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The Relationship between Serving as a Mentor and Depressive Symptoms among Sexual Minority Men in the MACS Healthy Aging Study

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Abstract

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Sexual minority men (SMM) in the US are twice as likely to experience mental health challenges, including depressive symptoms, compared with their heterosexual counterparts. Having a like-mentor, or a sexual minority mentor, is associated with improved mental well-being among SMM mentees. However, few studies have explored the potential benefits to mentors. Using confirmatory factor analysis, we calculated a perceptions of mentoring score that encompasses experiences and beliefs regarding mentoring of SMM from the Healthy Aging Substudy of the Multicenter AIDS Cohort Study. We used a generalized estimating equations model to assess associations between perceptions of mentoring and clinically significant depressive symptoms adjusted for key covariates; models were also stratified by HIV serostatus. Among 1,246 men aged 40+ years, the strongest agreement was with the statement "I have encouraged people to be proud of their sexual orientation," for which 770 individuals (72%) indicated "Agree" or "Strongly Agree." Each unit increase in the mean perceptions of mentoring score was associated with 8% decreased odds of having clinically significant depressive symptoms (adjusted odds ratio: 0.92; 95% CI: 0.85–0.99). We show that SMM reported like-mentoring experiences and had positive mentoring beliefs, and that these were associated with a decreased odds of having depressive symptoms. Encouraging SMM to serve as like-mentors could be a way to counter depressive symptoms among this key population. There is a need for increased research regarding how mentoring programs can best be designed to benefit sexual minority mentees and mentors.

Keywords

Sexual Minorities; Like-Mentoring; Depressive symptoms

Introduction

Studies have shown that sexual minority individuals report depressive symptoms at a rate 1.5 times higher than that of the general population, and that 33.4% of sexual minority individuals report clinically significant levels of depressive symptoms (King et al., 2008; Su et al., 2016). Sexual minority men (SMM) in the US are nearly twice as likely to experience mental health challenges, including depressive symptoms, compared with their heterosexual counterparts (Fredriksen-Goldsen et al., 2013; Lewis, 2009; Ploderl & Tremblay, 2015; Stinchcombe et al., 2018). The disproportionate levels of depressive symptoms among sexual minority men compared to heterosexual men may be explained by higher levels of exposure to a variety of stressors among SMM, including sexual minority stigma, violence, and social isolation (Surkan et al., 2020; Wohl et al., 2013; Yan et al., 2019).

Several studies have shown a link between increased social connectedness or social activities and decreased levels of depressive symptoms (Choi et al., 2020; Glass et al., 2006; Roh et al., 2015). However, the mechanisms underlying these relationships remain unclear. One potential, but seldom investigated, mechanism for encouraging social connectedness and bonding to facilitate psychological well-being is through serving as a mentor. Although definitions vary in the literature, a mentor is broadly defined as "someone who serves as a positive, guiding influence in another (usually younger) person's life," and undertakes various roles, including advising, advocating, counseling, and role-modeling (Disch, 2018; Mullen & Klimaitis, 2021). Formal and informal mentorships with trusted adults have

been shown to be effective as a mechanism to provide positive role models, strategy for navigating challenges, and social support for young people (DuBois et al., 2011; Raposa et al., 2019).

Sexual minority individuals face unique challenges in their personal and professional lives, including making decisions about disclosing their identity, facing rejection from family/peers, and encountering discrimination in school/work (Russell & Fish, 2016). Social connections or bonding with other sexual minority individuals could be particularly beneficial in dealing with these challenges. Studies have shown that sexual minority youth and adults value support services designed specifically for sexual minority persons (Eisenberg et al., 2018; Hebl et al., 2012). Like-mentors are defined as people who share particular characteristics with their mentees, such as having sexual minority individuals mentored by sexual minority mentors. Prior studies and meta-analyses provide strong support for positive mental health, social and educational effects of mentoring programs for sexual minority youth using like-mentors (Albright et al., 2017; Raposa et al., 2019). In a study exploring the effects of like-mentoring for gay and lesbian adults in a work setting, Hebl (2012) showed specific benefits gained by gay/lesbian employees with like-mentors including increased job satisfaction as well as salaries and promotions (Hebl et al., 2012).

