Gender Differences in the Effects of Support Exchanges on Self-Esteem and Mastery for Mid- to Late-Life Adults

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ABSTRACT

Applying social psychological theories of social exchange and gender socialization perspectives, we assess gender differences in the effects of receiving and giving social support on self-esteem and mastery (i.e., self-concept) for respondents in the United States. We also explore whether imbalances in support exchanges are beneficial or detrimental to self-concept for women (mean age = 72) and men (mean age = 73). We examine this topic using data from Mended Hearts volunteers. Methodologically, we investigate the gender patterns of self-esteem, mastery, and social support by examining common summary statistics (i.e., means, standard deviations, Cohen's *d*) as well as locations and scales which attempt to account for skewness. We also compare results from bivariate correlations with regression analyses to ascertain if and when results converge. First, the means/standard deviations and locations/scales reveal different gendered patterns in self-concept and social support. Second, among women, we find a large positive effect of giving instrumental support on self-esteem in the regression analysis; on the other hand, the zero-order correlation reveals a weaker effect. For men, giving emotional support has a large positive effect on self-concept in both the bivariate and regression analysis. Third, reciprocity in instrumental support is generally beneficial for self-concept, but effects are larger for women. Fourth, imbalances in emotional support are associated with higher self-concept for women. Given the disjuncture between 1) summary statistics that do and do not take into account the skewness of the study measures and 2) correlations versus regression coefficients, our study suggests a need to critically address how methodological decisions (e.g., addressing skewness) affect results reported in social psychological studies and the conclusions drawn from them.

Introduction

A large literature documents the positive association between the receipt of social support and psychological well-being (House et al., 1988; Thoits, 1995; Thoits & Hewitt 2001; Turner & Turner, 2013). However, social support is bi-directional with the recipient typically receiving *and* giving support. Given the bi-directional nature of social support, recipients may perceive an equal exchange of support (i.e., reciprocity); or they may perceive an imbalance in support, in which they either give more support than they receive (i.e., under-benefit) or receive more support than they give (i.e., over-benefit). The level of balance in giving and receiving support can influence whether support is salubrious or deleterious to psychological well-being (Cruza-Guet et al., 2008; Erving & Irby-Shasanmi, 2018; Lowenstein et al., 2007; Reczek & Zhang, 2016).

The effect of support (im)balance on well-being is complicated by social status, particularly gender. In other words, gender is a status characteristic that influences the effect of social support on health (Caetano et al., 2013; Milner et al., 2016). Thus, here we first evaluate gender differences in the extent to which receiving or giving support (i.e., the direction of social support) to family and friends impact self-esteem and mastery. Second, we investigate gender differences in the effects of equal (reciprocity) or unequal (under-benefitting or over-benefitting) sup-

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port exchanges on self-esteem and mastery. To investigate these inquiries we use a sample of mid- to late-life volunteers; thus, our sample offers support through volunteering. However, our sample is also embedded within a larger social network outside their volunteer role. In this network, much like those who are non-volunteers, our respondents offer long-term continuous support through the caregiving of intimate social network members and they offer brief, unplanned support to strangers, friends, and relatives. Therefore, our sample includes individuals who provide both long- and short-term support and are embedded within a domain-specific (volunteering) and a general social network.

Self-concept

In this study, we examine self-esteem and mastery, two self-concepts that act as health-protective psychological resources (Turner et al., 1999; Turner & Roszell, 1994). Throughout the text, we refer to self-esteem and mastery collectively as self-concept. High self-esteem, a global attitude a person has about him/herself (Carver, 1989), is associated with fewer anxiety and depressive symptoms, as well as greater life satisfaction and happiness (Baumeister et al., 2003; Taylor & Stanton, 2007; Thoits, 2003; Turner & Lloyd, 1999; Turner & Roszell, 1994). Similarly, high mastery, the extent to which a person feels in control of what happens to him/her (Bandura, 1997), is associated with better mental health (Thoits, 1995). We currently know little about the situations and circumstances that promote or diminish self-esteem and mastery (for exceptions see Pearlin et al., 2007; Schieman et al., 2003), especially as it relates to social support exchanges (for exceptions see Erving & Irby-Shasanmi, 2018; Skaff et al., 1996). Furthermore, the social determinants of self-concept have yet to be systematically explored (for an exception see Josephs et al., 1992). The current study addresses this research gap by ascertaining the extent to which social support and support exchanges are associated with self-esteem and mastery for women and men.

The role of gender in the social support and self-concept association for mid- and late-life

Social support refers to “functions performed for the individual by significant others, such as family members, friends, and coworkers” (Thoits, 1995, p. 64). There are three dimensions of social support: emotional, instrumental, and informational. Emotional support involves making a person feel valued, instrumental support entails providing physical or material aid with practical tasks, and informational support centers on the provision of advice or information (House & Kahn, 1985). Here, we focus on emotional and instrumental support, as they are the most commonly studied (Thoits, 1995; Turner & Turner, 2013), and are available in our data.

As individuals age, their social networks begin to change in structure and content (Kalmijn, 2003; Wellman et al., 1997). For example, network sizes become smaller as friends and spouses die. As individuals age, they are also more vulnerable to health problems and disabilities. This implies that the direction of social support and the level of balance can be especially consequential for mid- to late-life adults. On one hand, it may be important to receive support to feel valued; on the other hand, it may be crucial to provide support to feel significant and competent. Additionally, the level of balance in support must also be considered. We ask, which is better for the self-esteem and mastery of women and men, reciprocity in support or an imbalance? How does the type of support, emotional or instrumental, impact the relationship between social exchange and self-concept for women and men? We suspect that levels of support exchange can differentially impact women’s and men’s self-esteem and mastery.

