Meekers & Calvès, 1997; Calvès & Meekers, 1997; Epanya & Delude, 1996; Kamtchouing, Takougang, Ngoh, & Yakam, 1997; Tchupo & Tégang, 2001; Fotso et al., 1999). Nevertheless, consistent condom use remains fairly low (Meekers & Calvès, 1997; Tchupo et al., 1996; Van Rossem & Meekers, 2000). Among unmarried youth in Yaoundé, only 24% of men and 16% of women reported frequently using condoms (Lagarde et al., 2001). Another study estimated condom use among youth at 16% for women and 31% for men (UNICEF, 2001).

The *100% Jeune* program, a social marketing program targeting youth aged 15-24 in Yaoundé and Douala, Cameroon's two major cities, was initiated and implemented by *Programme de Marketing Social au Cameroon* (PMSC) from 2000 on (Meekers & Klein, 2002b; Neukom & Ashford, 2003). It aims to motivate urban youth to adopt safer reproductive health behaviors, including abstinence and condom use. A wide range of social marketing techniques are employed, including mass media campaigns as well as education sessions and other peer education techniques (Plautz & Meekers, 2007; Chapman & Robinson, 2004; Cheta, Ngwambe, Foyet, Ward, & Armand, 2001; Meekers, Agha, & Klein, 2005). Initially this program focused exclusively on youth, but—after a midterm review—stimulating parent–to–youth communication also became an important part of the program(Meekers & Klein, 2002b).

Social learning (Bandura, 1977) is an important component of most theories of behavior change. However, it emphasizes the cognitive dimensions of the social environment, and assumes that individual youth are influenced by their peers who act as role models and opinion leaders and that through this mechanism attitudinal and behavior change will diffuse among youth. This emphasis on peers is by no means self-evident, and results from the perceived decline of traditional authority systems, such as the family and the community, in sub-Saharan Africa due to modernization processes (Gage, 1998; Apt, 1992; Cattell, 1994; Blanc et al., 1996). As decisions about one's sexual behavior, such as to engage in intercourse or to use condoms, have become more individualized, the peer group is said to provide the relevant opinion leaders. Such argument, however, may underestimate the tenacity of traditional structures, which are integrated in the modernization process rather than being completely discarded. Furthermore, opinion leaders have a dual function, they not only disseminate information, but also express their approval/disapproval of various behaviors.

Social capital, social network and social control theories (Howard & McCabe, 1990; Auerbach, Wypijewska, & Brodil, 1994; Lin, 2001) conceptualize the social environment as not only a source of information, but also of emotional and practical support, identity, status and approval, and, perhaps even more importantly, social control. Behavior deemed inappropriate by others may be negatively sanctioned. These sanctions may vary from mild disapproval, to loss of status and stigmatization, to social exclusion. Reproductive health behavior needs cultural legitimation. In many African societies, condom use is still widely disapproved of (Calvès, 1999). This discourages use, as adopting safe sex practices may be difficult in the face of social disapproval. For instance, one study indicates that Cameroon women who carry condoms are stigmatized as sluts or prostitutes (Calvès, 1999). A supportive social environment may facilitate the adoption of safe sex practices. Studies on Ghana, Zimbabwe, and Nigeria found a positive relationship between perceived social support and condom use (Estrin, 1999; Akande, 1994; Wilson & Lavelle, 1992). A study on Cameroon also found that parental support increased the likelihood that youth ever used condoms (Meekers & Klein, 2002b). Hence, it is not always the peers who matter most.

Although peers may be important for the diffusion of new ideas, other actors, such as parents, other family members or religious leaders, may be

more important for the acceptance of these ideas or the cultural legitimacy of such behavior (MacPhail & Campbell, 2001). Parents, family and community members still feature prominently in the everyday life of the adolescents. Adolescents still depend on these actors, financially, emotionally, socially as well as culturally and therefore may still play a key role in the social environment that governs adolescent behavior through (anticipated) positive and negative sanctions.

This study identifies whose opinions are valued by these Cameroonian youth, and looks at the effect of these MVPs on condom attitudes and condom use with casual partners. (Note that condom use with regular partners may be less affected by others, as it is driven by family planning considerations.)