The benefits of like-mentoring relationships to the mentor are understudied in the literature. The potential positive health effects being a mentor can have on depressive symptoms is based on the theory of Baumeister and Leary (1995), who argue that the need for interpersonal attachment is among the most basic of human emotions (Baumeister & Leary, 1995). Social isolation describes a lack of a sense of belonging. Unfortunately, social isolation is frequently noted to occur at higher rates among sexual minority individuals, due to stressors such as family rejection, gender identity and sexual orientation stigma, and ostracization (Floyd et al., 2016; Garcia et al., 2020; Williams et al., 2018). Encouraging intergroup contact has been identified as a mechanism for reducing psychosocial stress and isolation among sexual minority individuals (Chaudoir et al., 2017). Like-mentoring is one possible means for increasing intergroup contact and social connectedness. The potential benefits of mentoring identified in a meta-analysis by Eby (2013) included improved attitudinal, behavioral, career-related, and health-related outcomes (Eby et al., 2013). With social isolation being one part of a complex set of factors contributing to depressive symptoms, we propose that perceptions related to serving in a mentoring role to sexual minority individuals could help to counteract depressive symptoms among SMM (Elmer & Stadtfeld, 2020; Giano et al., 2020).

Depressive symptoms are commonly reported among people living with HIV (PLWH), with reported prevalence of 20% to 30% among HIV-seropositive adults in the US (Bengtson et al., 2018). Rates of depressive symptoms and diagnosed depression are even higher among sexual minority individuals living with HIV. A meta-analysis by Xiao (2020) showed a prevalence of diagnosed depression of 43% (95% confidence interval [CI]: 32%−53%) among SMM living with HIV, and nearly 1.5-fold increased odds of depression among SMM with HIV compared with those who were seronegative (Xiao et al., 2020). Despite the importance of mentorship, to our knowledge, few studies have examined the physical or mental health effects of serving in a mentoring role among SMM who are living with

HIV. In a prior study, older adults living with HIV reported feeling fortunate and important when serving as mentors to family members and younger people, both in terms of providing education and serving as a positive role model (Emlet & Harris, 2020).

Current Study

In this study, we examined experiences with serving in a mentoring role among men in the Multicenter AIDS Cohort Study (MACS), a well-established prospective cohort that has been following SMM with and without HIV for nearly four decades, and explored the associations between mentorship perceptions and depressive symptoms among these men. We applied Confirmatory Factor Analysis to create a perceptions of mentoring score based on an eight-item questionnaire. We hypothesized that having positive perceptions of mentorship would be associated with decreased depressive symptoms among SMM. In addition, we hypothesized that this association would be stronger among SMM living with HIV due to the opportunity for PLWH to explore and provide mentorship on issues at the intersection of sexual orientation and HIV risk and/or care.

Method

Participants

Details of the design of the MACS have been extensively documented; briefly, the MACS recruited men who reported having sex with men from 4 metropolitan areas across the US (Baltimore, Maryland/Washington, DC; Chicago, Illinois; Pittsburgh, Pennsylvania; and Los Angeles, California) to follow the natural and treated history of HIV/AIDS (Kaslow et al., 1987; Silvestre et al., 2006). MACS enrollees participate in biannual visits with questionnaires, physical examinations, and laboratory specimen collection. In April 2016, the MACS Healthy Aging Substudy was initiated within the MACS and aimed at identifying psychosocial resiliencies among aging SMM (S. Meanley et al., 2020). Eligibility criteria for enrollment in the MACS Healthy Aging Substudy included being at least 40 years of age by April 2016, reporting at least 1 incident of sexual intercourse with a man since enrolling in the MACS study, and having completed at least 2 consecutive MACS visits prior to April 2016 (S. P. Meanley et al., 2020). An online survey was administered at 6 biannual visits over a 3-year period between April 2016 and March 2019. This group of men had a mean age of 59.6 years (range 40–91 years) at baseline. Most self-identified as white (73%), and another 20% as Black. The majority (92%) reported not having Hispanic ethnicity. Most (82.7%) identified as gay, with another 4.6% as bisexual and 2.5% as straight. Having attended graduate school or higher was reported by 40%, with another 25% reporting having a college degree (Egan et al., 2021).

