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Emotional support and gender in people living with HIV: effects on psychological well-being

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Abstract Current research indicates that emotional support is strongly associated with physical and psychological adjustment in persons living with HIV/AIDS. While gender-differences in health and health behaviors of HIV positive patients are well studied, less is known about how men and women living with HIV/AIDS may differentially perceive and integrate support into their lives, and how it subsequently affects their psychological well-being. This cross-sectional study examines how emotional support received from partners and family/friends and gender explains psychological well-being (i.e., stress, depression, anxiety) in a sample of 409 partnered European HIV positive individuals. We hypothesized that gender would modify the associations between support and psychological well-being such that men would benefit more from partner support whereas women would benefit more from family/friend support. Results revealed that regardless of the source of support, men's well-being was more positively influenced by support than was women's well-being. Women's difficulties in receiving emotional support may have deleterious effects on their psychological well-being.

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Introduction

HIV is a chronic disease with a profound social impact due to its strong ties with sexual and societal stigmatized behavior, such as illegal drug use and sexual promiscuity. A diagnosis of HIV may lead to difficulties with illness-related coping, reduced self-esteem, social isolation, and poorer psychological well-being (Vanable et al. 2006; Parker et al. 2002). Receiving emotional support from significant social network members, such as partners, families, or friends may counteract the negative impact of HIV on psychological well-being. Moreover, it is likely that gender also influences the extent to which social support is perceived and integrated into the lives of people living with HIV. The present study examines how support from partners and support from family/friends is associated with psychological well-being in a European sample of men and women living with HIV, and how gender modifies these associations.

Living with HIV poses many challenges, and many people living with HIV have higher levels of stress and depression than the general population of healthy individuals (Bing et al. 2001; Cruess et al. 2003). Higher levels of distress are associated with poorer health behaviors, including non-adherence to medication, drug use, and unsafe sex practices (Bing et al. 2001). In addition, elevated levels of stress and depression are linked with faster disease progression (Leserman 2008). It is possible that receiving support from family members, friends, and partners may help to alleviate or prevent the extent to which people living with HIV experience psychological distress (Cohen and Wills 1985).

Current research confirms that receiving social support from significant social network members can promote positive psychological adjustment in people living with HIV. Emotional support provides coping assistance in attempts to alleviate or prevent distress through actions such as empathy and understanding (Heller and Rook 1997). Greater amounts of emotional support are associated with less negative and more positive affect in people living with HIV (Deichert et al. 2008; Gonzalez et al. 2004). Moreover, people living with HIV who are satisfied with the amount of support available to them tend to experience less psychological distress, a higher quality of life, and more self-esteem (Safren et al. 2002; Turner-Cobb et al. 2002) whereas those who perceive low levels of social support experience increased distress (Catz et al. 2002). Previous research suggests that sexual orientation influences the association between social support and psychological well-being in persons living with HIV (Carels et al. 1998; McDowell and Serovich 2007), but less is known about how men and women living with HIV/AIDS may differentially perceive and integrate support into their lives, and how this support subsequently explains their psychological well-being.

Compared to men living with HIV, women living with HIV often have increased distress, lower health-related quality of life, and fewer social resources (Cederfjäll et al. 2001; Gaberman and Wolfe 1999). A paucity of research, however, directly examines if gender differences in social support processes may help to explain these health disparities in men and women living with HIV. The broader literature and theory examining gender roles and gender differences in social support and well-being, however, suggests that men and women differ in both their social behaviors and the sources from which they draw support (e.g., Belle 1989; Eagly et al. 2000). Taken together, these theories may explain, in part, why gender differences emerge in the well-being and health of men and women living with HIV.

According to gender role theory, from the time of childhood, men and women are socialized to engender specific attributes and social behaviors (Eagly et al. 2000). Like other social behaviors, social support interactions can be viewed as being regulated by social norms; therefore, it is likely that support processes are influenced by the social roles that individuals occupy (Eagly and Crowley 1986). Women's traditional gender roles prescribe that they provide more social support than they receive. Research confirms that women tend to offer higher levels of support and more effective support, including support to spouses, than do men (Belle 1989; Neff and Karney 2005; Schwarzer and Gutiérrez-Doña 2005), even when they are ill (Fekete et al. 2007). For women, the perception of giving support in one's intimate relationships may be even more important for one's health than the perception of receiving support (Väänänen et al. 2005). However, it is possible that providing more support than one receives may lead women to experience higher levels of distress than men (Belle 1989).