Data and Methods

SAMPLES

This study uses data from the 2000, 2002 and 2003 waves of the Cameroon Adolescent Reproductive Health Survey. These surveys were commissioned by *PMSC*, and implemented by *IRESCO* and *FOCAP* (Tchupo & Tégang, 2001; Tchupo & Tégang, 2002; FOCAP, Forum Camerounais de Psychologie, 2003), as part of the evaluation of the *100% Jeune* program. The surveys targeted youth aged 15 to 24 living in Cameroon's two major cities Yaoundé and Douala. A stratified sampling design was used in which neighborhoods were selected with probability of selection proportional to size (PPS). Within each neighborhood PPS sampling was used to select enumeration areas. At the next step, households were randomly selected in each enumeration area, and within each household one eligible person was randomly selected. In total 2,096, 3,536 and 3,627 respondents were interviewed in the three survey waves, respectively (for more detailed information, see Plautz & Meekers, 2007). Our analysis is restricted to respondents with a casual partner during the past 12 months, reducing the working samples to 378, 609 and 602, respectively.

VARIABLES

Condom use. The respondent's reported frequency of condom use with casual partners (never, sometimes, often, always) is our outcome variable (see Table 1). Condom use increased sharply across the three surveys ($\chi^2(6) = 109.6$, $p < 0.001$).

Condom attitudes. One's attitude toward condoms, their perceived effectiveness for family planning and STI prevention, and perceived advantages and disadvantages of condom use have proven to be important predictors of condom use (Meekers & Klein, 2002b). Persons with positive attitudes toward condom use are more likely to use them, while negative attitudes or perceptions are reasons for not using condoms (Abdool Karim, Abdool Karim, Preston-Whyte, & Sankar, 1992). The respondent's attitudes towards condoms and condom use was measured using an index created from 16 items with which the respondent could agree (1) or disagree (0) or say he/she doesn't know (0.5). The index equals the mean item score. A higher index score indicates a more positive attitude toward condoms and condom use. Table 1 shows that attitudes toward condoms have improved significantly from 2000 to 2003.

Social approval. Respondents were asked to name someone whose opinion they valued a lot. Subsequently, respondents were asked how this "most valued person" (MVP) would react if he/she were to discover that the respondent used condoms. Possible answers ranged from disapprove completely (0) to approve completely (4). However, respondents' reports about the beliefs, attitudes and behavior of others should be treated with caution. Respondents tend to exaggerate their homophily with their friends and relatives (Aseltine, 1995; Kandel, 1996), i.e., they overestimate the extent that these others' attitudes correspond to their own.

Control variables. Socio-demographic controls include the respondent's sex and age (range 15-24), and whether they are still in school. An SES asset index is created based on household possession of 9 items: bicycle, motorcycle, car, van, radio-tape player, radio, TV, tape recorder and fridge.

Two variables measure openness of the community toward reproductive health issues. A first variable captures whether one discussed family planning, STI or AIDS prevention issues in the past year. The second variable identifies the different types of persons these issues were discussed with: friend, spouse, parent, doctor, etc. This variable was standardized.

Easy access to condoms is known to facilitate condom use (Meekers & Klein, 2002b). Condom access is operationalized as the estimated time needed to obtain a condom (in minutes; truncated at 60 minutes maximum).

Self-efficacy takes a central position in social learning theory and in the theory of planned behavior (Bandura, 1983; Ajzen, 2002). Self-efficacy increases the likelihood of condom use (Meekers & Klein, 2002b; Meekers & Klein, 2002a; Gregson, Terceira, Mushati, Nyamukapa, & Campbell, 2004; Estrin, 1999; Baele, Dusseldorp, & Maes, 2001). Our indicators of self-efficacy are: whether one can do something to avoid AIDS, and whether respondents believe they can convince their partner to use condoms. Both proportions increased significantly from the 2000 to the 2003 survey.

Another relevant factor is the perceived severity of AIDS (Lugalla et al., 2004; Meekers & Klein, 2002b). Increased awareness of the severity of the AIDS epidemic leads to increased condom use. The first variable measures awareness that AIDS is a terminal disease: whether one believes that 1) AIDS can be cured, and 2) that one can survive AIDS. The second variable measures respondents' opinion about the severity of AIDS in their community (a serious problem; a problem like another; not really a problem).

Youth who consider themselves at high risk for HIV infection are more likely to adopt protective behaviors (Estrin, 1999; Akande, 1994; Meekers & Klein, 2002b; Baele et al., 2001; Richard & Van Der Pligt, 1991; Akwara, Madise, & Hinde, 2003). Respondents were asked whether, if they were not to use condoms, they considered themselves to be at high risk, moderate risk, low risk or no risk of contracting AIDS.