Procedures

Of the 1,497 men meeting eligibility criteria at the baseline visit, 1,318 unique individuals (88%) were enrolled in the current study. The Institutional Review Boards of all MACS enrollment sites and the data analysis center have reviewed and approved the MACS and Healthy Aging Substudy protocols. All participants gave written informed consent for participation in the studies.

Independent Variable

Eight questions related to experiences with and feelings about mentoring of SMM were asked at each of the 6 visits. The questions were adapted from a survey developed and administered by Hebl (2012) in a study exploring the potential benefits of work-place mentoring for and by sexual minority individuals (Hebl et al., 2012). Of the 8 questions, 5 ascertained prior experiences with mentoring, which included: (1) I have helped people decide how to come out; (2) I have helped people find LGBT community resources; (3) I have encouraged people to be proud of their sexual orientation; (4) I have discussed with people how to react to verbal and/or physical threats related to their LGBT identity; and (5) I have talked with people about specific strategies and issues to being “out.” Three additional questions asked about people’s beliefs related to mentoring, which included: (1) Interaction between younger and older LGBT people is important to me; (2) Interaction between younger and older LGBT people is important for the LGBT community; and (3) Younger LGBT people have helped me feel better about my LGBT identity. All of these questions were answered on a Likert scale, with 5 indicating Strongly Agree; 4, Agree; 3, Neutral; 2, Disagree; and 1, Strongly Disagree.

Our analytic sample consisted of the 1,246 men who attended 2 or more MACS Healthy Aging Study visits and answered 6 or more of the mentoring questions at least once. Based on the prior validation work by Hebl (2012) suggesting these questions assess a single latent construct related to mentoring, we used confirmatory factor analysis (CFA) to confirm that the 8 questions represented a single construct termed “perceptions of mentoring” using each participant’s baseline response to the mentoring questions (Hebl et al., 2012). We confirmed that a single-construct model was optimal as compared with a higher number of classes and therefore proceeded with the analysis in this way. The mean scores for perceptions of mentoring were calculated for each visit and, after being confirmed to be normally distributed in this population, used as a continuous variable in the regression models. To assess whether men with positive perceptions of mentoring were different from the overall sample, we conducted a sensitivity analysis restricted to men having higher mentoring sores than the overall median (representing “positive” perceptions of mentoring); these participants had a similar descriptive profile and effect size estimates as the overall sample (data not shown).

Outcome and Covariates

The primary outcome was depressive symptoms, as measured by the Center for Epidemiologic Studies Depression (CES-D) scale. The outcome was ascertained in the time period following baseline exposure assessment. We dichotomized the outcome using the standard cutoff of 15 or less indicating no/low depressive symptoms vs 16 or greater indicating moderate/severe depressive symptoms (Radloff, 1977). In the regression models, we used the outcome assessment from each time the CES-D was completed.