Men and women also differ in the sources from which they draw support. Compared to men, women tend to have broader social networks, a greater number of intimate relationships, and are more likely to report that their closest social network member is someone other than their spouse (Antonucci 1994; Belle 1989). Women are also more capable of mobilizing support networks during times of stress than are men (Kessler et al. 1985). Especially when coping with an illness, men tend to rely on their spouses as primary sources of support, whereas women have a broader social support network from which they draw support (Revenson et al. 2005). It is unclear if this pattern of findings is consistent for individuals living with HIV. However, research notes that while perceived family support appears to be important for both men and women living with HIV, support from a spouse or romantic partner is also associated with psychological adjustment (Schrimshaw 2003; Serovich et al. 2001).

Thus, for people living with HIV who have partners or significant others, it is plausible that men receive more support from their partners and also yield more psychological benefits from their partners' support than do women. In contrast, it is likely that women receive more support from their families and friends and gain more psychological benefits from these types of relationships than men. The goal of our study was to examine gender differences in the extent to which emotional support received from partners and family/friends was associated with psychological well-being (i.e., less stress, depression, and anxiety) in a sample of European men and women living with HIV. A better understanding of gender-specific variables influencing the perception of social support has important clinical implications for men and women living with HIV, and is also necessary for developing more effective psychosocial interventions in a family context.

Our first hypothesis predicted that emotional support from both partners and family/friends would be associated with lower levels of stress, depression, and anxiety in both men and women living with HIV. Our second hypothesis predicted that gender would modify the associations between the source of support and psychological well-being. Specifically, we hypothesized that partner emotional support and gender would interact such that HIV positive men would derive stronger psychological benefits from receiving social support from partners whereas HIV positive women would obtain stronger psychological benefits from receiving social support from other family members and friends.

Method

Participants and procedure

This cross-sectional retrospective study was carried out in the context of the European Public Health project "EUROSUPPORT V", a multi-center study performed at 16 European HIV treatment and research centers from 13 European countries, both old and new Member States (for a list of participating countries see 'acknowledgements'). Data were collected from study sites using an anonymous, self-report questionnaire, which was developed on the basis of a preceding qualitative elicitation study (Nöstlinger et al. 2008) with validated scales integrated where appropriate. Ethical approval was obtained at the coordinating center's Institutional Review Boards (ITM/University of Antwerp). The study instrument was piloted at the coordinating study site for clarity and feasibility, using a small selected sample of patients.

The current study focuses on a subset of men and women ($n = 409$) from these data who reported that they had been in a committed relationship for at least the past 6 months and were receiving social support from both a significant others and other family members. Men and women in the current study (24.9% women) were on average 39.4 years of age (SD = 8.6, range = 18–68), had been living with HIV for approximately 8.8 years (SD = 6.3; range = less than 1–24 years), and had a mean self-rated health score of 7.3 (SD 2.1; range 0–10) on a scale of 0 (not at all satisfied) to 10 (completely satisfied). About half of participants in the study identified themselves as having a homosexual orientation (51.8%), and the remaining identified themselves as being heterosexual (42.3%), or bisexual (5.9%). The majority of participants contracted HIV through sexual contact (69.7%), and the remainder contracted it through intravenous (IV) drug use (11.7%), a combination of sexual contact and IV drug use (2.9%), blood transfusion (3.2%), mother to child transmission (2.0%), or an unknown route of transmission (10.5%) and approximately one-third (29.8%) of the participants had experienced some sort of discrimination regarding their HIV-status over the past 3 years. Most participants described themselves as seropositive without HIV-related physical complaints (80.0%). Almost half of the sample (42.3%) reported having a higher secondary education (±12 years of education), most of the sample reported that they were employed (72.1%), and over half had not encountered financial difficulties during the past year (67.9%).