High risk sexual behavior is also a determinant of condom use (Meekers, Klein, & Foyet, 2001). Two indicators of sexual risk behavior are included: the number of partners (spouse, regular, and casual) during the past 12 months, and the number of sex acts during the past month. The mean number of partners during the past year is 4.1, but 56.6% of respondents reported three or fewer partners, while only 5.3% reported 10 or more partners. The mean number of sex acts during the past month was 3.3. 27.9% of respondents abstained, while 7.9% reported 10 or more sex acts the past month.

STATISTICAL ANALYSIS

We test whether the perceived attitude of MVPs towards condom use affects the respondent's attitude towards condoms and his/her condom use. To control for the tendency to overestimate the homophily between one's own attitudes and those of MVPs we allow mutual effects between the attitudes of MVPs and respondents. To estimate such models, non-recursive model structural equation software is used (Jöreskog & Sörbom, 2004). To facilitate estimation of this non-recursive model an instrumental variable for the attitudes of MVPs towards condom use was added to the model. This variable equals the mean social approval score for the type of person the respondent valued most. To assure the necessary independence of this variable the respondent was not included in the calculation of this mean.

Since three independent surveys are included in the analysis a multigroup analysis was deemed appropriate. In the initial model the regression coefficients for the three waves (2000, 2002, & 2003) were all constrained to be equal across all waves. In subsequent steps these equality constraints were lifted where the modification indices indicated it was necessary while non-significant coefficients were fixed to zero. As both the MVP's attitude toward condom use and the frequency of condom use variables are ordinal, polychoric and polyserial correlations (and covariances) were used in the analysis for these variables. The final model fits the data well.

Table 1: Descriptive statistics for the three samples (Cameroon, 2000, 2002, & 2003)

% or $\bar{X}$ / s	Survey				
	2000	2002	2003	Total	change
Frequency condom use with casual partners					$\chi^2(6) = 109.61$***
Never	18.0%	14.0%	6.0%	11.9%	
Sometimes	19.8%	22.3%	16.4%	19.5%	
Often	19.8%	12.6%	6.6%	12.1%	
Always	42.3%	51.1%	70.9%	56.5%	
Respondent's attitude towards condoms	0.71 (0.13)	0.71 (0.14)	0.77 (0.13)	0.73 (0.13)	$E^2 = 5.9\%$***
MVPs					$\chi^2(18) = 25.6$
Father	26.6%	32.7%	31.7%	30.9%	
Mother	43.4%	38.4%	36.5%	38.9%	
Parents	*69.9%*	*71.1%*	*68.3%*	*69.8%*	
Grandfather	1.6%	2.0%	2.8%	2.2%	
Grandmother	1.1%	0.7%	0.8%	0.8%	
Family member	21.3%	21.0%	19.9%	20.7%	
Other family	*23.9%*	*23.6%*	*23.6%*	*23.7%*	
Total kin	**93.9%**	**94.7%**	**91.9%**	**93.4%**	
Teacher	0.5%	0.2%	0.5%	0.4%	
Religious leader	0.3%	0.5%	0.5%	0.4%	
Friend	2.9%	3.8%	3.3%	3.4%	
Star	0.3%	0.2%	0.0%	0.1%	