Covariates included age, underlying depression and social support as time-fixed baseline covariates, and income as a time-varying covariate. We conducted stratified analyses by HIV serostatus. Baseline age was included as a continuous integer. Underlying depression was categorized as a CES-D score of 16 or greater, evidence of medication use for depression,

or report of treatment for depression at the baseline visit. We chose to include medication use and/or report of treatment for depression in the definition of underlying depression to capture individuals who were being treated for depressive disorder and, therefore, may not manifest depressive symptoms at the baseline visit. Social support was ascertained using a series of questions on whether an individual had received support in the last 6 months from the following sources: work, church, acquaintances, friends, family, created family, and partner. Responses were on a 5-point Likert scale of "Not at all", "Very little", "Somewhat", "Quite a bit" and "A great deal". There was strong internal consistency in the responses (Cronbach's alpha: 0.78), so the means of the response values of these 8 questions were dichotomized as "Not at all/Very little/Somewhat" *vs.* "Quite a bit/A great deal". Income was ascertained as a dichotomous variable of less than $20,000 per year vs $20,000 or more per year as reported at each visit. HIV serostatus was determined via serological testing on specimens obtained at each MACS study visit using enzyme-linked immunosorbent assays and subsequent confirmatory tests (Kaslow et al., 1987). HIV serostatus was dichotomized as seronegative vs seropositive. We elected not to include race/ethnicity as a covariate in the primary analysis due to it being a poor proxy for underlying issues such as socioeconomic position, social inequalities, racial segregation, or structural racism. However, we did conduct a sensitivity analysis including race/ethnicity (self-identified as non-Hispanic Black, non-Hispanic White, Hispanic, vs other) as a covariate; there were no significant differences in our results (Kaufman & Cooper, 2001; Krieger, 2000).

Data Analysis

We conducted a CFA to confirm our 8-item single-factor hypothesized representation of a latent construct of perceptions of mentoring (Figure 1). We tested our model based on factor loadings of each question and overall goodness of fit statistics. The chosen fit statistics were root mean square error of approximation (RMSEA), Comparative Fit Index, and $\chi 2$ divided by degrees of freedom in accordance with standard recommendations in the literature (Marsh et al., 2020). Internal consistency of the variables in measuring each factor was assessed using Cronbach's alpha (Becker, 2000).

We describe perceptions of mentoring among the men in our sample, stratified by core sociodemographic indicators. We also stratified our sample by HIV serostatus; given the increased burden of depressive symptoms among PLWH, we hypothesized that perceptions of mentoring may have a stronger protective effect among HIV-seropositive men (Ironson et al., 2017). Sociodemographic indicators between HIV seronegative and seropositive men were compared using the Pearson Chi-Square statistic.

Our study population included individuals with complete exposure and outcome ascertainment. Missing data within the covariates was handled using a missing indicator. A generalized estimating equation model with a logit link and exchangeable correlation structure was used to assess the relationship between perceptions of mentoring and depressive symptoms over the 3-year period, both unadjusted and controlling for the above-mentioned covariates. We report all resulting adjusted odds ratios (aORs) and 95% confidence intervals (CIs). To assess differential associations between perceptions of

mentoring and depressive symptoms by HIV serostatus, we stratified the model by HIV serostatus. All analyses were conducted using Stata version 16.0 (StataCorp).

Results

Sample Descriptives

Among the 1,246 men in this analysis, the median age at baseline was 60 years (IQR: 54–66) (Table 1). The 1,246 men contributed 6,199 visits; most (73%) attended 5 or 6 of the 6 study visits during the MACS Healthy Aging Substudy. The majority of participants (70%) self-identified as non-Hispanic White, and 20% self-identified as non-Hispanic Black. Over 1,000 individuals (n=1,089, 87%) self-identify their sexual orientation as Gay, 57 (5%) as Bisexual, and 30 (2%) as Heterosexual/Straight. The majority (n=914, 73%) attended 5 or 6 Healthy Aging Substudy visits. Only 13% (n=159) reported having received “Quite a bit” or “A great deal” of social support in the past 6 months. Seventy-six percent reported an annual income $20,000 or more per year at baseline. More than one-third (n = 455, 37%) were categorized as having depression at baseline (defined as a CES-D score ≥16,taking medication for depression, or report of treatment for depression). Approximately 13% (n=159) individuals reported having received “Quite a bit or A great deal” of social support in the past 6 months. The baseline mean mentoring score was 3.29 (SD: 0.86).