Gender roles

Drawing from gender socialization perspectives, we propose that the association between social support and self-concept will differ for women and men. Our proposal is supported by research that finds that despite one’s health status or the level or type of support one desires, the structure of social networks and the nature of relationships are gendered (McKenzie et al., 2018; Turner, 1994). For example, Reevy & Maslach (2001) note, “Gender is at the heart of individual differences in social support; feminine qualities better prepare people to seek, receive, and provide support than do masculine qualities.” (p. 439). Thus, social support may have different psychological effects for women and men (for an exception, see Umberson et al., 1996). In sum, it is likely that gender differences in support are, partly, due to gender ideology.

Gender role socialization suggests that women, beginning in childhood, are socialized to help others; it is culturally ascribed and socially acceptable for women to ask for and receive help (Gore & Colten, 1991; Wheeler et al.,

1983). The societal assumption is that men should handle mundane problems competently and independently. Barbee et al. (1993) wrote:

Males learn the risks of dependent behavior at an early age...if the male's request is direct, others may be uncomfortable or resentful because he is not living up to the standards set by society...Such reactions may cause males to feel that the costs to the potential helper, combined with potential loss of face and threat to self-esteem...make the seeking of social support more threatening than the problem itself (p. 179).

In this paper, we assume that our sample of mid- to late-life adults adhere to traditional gender roles as it relates to social support. This assumption is based on research documenting that older cohorts and particularly men, on average, are more traditional in their gender ideology (Ciabattari, 2001; for review see Davis & Greenstein, 2009).

Gender and social support

Both past and recent research suggests that men's networks are smaller and comprised of less frequent supportive exchanges; in addition, men report requiring less emotional support (Fiori & Denckla, 2012; Fuhrer & Stansfeld, 2002; Liebler & Sandefur, 2002; Shaw et al., 2007; Thompson & Whearty, 2004). In contrast, women's relationships are characterized by a greater degree of communal behavior and emotional closeness (Aukett et al., 1988; Bell, 1981; Leavy, 1983) and women are more socially skilled in seeking social support (Procidano & Smith, 1997; Sara-son et al., 1985; Walen & Lachman, 2000). Prior research shows that older men receive and provide less support than older women (House et al., 1988; Shaw et al., 2007) while other research specifies that the type of support (e.g., emotional versus instrumental) is important for determining whether men or women give or receive more or less support. For example, Kahn et al. (2011) show that older men often provide assistance with yard work and repairs; furthermore, as they enter retirement, they increasingly help with childcare, a task that women generally perform.

In one study, older men adhering to traditional masculinity ideology felt satisfied when their relationships involved less advice and less supportive feedback than men who held nontraditional views (Thompson & Whearty, 2004). In line with this assumption, research finds that women are more likely to receive emotional support compared to men (Barbee et al., 1993; Bucx et al., 2012; Fiori & Denckla, 2012; Fischer & Beresford, 2015; Klaus 2009; Liebler & Sandefur, 2002; Stevens & Tilburg, 2011; for a review see; Meyers-Levy & Loken, 2015; Swain, 1992). Although we do not have formal hypotheses for how the direction and type of social support affect women and men, given prior research findings, we assume that there will be gender differences in the effect of receiving and giving emotional and instrumental support on self-concept.

Research on the receipt of social support and its impact on mental health is growing (Cohen, 1988; Uchino et al., 2012); however, less is known about how giving support impacts psychological well-being (for an exception see Erving & Irby-Shasanmi, 2018; Wang & Gruenewald, 2019).

Meyers-Levy and Loken (2015) wrote, "Gender roles can be used ... to self-regulate...as a result, males and females with strong (versus weak) gender identities experience higher self-esteem and positive affect when they conform to gender standards" (p. 131). Gerstel (2000) asserts that women "may also obtain some culturally affirmed sense of identity as well as power and material rewards by doing the work that sustains community" (p. 481). Because emotional exchanges are a valued component of women's relationships (Aukett et al., 1988; Bell, 1981; Leavy, 1983; Tiedt, 2010), receiving emotional support might positively affect women's self-esteem. Furthermore, receiving emotional support might be positively associated with mastery because women may feel emotional support from others is essential for successfully solving problems. Accordingly, effectively providing emotional and instrumental support to others may help a woman feel significant and in control of her life (i.e., mastery). However, for men, there may be no association between giving emotional support and self-concept as this exchange is not associated with traditional masculinity. As such, receiving emotional and instrumental support may be associated with lower self-esteem and mastery because receiving help might signal helplessness, a traditionally non-masculine characteristic. However, the ability to give instrumental support may be associated with positive self-concept for men because they are often expected to provide tangible support for loved ones.

Social exchange theories and self-concept

Though social exchange theories are commonly used to understand dyadic interactions (e.g., Sprecher, 1992), they are also useful for assessing how support exchanges occur in other communal social contexts (e.g., Lawrence & Schigelone, 2002). Here, we examine support exchanges in the context of relatives and friends. Social exchange, altruism/self-esteem enhancement, and equity theories, in particular, provide insight on how support exchanges impact self-concept.