Other	2.1%	0.7%	3.8%	2.2%	
Total non-kin	**6.1%**	**5.3%**	**8.1%**	**6.6%**	
MVP's attitude towards condoms					$\chi^2(8) = 18.60$*
Disapproves completely	5.9%	3.6%	2.3%	3.7%	
Disapproves completely	10.6%	10.8%	9.0%	10.1%	
Neither pro or against	17.0%	12.6%	17.6%	15.6%	
Approves	33.8%	38.8%	33.9%	35.7%	
Approves completely	32.7%	34.2%	37.2%	35.0%	
Social environment					
Discussed either FP, STI or AIDS P12M					$\chi^2(2) = 16.72$***
No	22.8%	26.4%	16.8%	21.9%	
Yes	77.2%	73.6%	83.2%	78.1%	
Diversity of alters discussed FP, STD, AIDS with (stand)	0.06 (0.95)	-0.05 (0.90)	0.18 (1.03)	0.06 (0.97)	$E^2 = 1.1\%$***
Socio-demographic characteristics					
Sex of respondent					$\chi^2(2) = 0.03$
Man	78.8%	79.0%	78.6%	78.8%	
Woman	21.2%	21.0%	21.4%	21.2%	
Age of respondent	19.97 (2.33)	19.93 (2.36)	20.31 (2.41)	20.08 (2.38)	$E^2 = 0.6\%$*
Number of assets owned by HH	3.87 (1.88)	3.67 (1.83)	3.51 (1.55)	3.66 (1.75)	$E^2 = 0.6\%$**
Respondent still in school					$\chi^2(2) = 20.14$***
Not in school	45.5%	56.0%	43.9%	48.9%	
In school	54.5%	44.0%	56.1%	51.1%	
Self-efficacy					
Can convince casual partner to use condom					$\chi^2(2) = 13.48$**
No	11.9%	12.3%	6.5%	10.0%	
Yes	88.1%	87.7%	93.5%	90.0%	
Can avoid HIV					$\chi^2(2) = 20.73$***
No	4.2%	7.2%	1.8%	4.5%	
Yes	95.8%	92.8%	98.2%	95.5%	
Perceived severity					
Aids societal problem					$\chi^2(4) = 4.05$
A serious problem	90.5%	88.3%	91.7%	90.1%	
A problem like another	8.2%	10.3%	7.3%	8.7%	
Not really a problem	1.3%	1.3%	1.0%	1.2%	
Severity of AIDS	1.38 (0.74)	1.17 (0.79)	1.17 (0.80)	1.22 (0.79)	$E^2 = 1.2\%$***
Perceived risk					
Perceived AIDS risk					$\chi^2(6) = 34.84$***
No risk	5.8%	7.1%	10.3%	8.0%	
Low risk	10.3%	14.1%	18.4%	14.9%	
Moderate risk	9.0%	10.3%	13.8%	11.3%	
High risk	74.9%	68.5%	57.5%	65.8%	
Sexual risk behavior					
Number of partners P12M	4.12 (3.62)	4.34 (3.95)	3.84 (3.44)	4.10 (3.69)	$E^2 = 0.4\%$
Frequency sex P1M	2.85 (4.40)	4.08 (4.67)	2.89 (4.02)	3.34 (4.41)	$E^2 = 1.8\%$***
Access to condoms					
Time required to obtain condom	8.63 (10.88)	8.57 (12.08)	5.92 (7.22)	7.58 (10.27)	$E^2 = 1.6\%$***
N	378	609	602	1589	

significance: *: $p < 0.050$; **: $p < 0.010$; ***: $p < 0.001$

Results

IDENTIFICATION OF MVPS

The overwhelming majority mentioned family members as their MVP (93%, see Table 1); 70% mentioned a parent. Less than 4% mentioned friends. The fact that youth are more likely to value the opinions of their parents than those of their friends raises questions about programs that emphasize the role of peers. Between 2000 and 2003 a significant shift toward positive condom use attitudes among MVPs was reported, irrespective of the type of person ($\chi^2(8) = 18.6$, $p = 0.017$). The percentage reporting their MVP completely approves condom use increased from 32.7% in 2000 to 37.2% in 2003 (see Table 1). Significant differences in perceived condom attitude were also observed by type of MVP ($\chi^2(36) = 326.9$, $p = 0.000$). For instance, 45% of youth who value the opinions of friends believe these friends approve of condom use. By contrast, only 21% of youth who value their father's opinion, and only 4% of those who respect religious leaders, believe these persons approve of condom use.

BIVARIATE RELATIONSHIPS

Table 2 reveals a clear association between the MVP's approval of condom use and the frequency of condom use. When the MVP completely approves of condom use, 61% report always using condoms with casual partners, compared to only 40% when the MVP completely disapproves. Furthermore, the proportion never using condoms declines when the MVP's support of condom use increases.

Table 2: Attitude of MVP regarding condom use and frequency of condom use with casual partners, pooled samples (*N* = 1587)

Attitude of MVP	Frequency of condom use frequency with casual partners			
	Never	Some-times	Often	Always
Disapproves completely	22.4%	32.8%	5.2%	39.7%
Disapproves completely	21.9%	21.9%	14.4%	41.9%
Neither pro or against	12.1%	18.6%	10.5%	58.7%
Approves	10.4%	19.9%	12.9%	56.8%
Approves completely	9.4%	17.3%	11.9%	61.4%
Total	11.9%	19.5%	12.0%	56.6%

$\chi^2(12) = 45.4$, $p = 0.000$

STRUCTURAL EQUATION MODELS

The analysis (see Table 3) confirms the presence of homophily regarding condom attitudes. Respondents with positive attitudes toward condom use are more likely than others to report people they respect also support condom use. This may reflect that people prefer others who think alike, but it can reflect a tendency to overestimate homophily (Aseltine, 1995; Kandel, 1996). This homophily effect decreases significantly over time, which suggests increased acceptance of condom use in the communities. Homophily is the most outspoken on divisive issues.