Approximately 50% were living with HIV. Mean age was higher among HIV seronegative men (62 *vs.* 57 years, p<0.001). HIV seronegative men also were more likely to be non-Hispanic white (81% *vs.* 58%, p<0.001), self-identify as Gay (90% *vs.* 84%, p=0.002), report an income ≥$20,000 per year (84% *vs.* 67%, p<0.001). HIV seropositive men were more likely to report depression at baseline (44% *vs.* 29%, p<0.001). Reports of social support, mean mentoring perceptions score, and number of study visits attended did not differ significantly between the two groups.

Perceptions of Mentoring

Table 2 shows the proportion of men in the overall sample indicating the different levels of agreement to the mentoring questions. Among the questions related to experiences with mentoring, the strongest agreement among this group was with the statement “I have encouraged people to be proud of their sexual orientation,” for which 770 individuals (72%) indicated “Agree” or “Strongly Agree.” There was also reasonably high agreement with “I have talked with people about specific strategies and issues to being ‘out’” (571 [46%] indicated “Agree” or “Strongly Agree”) and “I have helped people find LGBT community resources” (520 [42%] indicated “Agree” or “Strongly Agree”). The least agreement was with the statement “I have helped people decide how to come out,” for which 583 individuals (46%) indicated “Strongly Disagree” or “Disagree.” Among questions on beliefs regarding mentoring, there was strong agreement with the statement “Interaction between younger and older LBGT people is important for the LBGT community,” for which 980 individuals (79%) indicated “Agree” or “Strongly Agree.” Fewer individuals agreed with the statement “Younger LGBT people have helped me feel better about my LGBT identity,” for which 394 individuals (32%) indicated “Strongly Disagree” or “Disagree.”

From the CFA, fit statistics included a root mean square error of approximation of 0.03 (90% CI: 0.023–0.038), a Comparative Fit Index of 0.93, and a $\chi 2$ divided by degrees of freedom of 4.7. The loading values ranged between 0.45 and 0.84. The Cronbach's alpha for perceptions of mentoring was 0.878.

Mentoring and Depressive Symptoms

Each unit increase in the score for perceptions of mentoring was associated with 8% decreased odds of having clinically significant depressive symptoms (aOR: 0.92, 95% CI: 0.85–0.99) (Table 3). When stratifying the sample by HIV serostatus, both groups showed a trend over time towards increased perceptions of mentoring and decreased depressive symptoms (aOR: 0.94, 95% CI: 0.85–1.05, for HIV-seropositive men; aOR: 0.89, 95% CI: 0.78–1.01, for HIV-seronegative men), but the associations were not statistically significant.

Discussion

In this study, we hypothesized that perceptions of serving as like-mentor would be associated with decreased depressive symptoms among SMM. We have shown that a 1-unit increase in the mean score measuring perceptions of mentoring is associated with 8% decreased odds of having clinically significant depressive symptoms among SMM participating in the MACS Healthy Aging Study. Although we hypothesized that the beneficial effects of positive mentoring perceptions would be greater among PLWH, we did not note a significant difference when stratifying our analyses by HIV serostatus. We recognize that there are targeted treatments for depression and depressive symptoms that have been shown to be effective, including medication, therapy, and lifestyle alterations (Cohen & DeRubeis, 2018; Ormel et al., 2019). We believe our results suggest that promotion of mentoring could be an adjunct strategy for the prevention and/or treatment of depressive symptoms among SMM.

In our study, we used the mentoring scale developed by Hebl (2012) to evaluate the benefits of like-mentoring of sexual minority individuals in the workplace (Hebl *et al.*, 2012). The type of mentorship being asked about in our analysis specifically concerned sexual orientation, in terms of providing support to mentees regarding their sexual minority identity as well as participant beliefs on the importance of sexual orientation–related guidance and support. In the youth mentoring literature, having a like-mentor has been shown to help foster positive self-identity and potentially higher academic achievement among sexual minority youth (Albright et al., 2017; Graham, 2019; Grossman & D'Aguelli, 2004; Kosciw, 2004). In fact, Mallory (2014) reported that sexual minority mentors have indicated that general mentoring programs can be discriminatory towards both sexual minority mentors as well as mentees (Mallory et al., 2014). Our analysis provides unique insight into mentoring perceptions specifically related to like-mentoring among individuals belonging to a sexual minority group.