Measures

Emotional support. The emotional support subscale of the *Social Support Inventory* (SSI; Timmerman et al. 2000) was used to assess participants' perceptions of the emotional support they received from family/friends and from partners. Prior research finds the internal consistencies of the subscales to be satisfactory, with α-values ranging from 0.70 to 0.86 (Timmerman et al. 2000). The subscale consisted of five items (e.g., cheers you up, shows affection for you, is empathic), and participants indicated whether or not each item applied to them. Items were summed to create a continuous measure for each of the subscales with a potential range of 0–5 and participants completed this scale twice, once in reference to their family members/friends and once in reference to their partners. The mean amount of emotional support men and women reported receiving from partners was 4.42 (SD = 1.4; range = 0–5; $\alpha = .78$), and from families/friends was 3.74 (SD = 1.5; range = 0–5; $\alpha = .91$).

Psychological well-being. Psychological well-being was measured using the 21-item version of the *Depression Anxiety Stress Scale* (DASS-21; Antony et al. 1998). The DASS-21 consists of three subscales of 7 items each measuring stress, depression, and anxiety on a scale of 0 ('did not apply to me at all') to 3 ('applied to me very much, or most of the time') over the past week. Participants' mean amount of stress was 6.83 (SD = 4.7, range = 0–21; $\alpha = .87$), mean perceived feeling of being depressed was 5.01 (SD = 4.9; range = 0–21; $\alpha = .90$), and mean perceived anxiety was 4.00 (SD = 4.1; range = 0–21; $\alpha = .83$). Compared to UK normative data for this measure, the men and women in our sample had higher levels of stress, depression, and anxiety than in non-clinical, broadly representative adult populations (Crawford and Henry 2003).

Analysis plan

Hierarchical multiple regressions were used to test our hypotheses that (1) emotional support from partners and family/friends would be associated with better psychological well-being in people living with HIV and (2) gender would modify the associations between emotional support from partners and family/friends and psychological well-being. Covariates were entered into the first step of the regression equation, followed by centered predictor variables (i.e., partner support and family/friend support) in the second step, and the moderator (i.e., gender) in the third step. The interaction terms (i.e. partner support × gender and family support × gender) were entered into the final step of the model. Significant interaction terms were further explored using simple slope procedures set forth by Holmbeck (2002) for decomposing interactions using a categorical moderator variable.

Potential covariates in our analyses included socio-demographic (e.g., age, education, employment, financial

status, country of origin), social (e.g., partner HIV-status, children, experience of HIV-discrimination), and health characteristics (e.g., route of HIV transmission, sexual orientation, self-rated health, medication status). We used several methods to select covariates for our analyses. First, we examined for gender difference in each potential covariate using chi-square and *t*-tests. Table 1 presents sample characteristics by gender for all potential covariates. We next conducted bivariate correlations among each dependent variable and the potential covariates. Any additional variables that emerged as significant correlates of the dependent variables were also retained as covariates in all analyses. In addition, because sexual orientation has been linked to the type of support that men and women rely on (e.g., Kurdek and Schmitt 1987), we covaried sexual orientation in all analyses. Thus, all models control for sexual orientation, age, whether or not the participant had recently experienced financial problems, whether or not the participant was employed, whether or not the participant had children, whether or not the participant experienced HIV-related discrimination, education, country of origin, route of HIV transmission, years with HIV, HIV status, intake of antiretroviral medication, and self-rated health.

Results

Table 2 presents means, standard deviations, and *t* tests by gender for all key study variables. Compared to men living with HIV, women living with HIV reported higher levels of stress $t(407) = 4.00$, $p < .001$, depression $t(407) = 2.81$, $p < .01$, and anxiety $t(407) = 2.54$, $p < .01$. Women in our study also reported receiving lower levels of emotional support from both their families/friends and partners ($t(407) = -2.15$, $p < .05$ for families and $t(407) = -2.27$, $p < .05$ for partners).