Social exchange theory posits that individuals engage in social transactions with the expectation that the benefits will outweigh costs (Homans, 1961). Accordingly, individuals wish to maximize rewards and minimize costs in relationships (Lowenstein et al., 2007). Therefore, this perspective suggests that receiving more social support than is given, over-benefitting, would be associated with positive self-concept (Cruza-Guet et al., 2008). *Altruism and self-enhancement* theories both propose that it is salubrious to give more support than one receives, or under-benefit (Batson, 1998; Piliavin & Charng, 1990). In contrast to business transactions where calculations are made regarding how much of a good is given and received, individuals obtain satisfaction from supporting others with an expectation of receiving little to nothing in return. In sum, according to these two theories, under-benefitting (i.e., giving more than receiving) would be associated with positive self-concept. *Equity theory* (Adams, 1965; Homans, 1961; Walster et al., 1978) implies that reciprocity is most beneficial because individuals do not want to feel indebted due to over-benefitting nor exploited as a result of under-benefitting. The extant literature generally supports equity theory (Erving & Irby-Shasani, 2018; Kleiboer et al., 2006; Nahum-Shani et al., 2011; Wang & Gruenewald, 2019).

Gender, social exchange theories, and self-concept

Social exchange theories and social support processes can be better understood when coupled with an examination of gender norms, roles, and expectations. Empirical research supports this notion: one study found that, compared to men, women provided more social support to others but were also less likely to experience reciprocity in their relationships (Ashwin et al., 2013). Though the traditional gender response for women is that they are empathic and altruistic (Sprecher, 1992), reciprocity in all support types may be ideal. One study found that women were more likely than men to engage in equity-restoring behaviors when they perceived under- or over-benefitting in a close relationship (Sprecher, 1992). The same study found that women were more likely to experience distress under conditions in which they perceived they were under- or over-benefitting.

Reciprocal emotional support might be particularly beneficial because women may see emotional sharing and support as a two-way street. Among women, emotional sharing is associated with increased well-being (Jordan, 1997). Additionally, women's emotional and instrumental work is largely invisible (Hochschild, 2012), oftentimes viewed as normative and obligatory. For this reason, reciprocity might be beneficial for women's self-concept because it implies that the invisible work performed is recognized and appreciated. Women's lives center largely on helping friends and relatives (George et al., 1998). However, a social network in which one gives more instrumental support than one receives might feel burdensome or make women feel overworked or underappreciated. Over-benefitting in instrumental support might make women feel that they are perceived as needy, which could elicit feelings of indebtedness. For example, Goodman (1999) found that in the marriage context, wives who over-benefited from their husband's support were the least satisfied. Based on the results from existing literature we hypothesize that:

H1: Reciprocal exchanges (equity theory) in emotional and instrumental support will be associated with positive PWB among women.

The traditional masculine role of men as physical and material providers suggests that providing more instrumental (i.e., tangible) support than one receives (under-benefitting) would be associated with higher self-esteem and mastery compared to reciprocity or over-benefitting. Instrumental under-benefitting could also be associated with higher self-esteem and mastery because it indicates a man's independence and little need for this type of support. Wang and Gruenewald (2019) found that giving more support was associated with fewer depressive symptoms for men; there was no association for women (however, no distinction was made between emotional versus instrumental support). In assessing marriage relationships specifically, Goodman (1999) found no significant relationship between a perceived imbalance in support and satisfaction. Based on results from existing literature we hypothesize:

H2a: Under-benefitting (altruism/self-enhancement theory) in instrumental support will be associated with positive PWB among men.

H2b: There will be no association between social exchanges in emotional support for men.

Summary

In 2017, Wang and Gruenewald wrote, “More research is needed to clarify these mixed findings in the role of sex as a moderator of the relationship between social support imbalance and psychological well-being” (p. 8). As such, we address two questions: (1) Are there gender differences in the psychological effects of receiving and providing emotional and instrumental support; and (2) Are there gender differences in the psychological effects of over-benefitting, under-benefitting, and reciprocity? Before moving forward, we must reiterate that our sample consists of volunteers. Two points are noteworthy. First, our sample possesses high levels of social support. Second, because volunteering is associated with self-esteem and mastery (Schwartz & Sendor, 1999; Thoits & Hewitt, 2001), respondents will have high levels of both outcomes. By using a sample of volunteers, exchanges of social support could be theoretically insightful. If results show that imbalances in social support within one’s network are detrimental to the psychological well-being of those who are “in the business” of giving support, volunteers, we have reason to believe that these same patterns may hold for the general public/non-volunteers.

Data and methods

We use data from the *Social Support from Peers: Mended Hearts Visitors Study*. Respondents are members of and volunteers for *Mended Hearts*, a national and community-based nonprofit organization established in 1951 and affiliated with the American College of Cardiology. The organization provides the following services to heart patients: visiting programs, support group meetings, and educational forums (Mended Hearts, Inc., 2002). There are two types of hospital volunteers in Mended Hearts: former heart patients and caregivers. Former heart patients provide support to current heart patients. Caregiver volunteers offer emotional and informational support to those caring for the heart patient. The larger study was developed to examine volunteers’ perceptions of the meaning and importance of their volunteer role, motivations for volunteering, and impressions of how their peer support differs from the support others provide to cardiac patients. Information was collected from questionnaires and in-depth interviews. For this study, we use quantitative information from the questionnaire. Questionnaires were administered to volunteers in a random sample of 75 (of 250) Mended Hearts chapters. Four hundred fifty-eight individuals completed the questionnaire (response rate = 52%). The restricted sample for this study includes 166 women and 234 men ($n = 400$) and consists wholly of volunteer hospital visitors who volunteer an average of 3.3 hours per week and are mostly retired. Taken together, this suggests that these individuals have more leisure time to offer support and are more involved in supporting others than the general population. These sample characteristics might influence perceptions of how much support they provide and decrease variability in levels of support they give.