Our work supports previous studies showing positive mental health and well-being benefits of engaging in a relationship as a mentor (Bower et al., 2019; Emlet & Harris, 2020; Fredriksen-Goldsen et al., 2017). Studies have shown an inverse relationship between social connectedness and depressive symptoms among sexual minority individuals (Busby et al.,

2020; Kaniuka et al., 2019). In our study, mentoring relationships were shown to be a possible mechanism for enhancing social connectedness specifically among aging SMM. Certainly other mechanisms are possible as well; for example, being a mentor may offer an individual a sense of purpose or increased self-confidence, which may then reduce depressive symptoms (Morse et al., 2021; Rhodes & Spencer, 2010). We encourage future inquiry to investigate the mechanistic connections between being a mentor and depressive symptoms.

It is important to note that our study is not a direct evaluation of mentoring itself, but instead of one's perceptions of mentoring. It could be that when questions were asked related to mentoring experiences, individuals recalled experiences from several years ago, and the reminder of these experiences was associated with decreased depressive symptoms. Some studies have shown that there are enduring positive memories of key interactions with mentors among individuals receiving mentoring (Southwick et al., 2007; Wang, 2012; Waugh, 2016). It is reasonable to hypothesize that memories of the positive experiences of being a mentor endure as well.

Contrary to our initial hypothesis, we did not see a difference in the association between perceptions of mentoring and depressive symptoms by HIV serostatus. There is some evidence showing improved HIV care outcomes with peer-mentoring programs. It is reasonable to hypothesize that SMM living with HIV would have unique insights when mentoring sexual minority individuals in terms of issues at the intersection of sexual orientation and HIV risk or care (Denison et al., 2020; Jones & Cameron, 2017). Of note, the mentoring questions administered in this study did not specifically ask about issues unique to living with HIV (such as challenges with managing a long-term chronic health condition or dealing with HIV-related stigma or discrimination). It is possible that questions directed at HIV-related like-mentoring would show an association with reduced depressive symptoms among mentors.

Our study had several limitations. First, we did not detail individual mentoring experiences, specify whether this was part of a formal program, or specify a time frame in which mentoring relationships occurred. It will be important in future evaluations of mentoring among sexual minority individuals to determine the timing, intensity, and duration of mentoring that is most beneficial. Second, the substudy was conducted over a 3-year period, thus, our ability to assess the longer-term aspects of the relationship between mentoring and depressive symptoms was limited. Third, the men in the MACS study are SMM who have long-term engagement in a cohort study and, therefore, not likely representative of the general population of SMM.

Conclusion

Our study lends support to the mental health benefits of mentoring among older SMM. In addition, the surveyed men reported having had like-mentoring experiences as well as positive mentoring beliefs, and our findings suggest that encouraging SMM to serve as like-mentors could be a way to help counter depressive symptoms among this key population. There is a need for increased knowledge of how mentoring programs or other opportunities

for enhancing social connectedness can best be designed to benefit sexual minority mentees and mentors. In addition, the potential mental health consequences of negative mentoring experience should also be explored. Finally, future research should focus on ways to design effective and sustainable mentoring programs for improving the health and well-being of not only the individual being mentored, but also among the mentors as well.

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Data Availability

The data that supports this study are available through a request and approval process by the MACS-WIHS Combined Cohort Study (MWCCS).

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Public Significance:

Mentoring of sexual minority individuals by persons who identify as a sexual minority individual themselves can be beneficial not only to the mentee but to the mentors as well.