Our first hypothesis predicted that emotional support from family/friends and partners would explain lower levels of stress, depression, and anxiety in both men and women living with HIV. After accounting for covariates (i.e., sexual orientation, age, whether or not the participant had recently experienced financial problems, whether or not the participant was employed, whether or not the participant had children, education, country of origin, route of HIV transmission, years with HIV, HIV status, intake of antiretroviral medication, and self-rated health), emotional support from family/friends (Table 3) was associated with lower levels of depression ($\beta = -.11$, SE = .05, $p < .05$) and anxiety ($\beta = -.11$, SE = .05, $p < .05$) in both men and women living with HIV but emotional support from partners was not associated with any indicators of psychological well-being. Together, emotional support from partners and family/friends accounted for 1.2% of the variance in stress ($p < .10$), 2.6% for depression ($p < .01$), and 1.2% for anxiety ($p < .10$).

We next predicted that gender would modify the associations between partner support and well-being and between family/friend support and well-being. After accounting for covariates, significant interaction effects emerged between emotional support from family/friends and gender in explaining stress (Table 3, $\beta = -.27$, $p < .01$), depression (Table 3, $\beta = -.21$, $p < .05$), and anxiety (Table 3, $\beta = -.17$, $p < .05$) in men and women living with HIV. Decomposition of these interaction effects revealed that emotional support from family/friends predicted lower levels of stress ($\beta = -.18$, SE = .06, $p < .01$), depression ($\beta = -.18$, SE = .06, $p < .01$), and anxiety ($\beta = -.18$, SE = .06, $p < .01$) in men living with HIV. For women living with HIV, however, emotional support from family/friends was marginally associated with higher stress ($\beta = .16$, SE = .09, $p = .07$) but was not associated with depression ($\beta = .06$, SE = .09, ns) or anxiety ($\beta = .06$, SE = .09, ns). Interactions between family/friends and partner emotional support and gender accounted for an additional 2.4% of the variance in stress ($p < .01$), 1.2% of the variance for depression ($p < .10$), but only 1.1% for anxiety ($p < .10$).

Discussion

Consistent with prior research (e.g., Cederfjäll et al. 2001; Gaberman and Wolfe 1999), women living with HIV in our study experienced higher rates of stress, depression and anxiety than their male counterparts, and received less emotional support from their partners and families. We expected that emotional support from partners would be more beneficial for men living with HIV, whereas emotional support from family and friends would be more beneficial for women living with HIV. However, our findings suggest that partner support did not explain psychological well-being in men or women living with HIV, and the effectiveness of family/friend support varied by gender, such that men living with HIV derived more psychological benefits from family support than did women living with HIV. In fact, our results suggest that in some cases social support may have negative implications for the well-being of women living with HIV.

According to theory and research on the impact of gender roles on social interactions and psychological well-being, women are usually influenced more than men by the dynamics of their intimate relationships. As such, the maintenance of relationships may be more of a central objective for women than for men (Cross and Madsen 1997). Additionally, during times of stress women are more likely than men to seek out support and mobilize support

Table 1 Means and standard deviations of sample characteristics by gender ($n = 409$)

	Men ($n = 307$) Mean (SD)	Women ($n = 102$) Mean (SD)	t-value
Age	40.2	36.8	−3.49***
Education	4.9	4.4	−3.70***
Self-rated health	7.3	7.1	−1.00
Years with HIV	8.4	10.0	2.14*
	Men (%)	Women (%)	χ^2-value
Employment			15.75***
Yes	77.2	56.9	
No	22.8	43.1	
Financial problems			
Yes	27.5	46.5	12.53***
No	72.5	53.5	
Children			36.11***
Yes	76.9	45.1	
No	23.1	54.9	
Country of origin[a]			69.97***
Sexual orientation			154.3***
Homosexual	69.2	1.0	
Heterosexual	24.3	94.9	
Bisexual	6.5	4.1	
Partners' HIV status			3.05
HIV-positive	34.5	37.3	
HIV-negative	50.8	42.2	
Unknown	4.6	6.9	
Did not report	10.1	13.7	
Experience of HIV discrimination			9.87**
Yes	25.7	42.2	
No	74.3	57.8	
HIV transmission			37.00***
Sexual contact	75.7	55.0	
IV drug use	7.2	21.0	
Sexual contact and IV drugs	1.6	7.0	
Blood transfusion	3.6	2.0	
Occupational risk	0.0	0.0	
Mother to child transmission	0.7	6.0	
Unknown	11.2	9.0	
HIV status			.49
No physical symptoms	80.5	77.2	
Physical symptoms	19.5	22.8	
Medication status			1.11
On HIV medication	78.5	83.3	
Not on HIV medication	21.5	16.7	

[a] Because there were 13 participating countries, only the Chi-square value is reported and not the percentage of men and women from each country. For a list of participating countries, see 'Acknowledgments'

* $p < .05$; ** $p < .01$; *** $p < .001$

networks (Wethington et al. 1987). However, as the pattern of results in our study suggests, not only were women with HIV receiving less emotional support than men with HIV, but they did not benefit from the emotional support that they reported receiving.