Dependent measures

The two measures of self-concept are self-esteem and mastery. *Self-esteem* which is commonly viewed as a dimension of mental health is the Rosenberg (1986) 10-item scale. It includes the following ten items: (1) I feel that I’m a person of worth, or at least on an equal plane with others, (2) I feel that I have a number of good qualities, (3) all in all, I’m inclined to feel like a failure, (4) I am able to do things as well as most other people, (5) I feel I do not have much to be proud of, (6) I take a positive attitude toward myself, (7) I certainly feel useless at times, (8) I wish I could have more respect for myself, (9) at times, I think I am no good at all, and (10) on the whole, I am satisfied with myself. Response options are 1 = “strongly disagree,” 2 = “somewhat disagree,” 3 = “somewhat agree,” and 4 = “strongly agree.” Negative items were reverse-coded. To reduce missing values, each participant’s responses were summed and divided by the number of items answered to produce the average responses to the scale. Participants’ scores ranged from 2.1 to 4 in value (low to high self-esteem) (Cronbach alpha = 0.76).

Mastery is measured using the Pearlin and Schooler (1978) 7-item scale; this measure was used to assess respondents’ sense of personal control over their life. It includes the following items: (1) I can do just about anything I set my mind to do, (2) there is little I can do to change many of the important things in my life, (3) there is really no way I can solve some of the problems I have, (4) what happens to me in the future mostly depends on me, (5) I often feel helpless in dealing with the problems in life, (6) sometimes I feel that I’m being pushed around in life, and (7) I have little control over the things that happen to me. Response options are 1 = “strongly disagree,” 2 = “somewhat disagree,” 3 = “somewhat agree,” and 4 = “strongly agree.” Negative items were reverse-coded. Respondents’ answers

were summed and divided by their number of answers. Scores range from 1.86 to 4 (low to high mastery) (Cronbach alpha = 0.70).

Independent measures

Perceived *emotional support received* is measured by a three-item index: feels he/she can (1) count on a friend for understanding and advice, (2) tell a friend anything, and (3) talk to a friend about things that are important. In the questionnaire, respondents were instructed that friends could include relatives, but not their husband/wife/partner. Response options are 1 = “strongly disagree,” 2 = “somewhat disagree,” 3 = “somewhat agree,” and 4 = “strongly agree” (Cronbach alpha = 0.94). Higher scores indicate higher support. An index of perceived *emotional support given* includes three statements: certain friends come to me (1) when they have problems or need advice, (2) for emotional support, and (3) for companionship. The response options are the same as the emotional support received measures, and higher scores indicate higher support (Cronbach alpha = 0.86).

Perceived *instrumental support received* is derived from the statement, “I have a friend I can rely on for practical things, such as lending me something or doing me a favor if I ask.” Response options are 1 = “strongly disagree,” 2 = “somewhat disagree,” 3 = “somewhat agree,” and 4 = “strongly agree.” Higher scores indicate greater support. *Instrumental support given* is measured by agreement with the statement, “My friends can rely on me for practical things, such as lending something or doing a favor if I’m asked.” Response options are 1 = “strongly disagree,” 2 = “somewhat disagree,” 3 = “somewhat agree,” and 4 = “strongly agree.” Higher scores indicate greater support. For both receiving and giving instrumental support, responses range from 1 to 4.

To assess emotional and instrumental support exchange, we distinguish among three categories: balanced/equal receipt and provision of support (reciprocity), receiving more support than given (i.e., over-benefitting), and giving more support than received (i.e., under-benefitting). Due to differences in wording across the emotional support measures, the reciprocity in emotional support measure was constructed only using the following two measures: “feels he/she can count on family members or friends for understanding and advice” (receiving) and “certain friends come to me when they have problems or need advice” (giving). Values for giving support were subtracted from values for receiving support: thus, positive values indicate *over-benefitting* (i.e., receiving more than giving), zero indicates *reciprocity* (i.e., equivalent levels of giving and receiving support), and negative values indicate *under-benefitting* (i.e., giving more than receiving) emotionally (Erving & Irby-Shasanmi, 2018).

Similarly, reciprocity in instrumental support was constructed using the following two measures: “I have a friend I can rely on for practical things, such as lending me something or doing me a favor if I ask” (receiving) and “my friends can rely on me for practical things, such as lending something or doing a favor if I’m asked” (giving). Values for giving instrumental support were subtracted from values for receiving support, and three categories were created for over-benefitting, reciprocity, and under-benefitting.

Control measures

Because former heart patients might experience providing and receiving support differently than those who have not had a heart event, we include a control for *heart patient status*: former heart patient (reference category), former caregivers of heart patients, and those who are both former heart patients and a caregiver. *Educational attainment* includes less than high school, high school diploma or G.E.D equivalent (reference category), some college, Bachelor’s degree, and graduate/professional degree. *Financial strain* is ascertained using the question, “At the present time, how much difficulty do you have in paying your bills, a great deal, some, only a little, or none at all?” Higher values indicate greater financial strain. *Employment status* distinguishes between the retired (reference category) and not retired. *Relationship status* distinguishes between those who are married/cohabiting (reference category) versus not married/cohabiting. *Self-reported health* asks, “How would you rate your health in general?” Response options are 1 = Poor, 2 = Fair, 3 = Good, 4 = Very Good, and 5 = Excellent, and *age* is measured in years (ranging from 41 to 91).