The net effect of the MVP's support for condom use on the respondent's condom attitude is negative in 2000 and 2002, but not significant for 2003. These negative effects suggest that youth may exaggerate the homophily between them and their MVPs.

The MVP's support positively affects the frequency of condom use with casual partners. The respondent's condom attitude has a consistent positive effect on his or her frequency of condom use.

Being able to discuss reproductive health issues with others improves condom attitudes. The range of alters one discussed reproductive health issues with affects condom use, but only in the 2000 survey. This may also point to the wider acceptance of condoms. When condoms are less accepted discussing reproductive health issues with a large variety of people may be interpreted as seeking support.

Women are less likely than men to report that their MVPs support condom use. This points at least to the perception of different standards for men and women regarding reproductive health behaviors. Women also hold less favorable attitudes toward condom use than men, but report higher rates of condom use in 2002 and 2003.

Older respondents are more likely than younger respondents to report that their MVP supports condom use, and also report a higher frequency of condom use. Students have more favorable condom attitudes and also used condoms more frequently. Students are more likely than others to report that their MVP disapproves of condom use.

Self-efficacy has a strong impact on condom use. Respondents who believe they could convince their partner to use condoms, use condoms much more frequently and have more positive attitudes towards condoms. Self-efficacy has a direct positive effect on the frequency of condom use, but also a significant indirect effect (not shown) through its effect on the respondent's condom attitude. The belief that one can avoid HIV has a significant indirect effect on the frequency of condom use, again through the direct effect on condom attitudes.

The findings regarding the effects of perceived AIDS severity are somewhat ambiguous. Both indicators for AIDS severity are negatively defined. The more severe one considers AIDS, the more negative one's attitude towards condoms is. In 2000, respondents who consider AIDS a community problem report less support from their MVPs for condom use, while by 2003 this effect has reversed. Likewise, in 2002 the respondents considering AIDS a major community problem reported less frequent condom use, but this effect as well had reversed by 2003.

AIDS risk perception, as expected, has a positive effect on condom use in 2002. However, the effect was negative one in 2003. The number of partners in the past year positively affects the frequency of condom use. The availability of and access to condoms has a positive effect on condom attitudes, but not directly on reported condom use.

Table 3: Results of structural equation model for frequency of condom use with casual partner, MVP's support of condom use, and respondent's condom attitude, casual partner samples