Considering that emotional support may be defined as the expression of concern, compassion, sympathy, and esteem for an individual (Cohen and Wills 1985), we can assume that it may be the most successful way to practice, and also to solicit, aid for women. For instance, women

Table 2 Means and standard deviations of study variables by gender ($n = 409$)

	Men ($n = 307$) Mean (SD)	Women ($n = 102$) Mean (SD)	t-value
Stress	6.30 (4.6)	8.42 (4.7)	4.00***
Depression	4.63 (4.9)	6.18 (4.8)	2.81**
Anxiety	3.71 (3.9)	4.88 (4.4)	2.54**
Family/Friends emotional support	3.84 (1.4)	3.44 (.17)	−2.15*
Partner emotional support	4.52 (1.2)	4.11 (1.7)	−2.27*

* $p < .05$; ** $p < .01$; *** $p < .001$

Table 3 Effects of gender and emotional support from family and partners in the prediction of psychosocial well-being in people living with HIV ($n = 409$)

	Stress β (SE)	Depression β (SE)	Anxiety β (SE)
Independent variables			
Partner support	−.05 (.05)	−.09 (.05)	−.01 (.05)
Family/Friends support	−.08 (.05)	−.11 (.05)*	−.11 (.05)*
Gender	−.16 (.06)**	−.12 (.06)*	−.09 (.06)
Gender × Partner support*	−.03 (.08)	.02 (.08)	−.04 (.08)
Gender × Family/Friends support*	−.27 (.09)**	−.21 (.09)*	−.17 (.09)*

Note: All models control for sexual orientation, age, whether or not the participant had recently experienced financial problems, whether or not the participant was employed, whether or not the participant had children, whether or not the participant experienced HIV-related discrimination, education, country of origin, route of HIV transmission, years with HIV, HIV status, intake of antiretroviral medication, and self-rated health

* $p < .05$; ** $p < .01$; *** $p < .001$

usually talk more than men about private matters, try to seek and receive help, and are more engaged in emotional topics (Dindia and Allen 1992; Wethington et al. 1987). However, compared to the men in our study, the women in our study received less emotional support from both partners and family and friends. Women who did receive emotional support, particularly from their family and friends, tended to also report higher levels of distress. One explanation for these results is that there may have been a mismatch between the amount of support women perceived that they needed and the amount of support they actually received. Not receiving adequate support may explain why women living with HIV in our study did not obtain psychological benefits from receiving emotional support from their families.

It is also possible that women in our study did not want to relinquish their role of care provider and nurturer as a result of their illness (Revenson et al. 2005). If family members provided unsolicited instrumental or emotional support by offering to help with child care, providing advice, or even offering financial assistance, women may have perceived the message that they were not capable of managing the norms and responsibilities of their social role. Support that is not asked for can be perceived by support recipients as controlling or interfering, and is often met with negative reactions and feelings of incompetence (Smith and Goodnow 1999). Moreover, even well-intentioned support efforts from others may have negative effects, especially if support recipients perceive that the support efforts are insensitive or inconsistent with their needs (Fekete et al. 2007; Newsom et al. 2005). In contrast, men whose social roles prescribe that they be recipients of care rather than providers of care (e.g., Eagly et al. 2000) may have seen involvement from family as welcome and helpful, and likely did not feel as if the norms of their social role were being threatened.