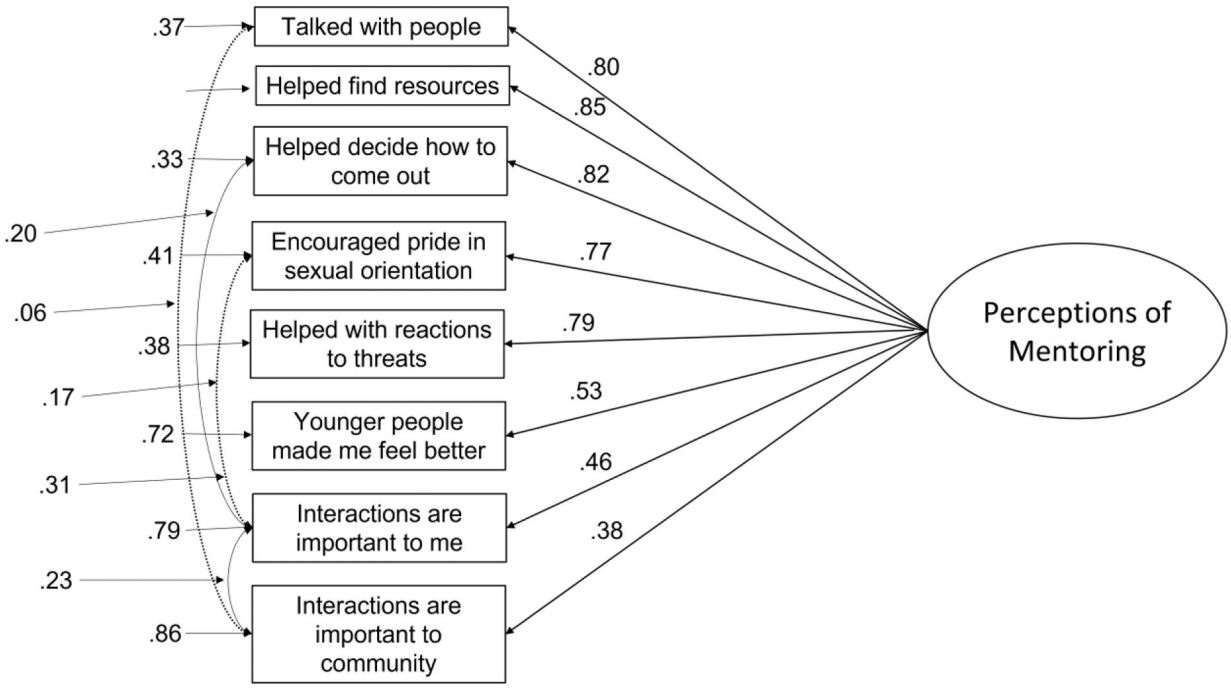

Figure 1:
Path Diagram of Perceptions of Mentoring

Table 1:

Baseline characteristics of men in the MACS Healthy Aging Study included in the mentoring and depressive symptoms analysis

Characteristic	n (%)			
	Overall Sample (N=1,246)	HIV Seronegative (n=629)	HIV Seropositive (n=617)	p-value
Age, median (IQR), y	60 (54–66)	62 (56–68)	57 (52–63)	<0.001
Raceand Ethnicity				
Non-Hispanic White	865 (70)	507 (81)	358 (58)	
Non-Hispanic Black	248 (20)	78 (12)	170 (28)	<0.001
Hispanic	110 (9)	33 (5)	77 (13)	
Other	23 (2)	11 (2)	12 (2)	
HIV status				
Seronegative	629 (50)			
Seropositive	617 (50)			
Sexual Orientation				
Gay	1,089 (87)	569 (90)	520 (84)	
Bisexual	57 (5)	21 (3)	36 (6)	
Heterosexual/Straight	30 (2)	17 (3)	13 (2)	0.002
Other	27 (2)	8 (1)	19 (3)	
Unsure/Don’t know	14 (1	2 (<1)	12 (2)	
Prefer not to say	18 (1)	6 (1)	12 (2)	
Number of study visits attended				
2	70 (6)	35 (6)	35 (6)	
3	95 (8)	45 (7)	50 (8)	0.84
4	167 (13)	87 (14)	80 (13)	
5	378 (30)	198 (31)	180 (29)	
6	536 (43)	264 (42)	272 (44)	
Mentoring score at baseline, mean (SD)	3.29 (0.86)	3.31 (0.85)	3.28 (0.88)	0.32
Social Support				
Not at all/Very little/Somewhat	1070 (86)	542 (86)	528 (86)	0.61
Quite a bit/A great deal	159 (13)	84 (13)	75 (12)	
Income ≥$20,000/year at baseline	773 (76)	447 (84)	326 (67)	<0.001
Depression at baseline (CES-D ≥16, taking medication, or report of treatment)	455 (37)	184 (29)	271 (44)	<0.001