b (β)	MVP's support of condom use			Respondent's condom attitude			Frequency of condom use with casual partner		
Year	2000	2002	2003	2000	2002	2003	2000	2002	2003
Condom attitudes and access									
Respondent's condom attitude	9.641*** (0.719)	5.639*** (0.570)	2.083*** (0.201)				1.316***[bc] (0.101)	1.316***[ac] (0.132)	1.316***[ab] (0.131)
Social support									
MVP's support of condom use				-0.050***[b] (-0.673)	-0.050***[a] (-0.496)		0.078***[bc] (0.081)	0.078***[ac] (0.077)	0.078***[ab] (0.081)
Discussed RH issues				0.026**[bc] (0.087)	0.026**[ac] (0.085)	0.026**[a]b (0.080)			0.314* (0..095)
Diversity of alters discussed RH with							0.272** (0.158)		
Mean condom use attitude of IO type	0.710***[bc] (0.088)	0.710***[ac] (0.085)	0.710***[ab] (0.130)						
Socio-demographic characteristics									
Sex (1: female)	-0.278**[bc] (-0.066)	-0.278**[ac] (-0.083)	-0.278**[ab] (-0.089)	-0.029**[bc] (-0.092)	-0.029**[ac] (-0.085)	-0.029**[ab] (-0.095)		0.232**[c] (0.069)	0.232**[b] (0.077)
Age	0.088***[bc] (0.122)	0.088***[ac] (0.153)	0.088***[ab] (0.166)				0.053***[bc] (0.075)	0.053***[ac] (0.091)	0.053***[ab] (0.103)
Currently in school	-0.196*[bc] (-0.057)	-0.196*[ac] (-0.071)	-0.196*[ab] (-0.076)	0.027***[bc] (0.105)	0.027**[ac] (0.096)	0.027**[ab] (0.107)	0.177**[bc] (0.054)	0.177**[ac] (0.064)	0.177**[ab] (0.071)
Assets index				0.005*[bc] (0.069)	0.005*[ac] (0.062)	0.005*[ab] (0.058)	0.037*[bc] (0.043)	0.037*[ac] (0.050)	0.037*[ab] (0.047)
Self-efficacy									
Can convince casual partner to use condom				0.058***[bc] (0.149)	0.058***[ac] (0.139)	0.058***[ab] (0.116)	1.369***[bc] (0.268)	1.369***[ac] (0.327)	1.369***[ab] (0.272)
Can avoid AIDS				0.059**[bc] (0.095)	0.059**[ac] (0.112)	0.059**[ab] (0.064)			
AIDS severity									
AIDS as community problem	0.746* (0.155)		-0.334* (-0.084)					0.320* (0.087)	-0.467** (-0.122)
Severity of AIDS				0.011*[bc] (0.065)	0.011*[ac] (0.063)	0.011*[ab] (0.071)			
AIDS risk perception									
AIDS risk					0.016* (0.114)			0.114* (0.080)	-0.138** (-0.118)
Sexual risk behavior									
Number of partners P12M	0.079** (0.168)						0.041***[bc] (0.090)	0.041***[ac] (0.117)	0.041***[ab] (0.113)
Number of sex acts P1M		0.042***[c] (0.145)	0.042***[b] (0.132)						
Time required to obtain condom				-0.002***[b] (-0.155)	-0.002***[a] (-0.159)				
R^2	7.6%	8.1%	9.8%	8.7%	11.0%	7.2%	16.3%	17.7%	18.0%

[a] coefficient constrained to equal the 2000 coefficient;
[b] coefficient constrained to equal the 2002 coefficient;
[c] coefficient constrained to equal the 2003 coefficient
significance: *: $p < 0.050$; **: $p < 0.010$; ***: $p < 0.001$
$\chi^2(109) = 107.680$, $p = 0.518$, RMSEA = 0.021, , NFI = 0.968

Discussion

The results show that the MVP's support for condom use has a positive effect on the frequency of condom use with casual partners. This finding is consistent with the literature on the importance of the social environment and on social support for condom use (Meekers & Klein, 2002b; Estrin, 1999; Akande, 1994; Wilson & Lavelle, 1992; MacPhail & Campbell, 2001). Information about condom use, or

favorable attitudes toward it, are not sufficient to use them. Social approval of condom use by people whose opinion one values is a crucial link in this process.

Although the effect of the MVPs proved to be limited it is noteworthy that youth rarely named a peer as someone whose opinion mattered to them. The overwhelming majority name parents or other relatives as MVPs. This emphasizes the importance of vertical over horizontal relations, of traditional authority. Peers may be important for knowledge and such, but in the end it is still the approval of parents and relatives that matters. AIDS prevention programs, therefore, should pay more attention to these traditional authority structures as any widespread behavior change requires support of both important adults and peers. This was understood by the *100% Jeune* program that after a midterm review started to pay more attention to parent-youth communication. Rather than focusing on specific target groups, such as youth and other high risk groups, AIDS programs should be more encompassing and include the entire community. Traditional authority systems, whenever possible, should be mobilized to promote and support behavior change. That such an approach may yield success is suggested by the observation that the effect of the MVP's opinion on the respondents' condom attitude turned from negative in 2000 and 2002 to non-significant in 2003. Improved communication, especially with parents, creates an environment that facilitates the adoption of reproductive health behaviors, in which youth feel support for their decisions.

Homophily is considered a major organizing principle in human relations. People prefer to associate with others who are similar. This explains the attention paid to peers as the relevant reference group for adolescents. However, the homophily principle applies only to voluntary relationships when there are no structural constraints on one's relationships. Relationships with family and the community are ascribed, not achieved. While peers may influence one's beliefs and knowledge, it is the non-voluntary relationships with family and community members that exert social control over the behaviors of adolescents. This suggests a two-pronged approach: a traditional program oriented towards adolescents, and a second program that targets the community with special attention to opinion leaders in the community. The role of these opinion leaders is twofold: disseminating information about safe sex behaviors, and providing moral approval for such behaviors.

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