Analytic strategy

First, to assess gender differences in mastery, self-esteem, as well as the key independent measures and controls, we report means and standard deviations for women and men separately; we also report Cohen’s *d* and point-serial

correlations (Table 1). Second, given that most measures in social psychological research do not follow a normal distribution, we calculate locations, scales, and effect sizes by gender (Trafimow et al., 2019) (Table 2). We then compare gender differences in the key study variables using a traditional effect size indicator (i.e., Cohen's *d*) and an effect size that takes into account the skewness of the measures (i.e., calculated by using locations and scales) (Table 3). Third, we include bivariate correlations between the key-dependent and independent measures for women and men (Table 4). To assess gender differences in the effects of giving and receiving social support on self-concept, we analyze women and men separately and include receiving and giving emotional support as well as receiving and giving instrumental support (Table 5). We compare the bivariate correlations to the regression analysis in Table 6, pointing out similarities and differences across these two analysis strategies. In Table 7, we present regression analysis to assess the extent to which under-benefitting, over-benefitting, and reciprocity are associated with positive self-concept among women and men. Last, we summarize findings in Table 8 to clarify the extent to which we find empirical support for the three theories of social exchange among women and men. Analyses were conducted with STATA 14.2 (StataCorp, 2015), and locations, scales, and accompanying effect sizes were calculated following Trafimow and colleagues (2019) in Excel.

Table 1. Descriptive statistics for dependent and independent measures (*n* = 400).

	Women (<i>n</i> = 166)	Men (<i>n</i> = 234)	Range	Cohen's <i>d</i>	<i>r</i> *
	Mean (SD)	Mean (SD)			
Dependent measures					
Self-esteem	3.66 (0.36)	3.67 (0.34)	2.1–4	0.01	0.01
Mastery	3.25 (0.51)	3.31 (0.44)	1.86–4	0.13	0.06
Independent measures					
Social support					
Emotional support received	3.66 (0.61)	3.33 (0.76)	1–4	–0.47	–0.23
Emotional support given	3.50 (0.58)	3.08 (0.66)	1–4	–0.67	–0.31
Instrumental support received	3.67 (0.60)	3.43 (0.67)	1–4	–0.39	–0.19
Instrumental support given	3.75 (0.51)	3.62 (0.59)	1–4	–0.24	–0.12
Reciprocity variables					
Emotional support					
Over-benefitting	0.28	0.35	0–1	0.14	0.07
Balanced	0.63	0.55	0–1	–0.17	–0.09
Under-benefitting	0.08	0.10	0–1	0.06	0.03
Instrumental Support					
Over-benefitting	0.08	0.06	0–1	–0.09	–0.05
Balanced	0.78	0.70	0–1	–0.18	–0.09
Under-benefitting	0.14	0.25	0–1	0.26	0.13
Controls					
Heart Status					
Heart Patient	0.61	0.90	0–1	0.75	0.35
Caregiver	0.28	0.01	0–1	–0.88	–0.40
Heart Patient and Caregiver	0.11	0.09	0–1	–0.10	–0.05
Education					
Less than high school	0.04	0.02	0–1	–0.15	–0.08
High school diploma/GED	0.16	0.12	0–1	–0.09	–0.05
Some college	0.49	0.30	0–1	–0.40	–0.19
College graduate	0.14	0.34	0–1	0.48	0.23

	Women (<i>n</i> = 166)	Men (<i>n</i> = 234)	Range	Cohen's <i>d</i>	<i>r</i> *
	Mean (SD)	Mean (SD)			
Graduate/professional school	0.17	0.21	0–1	0.11	0.06
Financial strain	1.52 (0.86)	1.35 (0.69)	1–4	–0.21	–0.10
Married/cohabiting	0.62	0.89	0–1	0.68	0.32
Retired	0.84	0.86	0–1	0.07	0.04
Self-rated health (1 = Poor)	3.53 (0.86)	3.60 (0.81)	1–5	0.08	0.04
Age (years)	72.08 (9.47)	73.12 (8.15)	41–91	0.12	0.06

Source: Mended Hearts Visitors Study of 2011.

*Point-biserial correlation.

Table 2. Location and scale parameters for dependent and key independent measures.

	Women		Men		Effect size
	Location (Scale)	Skewness	Location (Scale)	Skewness	
Self-esteem	3.16 (0.35)	–1.19	3.28 (0.34)	–1.21	–0.35
Mastery	2.72 (0.13)	–0.39	2.59 (0.56)	–0.21	0.30
Emotional support received	2.59 (0.88)	–2.32	2.26 (0.76)	–1.21	0.41
Emotional support given	2.57 (0.74)	–1.30	2.32 (0.39)	–0.68	0.45
Instrumental support received	2.65 (0.83)	–2.17	2.54 (0.58)	–1.00	0.16
Instrumental support given	2.87 (0.72)	–2.24	2.69 (1.10)	–1.66	0.19

Table 3. Comparison of effect sizes comparing women and men.