CESD, Center for Epidemiological Studies Depression; IQR, interquartile range; MACS, Multicenter AIDS Cohort Study.

Table 2:

Level of agreement at baseline for questions on the gay mentoring scale among men in the MACS Healthy Aging Study included in the mentoring and depressive symptoms analysis (N=1,246)

Question	n (%)					
	1 Strongly Disagree	2 Disagree	3 Neutral	4 Agree	5 Strongly Agree	Missing
Experiences with mentoring						
I have helped people decide how to come out.	228 (18)	355 (28)	316 (25)	201 (16)	96 (8)	50 (4)
I have helped people find LGBT community resources.	176 (14)	272 (22)	236 (29)	346 (28)	174 (14)	42 (3)
I have encouraged people to be proud of their sexual orientation.	97 (8)	116 (9)	225 (18)	438 (35)	332 (37)	38 (3)
I have discussed with people how to react to verbal and/or physical threats related to their LBGT identity.	173 (14)	286 (23)	327 (26)	274 (22)	132 (11)	54 (4)
I have talked with people about specific strategies and issues to being “out.”	157 (13)	211 (17)	260 (21)	389 (31)	182 (15)	47 (4)
Beliefs regarding mentoring						
Interaction between younger and older LBGT people is important to me.	61 (5)	76 (6)	274 (22)	468 (38)	331 (27)	36 (3)
Interaction between younger and older LBGT people is important for the LBGT community.	41 (3)	38 (3)	137 (11)	426 (34)	554 (45)	50 (4)
Younger LGBT people have helped me feel better about my LGBT identity.	174 (14)	220 (18)	395 (32)	297 (24)	118 (9)	42 (3)

MACS, Multicenter AIDS Cohort Study.

Table 3:

Longitudinal associations between mentoring perceptions and depressive symptoms among men in the MACS Healthy Aging Study included in the mentoring and depressive symptoms analysis

	Overall		HIV Seronegative		HIV Seropositive	
	Adjusted Odds Ratio[a]	**95% Confidence Interval**	**Adjusted Odds Ratiô**	**95% Confidence Interval**	**Adjusted Odds Ratio[a]**	**95% Confidence Interval**
Mentoring perceptions	0.92[b]	0.85–0.99	0.89	0.78–1.01	0.94	0.85–1.05
Age	0.97[b]	0.96–0.99	0.99	0.98–1.01	0.95[b]	0.93–0.97
Median income	0.61[b]	0.49–0.74	0.60[b]	0.43–0.83	0.63[b]	0.48–0.83
Social Support	0.70[b]	0.60–0.83	0.85	0.65–1.10	0.59[b]	0.48–0.74
Baseline Depression	2.23[b]	1.78–2.79	2.07[b]	1.49–2.89	2.30[b]	1.68–3.14

MACS, Multicenter AIDS Cohort Study.

[a] Adjusted for baseline age, baseline depression status, social support, and median income as a time-varying covariate.

[b] Denotes a statistically significant association, $p < 0.05$.