In addition to the influence of gender roles on interpersonal processes, self-esteem may have played a role in the extent to which women were able to perceive and receive support efforts from partners and families. Self-esteem influences interpersonal relationships because individuals' feelings of self-worth have a bearing on both their beliefs and social behaviors (Stinson et al. 2008). Low self-esteem may damage interpersonal relationships because it promotes a self-protective interpersonal style (Stinson et al. 2008). In other words, living with HIV may cause individuals to feel socially isolated and have negative perceptions of their social relationships. This process may be fueled by internalized HIV-related stigma, which has been described as an emotional reaction to the many different layers of overt HIV-related stigma people living with HIV have to face (Stewart et al. 2008). At a general level, it

can be posited that a lack of positive social relationships leads to negative psychological states such as anxiety or depression, and that only support that is perceived as adequate would influence the appraisal process and function as a stress buffer (Cohen and Wills 1985).

However, research notes that women may experience higher levels of HIV-related stigma (Wingwood et al. 2007) and this stigma could prevent women from disclosing that they are HIV-positive (Derlega et al. 2002). Non-disclosure of a positive HIV status may be a barrier to women receiving the support they need to cope with their illness (Serovich et al. 2000). In our study, women with HIV did tend to report that they experienced more HIV-discrimination than men, were more likely to be infected with HIV through IV drug use, and were more likely to be unemployed and experiencing financial problems. Although our analyses included route of HIV-transmission, whether or not participants had experienced financial problems, and HIV discrimination as covariates, it is still possible that these factors contributed to the poorer well-being and lack of support seen in women living with HIV. Future research should more closely examine the extent to which gender differences in the support interactions and psychological well-being of people living with HIV may be accounted for by perceptions of stigma, HIV-related discrimination, or socioeconomic stress.

There are also other several limitations to our study that should be noted. Our study is cross-sectional and causal inferences cannot be made about the direction of associations, and our heterogeneous sample comprises respondents stemming from 13 European countries. Research suggests that similarities of behavior are likely due to social roles rather than traits in traditional cultures (Costa 2001). Even so, we did control for the country from which the individual originated in all of our analyses. Additionally, our measures of emotional support from partners and family/friends were reported using dichotomous options. Even though this measure of support (SSI; Timmerman et al. 2000), has been validated and used in prior research, this method of assessing emotional support may have reduced the variability in participants' responses.

Because the current study focuses on comparing support from partners versus support from family members/friends on well-being in PLHA, we selected the sample for the current study from the larger sample based on whether or not participants were partnered (for at least the past 6 months) and currently receiving support from both partners and family members/friends. We acknowledge that this may limit the generalizability of our findings, as some people may be receiving support from partners and not family members/friends or vice versa. We also did not have a measure of length of relationship, and it is possible that relationship dynamics and interactions change over the course of a relationship. Moreover, our results may not generalize to single men and women living with HIV, or men and women who do not have family involved in their lives, as it is well-established that strong social ties, such as marital and family relationships, have benefits for both physical and psychological well-being (Kawachi and Berkman 2001).

Finally, more than half of the sample is bisexual or homosexual, and men were more likely to identify with these categories of sexual orientation. Although most research on gender role theory has been conducted in heterosexual couples, there is some evidence to suggest that individual power differences within homosexual and bisexual couples exist, reproducing to some extent the traditional gender roles expressed in theory and research (Peplau and Spaulding 2000). While we controlled for sexual orientation in all analyses, future research should examine the role that sexual orientation plays in how men and women are differentially influenced by support processes. Our study was also unable to differentiate between support received from family members and friends. Some research suggests that friends may be more supportive than family members because they are 'chosen' as part of an individual's social network (Kalichman et al. 2003). Thus, future research should examine how associations between gender and well-being differ as a function of support from family versus support from friends.

Despite its limitations, our study provides evidence that among men and women living with HIV, social support from families on psychological well-being differs between genders. These gender differences in support are associated with differential psychological health outcomes. Our findings illustrate the need to develop more gender-sensitive psychosocial models for explaining health behavior and well-being, as well as evidence-based approaches for professional support and counseling. Defining HIV as a dyadic or family disease may also provide a particularly valuable approach in psychosocial HIV care. While there may be limits to this approach in most routine HIV care settings, it would help to strengthen partner and family relations by enabling the couple or members of the family system to become involved in the illness management of men and women living with HIV. Knowledge of how social support is perceived by HIV positive persons seems to be a necessary requisite for effective psychological treatment; therefore, a gender specific approach should be applied as much in clinical practice as in social support research.

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