	Cohen's <i>d</i>		Effect Size based on locations and scales	
Self-esteem	0.01	No difference	–0.35	Small negative
Mastery	0.13	Small positive	0.30	Small positive
Emotional support received	–0.47	Medium negative	0.41	Medium positive
Emotional support given	–0.67	Medium negative	0.45	Medium positive
Instrumental support received	–0.39	Small negative	0.16	Small positive
Instrumental support given	–0.24	Small negative	0.19	Small positive

Cohen's *d* represents the standardized mean difference between women and men. If *d* = 0.20 the effect size is often called small, if *d* = 0.5 the effect size is medium, and if *d* = 0.80, the effect size is large (McGraw & Wong, 1992).

Table 4. Bivariate correlations for key study variables by gender.

Women (<i>n</i> = 166)	1	2	3	4	5
1. Self-esteem					
2. Mastery	0.61				
3. Emotional support received	0.21	0.28			
4. Emotional support given	0.23	0.20	0.56		

Women (<i>n</i> = 166)	1	2	3	4	5
5. Instrumental support received	0.18	0.25	0.79	0.51	
6. Instrumental support given	0.32	0.17	0.40	0.54	0.43
Men (<i>n</i> = 234)	1	2	3	4	5
1. Self-esteem					
2. Mastery	0.58				
3. Emotional support received	0.32	0.22			
4. Emotional support given	0.42	0.30	0.61		
5. Instrumental support received	0.30	0.26	0.63	0.55	
6. Instrumental support given	0.27	0.25	0.44	0.52	0.59

Table 5. Gender-specific models of self-esteem and mastery regressed on support received and support given^a.

	Model 1	Model 2	Model 3
Women (<i>n</i> = 166)			
Panel A: self-esteem			
Emotional support received	−0.01		0.01
	(0.04)		(0.07)
Emotional support given	0.12		0.05
	(0.05)		(0.05)
Instrumental support received		−0.02	−0.05
		(0.05)	(0.08)
Instrumental support given		0.20	0.18
		(0.06)	(0.06)
<i>R</i> ²	0.30	0.34	0.35
Panel B: mastery			
Emotional support received	0.13		0.08
	(0.06)		(0.09)
Emotional support given	0.06		0.05
	(0.07)		(0.08)
Instrumental support received		0.15	0.07
		(0.06)	(0.10)
Instrumental support given		0.03	0.01
		(0.07)	(0.07)
<i>R</i> ²	0.25	0.24	0.25
Men (<i>n</i> = 234)			
Panel C: self-esteem			
Emotional support received	0.04		0.03
	(0.04)		(0.04)
Emotional support given	0.15		0.15
	(0.04)		(0.04)
Instrumental support received		0.09	0.02
		(0.04)	(0.04)
Instrumental support given		0.06	0.002

	Model 1	Model 2	Model 3
		(0.06)	(0.05)
R^2	0.29	0.23	0.29
Panel D: mastery			
Emotional support received	0.03		0.01
	(0.05)		(0.06)
Emotional support given	0.13		0.10
	(0.08)		(0.08)
Instrumental support received		0.10	0.06
		(0.05)	(0.06)
Instrumental support given		0.08	0.05
		(0.05)	(0.06)
R^2	0.21	0.21	0.22

Source: Mended Hearts Visitors Study of 2011. Data is presented as unstandardized coefficients with standard errors in parentheses.

^aAll models control for heart patient status, education, financial strain, relationship status, employment status, self-reported health, and age.

Table 6. Comparison of the bivariate correlation and regression analysis.

Women	Correlation ^a		Regression	
Self-esteem				
Emotional support received	Weak	0.21	Weak	0.01
Emotional support given	Weak	0.23	Weak	0.05
Instrumental support received	Very weak	0.18	Weak	-0.05
Instrumental support given	Weak	0.32	Very strong	0.18
Mastery				
Emotional support received	Weak	0.28	Weak	0.08
Emotional support given	Weak	0.20	Weak	0.05
Instrumental support received	Weak	0.25	Weak	0.07
Instrumental support given	Very weak	0.17	Weak	0.01
Men				
Self-Esteem				
Emotional support received	Weak	0.32	Weak	0.03
Emotional support given	Moderate	0.42	Very strong	0.15
Instrumental support received	Weak	0.30	Weak	0.02
Instrumental support given	Weak	0.27	Weak	0.002
Mastery				
Emotional support received	Weak	0.22	Weak	0.01
Emotional support given	Weak	0.30	Moderate	0.10
Instrumental support received	Weak	0.26	Weak	0.06
Instrumental support given	Weak	0.25	Weak	0.05

^aThe interpretation for the bivariate correlation is based on Evans (1996). In Evans (1996) a correlation of 0–0.19 means a very weak correlation, a correlation of 0.2–0.39 means weak, 0.4–0.59 means moderate, 0.6–0.79 means a strong correlation, and 0.8–1.00 means a very strong correlation between two variables.

Table 7. Gender-specific models of self-esteem and mastery regressed on reciprocity measures^a.

	Model 1	Model 2	Model 3
Women			
Panel A: self-esteem ^b			
Over-benefitting emotional	0.02	–	0.10
	(0.05)		(0.06)
Under-benefitting emotional	0.16	–	0.17
	(0.07)		(0.08)
Over-benefitting instrumental	–	–0.27	–0.33
		(0.10)	(0.10)
Under-benefitting instrumental	–	0.02	–0.03
		(0.05)	0.06
R^2	0.29	0.31	0.33
Panel B: mastery			
Over-benefitting emotional	0.002	–	0.09
	(0.08)		(0.08)
Under-benefitting emotional	0.14	–	0.30
	(0.11)		(0.15)
Over-benefitting instrumental	–	–0.26	–0.31
		(0.11)	(0.12)
Under-benefitting instrumental	–	–0.27	–0.36
		(0.08)	(0.09)
R^2	0.21	0.25	0.27
Men			
Panel C: Self-Esteem ^b			
Over-benefitting emotional	–0.02	–	–0.03
	(0.05)		(0.05)
Under-benefitting emotional	0.03	–	0.05
	(0.08)		(0.08)
Over-benefitting instrumental	–	–0.08	–0.07
		(0.07)	(0.07)
Under-benefitting instrumental	–	–0.11	–0.12
		(0.05)	(0.05)
R^2	0.18	0.19	0.20
Panel D: mastery			
Over-benefitting emotional	–0.06	–	–0.06
	(0.06)		(0.07)
Under-benefitting emotional	0.02	–	0.03
	(0.10)		(0.10)

	Model 1	Model 2	Model 3
Over-benefitting instrumental	–	0.06 (0.13)	0.07 (0.14)
Under-benefitting instrumental	–	–0.04 (0.07)	–0.05 (0.07)
R^2	0.17	0.17	0.17

Source: Mended Hearts Visitors Study of 2011. Data is presented as unstandardized coefficients with standard errors in parentheses.

^aAll models control for heart patient status, education, financial strain, relationship status, employment status, self-reported health, and age. ^bThe reference category includes those who experience equal exchanges in support (i.e., reciprocity).

Table 8. Summary of regression results and support for theories of social exchange.

	Theories		
	Social exchange theory	Altruism/self-enhancement theory	Equity theory
The theory suggesting the following is most psychologically beneficial:	Over-benefitting	Under-benefitting	Reciprocity
Women			
Self-esteem			
Emotional	Partial support	Partial support	No
Instrumental	No	No	Partial support
Mastery			
Emotional	No	Support	No
Instrumental	No	No	Support
Men			
Self-esteem			
Emotional	No	No	No
Instrumental	No	No	Weak Support
Mastery			
Emotional	No	No	No
Instrumental	No	No	No

This summary table is based on the regression results presented in [Table 7](#), Model 3.

Results

Descriptive statistics

[Table 1](#) shows means, standard deviations, Cohen's d , and point-serial correlations for the study measures by gender. Women and men both have relatively high self-esteem and mastery. Compared to men, women report higher mean levels of receiving emotional support ($d = -0.47$) and giving emotional support ($d = -0.67$). Mean gender differences for receiving instrumental ($d = -0.39$) and giving instrumental ($d = -0.24$) support are more modest but suggests that women have slightly higher levels. Turning to the reciprocity measures, there were very small mean gender differences in over-benefitting, balanced, and under-benefitting in emotional support. Balanced emotional support

(i.e., equal exchanges) is the mode for both women (63%) and men (55%) followed by over-benefitting (28% for women and 35% for men). Under-benefitting in emotional support is least common with 8% and 10% for women and men, respectively. For instrumental support, women (78%) and men (70%) are most likely to experience balanced exchanges. Over-benefitting in instrumental support is relatively rare for women (8%) and men (6%). Under-benefitting in instrumental support, however, is higher for men (25%) than women (14%) ($d = 0.26$).

With regards to the control measures, men (90%) are more likely to be former heart patients than are women (61%) ($d = 0.75$). Women are more likely to have some college experience ($d = -0.40$) while men are more likely to be college graduates ($d = 0.48$). Women have a slightly higher mean financial strain score relative to men ($d = -0.21$). Men are more likely to be married (89%) when compared to women (62%) ($d = 0.68$). The majority of the sample is retired (84% of women and 86% of men), and report “good” self-rated health. The average age is 72 for women and 73 for men. The pattern of descriptive findings for this sample of older adults is distinct from the U.S. older population in several ways. This sample is highly educated, mostly White, and comprised of volunteers for a specific organization. However, this analysis enables us to examine social exchange processes and their impact on self-concept in a specific segment of the U.S. aging population.

Because the dependent measures were not normally distributed, we include location and scale parameters in Table 2 for the key-dependent and independent measures (Trafimow et al., 2019). Overall, the location parameters are lower than the means, while the scale parameters are generally larger than are the standard deviations (shown in Table 1).

In Table 3, we compare Cohen’s d to the effect size using locations and scales. Several key differences emerge. First, though Cohen’s d (0.01) suggests little difference in self-esteem by gender, the skew-informed effect size reflects higher self-esteem for men relative to women (effect size = -0.35). Second, there is a medium negative effect of receiving emotional support per Cohen’s d (-0.47), but a medium positive effect for the skew-informed effect size (0.41). The same inverse pattern is observed when comparing the Cohen’s d to the skew-informed effect sizes for giving emotional support, receiving instrumental support, and giving instrumental support. Thus, it appears that summary statistics that do not take into account the skewness of these measures are misleading (Trafimow et al., 2018).

Table 4 reports bivariate correlations separately for women and men. Here we ask: is there an association between emotional and instrumental support given and received on self-esteem and mastery for women and men, respectively? For women, support measures are weakly correlated with self-esteem and mastery; however, giving instrumental support has the highest correlation with self-esteem ($r = 0.32$) while receiving emotional support has the highest correlation with mastery ($r = 0.28$). Among men, all the support measures are weakly correlated with self-esteem and mastery with the exception of giving emotional support which correlates, at $r = 0.42$ for self-esteem.

In sum, the bivariate correlation results suggest weak correlations between our key dependent measures and social support for men and women. The exception is the association between emotional support given and self-esteem for men, which is moderate.

Regression analysis for the direction of support

Next, we use ordinary least squares (OLS) regression to analyze the two dependent measures. We estimated gender-stratified models to examine the support/exchange and self-concept association among women and men. We specify all regression models taking into account clustering by chapter using the “vce” command in STATA. We chose this stratified modeling approach based on prior research which suggests that there are divergent social processes impacting the health of women and men (Hart et al., 2019; Josephs et al., 1992; Liu & Waite, 2014). Thus, we conduct *separate* analyses for women and men.

In Table 5, we answer the following query using regression analyses: Are there gender differences in the psychological effects of receiving and providing emotional and instrumental support? To assess gender differences in the effects of giving and receiving social support on self-concept, we analyze women and men separately and include three models: first, receiving and giving emotional support, and second, receiving and giving instrumental support. The third model includes all four measures in the same model. We discuss the results for women first.

Women

Table 5, Panel A shows that giving emotional support is associated with higher self-esteem ($b = 0.12$, $SE = 0.05$). In Model 2, giving instrumental support is associated with higher levels of self-esteem ($b = 0.20$, $SE = 0.06$). In the

full model, Model 3, we observe the largest effect size for giving instrumental support, which is associated with higher self-esteem ($b = 0.18$, $SE = 0.06$).

Table 5, Panel B shows the results for mastery. Receiving emotional support (Model 1) is associated with higher mastery ($b = 0.13$, $SE = 0.06$). Receiving instrumental support (Model 2) is associated with higher mastery ($b = 0.15$, $SE = 0.06$). In the full model, the effect sizes for both receiving emotional support and receiving instrumental support are reduced to $b = 0.08$ and $b = 0.07$, respectively. This is likely due to the high correlation between the two variables among women ($r = 0.79$).

In sum, the regression analysis suggests that among women, different types of support affect self-esteem and mastery. What is especially salient for women is that giving instrumental support boosts self-esteem.

Men

Table 5, Panel C shows the results for self-esteem. Giving emotional support is associated with higher self-esteem (Model 1, $b = 0.15$, $SE = 0.04$). In addition, receiving instrumental support is associated with higher self-esteem (Model 2, $b = 0.09$, $SE = 0.04$). In the full model, however, only the relatively large effect of giving emotional support remains, net of the other support measures.

Panel D includes the mastery results. Giving emotional support (Model 1) is associated with higher mastery levels ($b = 0.13$, $SE = 0.08$). Receiving instrumental support (Model 2) is associated with higher mastery ($b = 0.10$, $SE = 0.05$). In the full model, the largest effect is observed for giving emotional support ($b = 0.10$, $SE = 0.08$). Thus, for men, the most crucial support type for self-concept is giving emotional support.

Comparing the bivariate correlations with regression analysis

In Table 6, we compare the results from the zero-order correlation with the results from the regression analysis. Generally, when the bivariate correlation shows a weak association between the key-dependent and independent variables, there is also a weak effect in the regression analysis. However, in three instances we see noteworthy discrepancies. First, the interpretation of results between instrumental support given for women is weak in the zero-order correlation ($r = 0.32$) yet very strong in the regression ($b = 0.18$). Second, the interpretation of results between emotional support given for men and self-esteem is moderate in the correlation ($r = 0.42$) but very strong in the regression analysis ($b = 0.15$). For these two measures, the discrepancy is not in whether the association exists for men, but, rather, the strength of the association. Third, the correlation for emotional support given and mastery for men is 0.10, suggesting a weak correlation, but the coefficient of 0.10 suggests a moderate relationship between the two variables.

Regression analysis for level of support exchanged

In Table 7, to assess the effects of over-benefitting, under-benefitting, and reciprocity, we include three models: Model 1 includes emotional over-benefitting and under-benefitting (reciprocity is the reference category). Model 2 includes instrumental over-benefitting and under-benefitting. Model 3 incorporates both emotional and instrumental over-benefitting and under-benefitting. In Table 7, we address the question: Are there gender differences in the psychological effects of over-benefitting, under-benefitting, and reciprocity?

Women

The results for self-esteem are shown in Table 7, Panel A. Inconsistent with Hypothesis 1, when compared to reciprocity/balanced exchange, under-benefitting in emotional support is associated with higher self-esteem (Model 1, $b = 0.16$, $SE = 0.07$). Model 2 shows that over-benefitting in instrumental support is associated with lower self-esteem ($b = -0.27$, $SE = 0.10$). In the full model, these two effects become even larger ($b = 0.17$ for under-benefitting in emotional support ($b = -0.33$ and for over-benefitting in instrumental support).

In Table 7, Panel B, under-benefitting in emotional support is associated with higher mastery ($b = 0.14$, $SE = 0.11$), running counter to our prediction. However, consistent with Hypothesis 1, the second model shows that reciprocity in instrumental support is most beneficial to women's mastery, as both over-benefitting ($b = -0.26$, $SE = 0.11$) and under-benefitting ($b = -0.27$, $SE = 0.08$) are associated with lower levels of mastery. In the full model, these effects become even larger. Thus, for women, on the one hand, we find support for Hypothesis 1, as reciprocity in instrumen-

tal support is ideal for self-concept. On the other hand, contrary to our prediction, under-benefitting emotionally is ideal for maintaining optimal self-esteem and mastery.

Men

The results for self-esteem among men are shown in Panel C. The largest effect size is for instrumental under-benefitting; in other words, under-benefitting in instrumental support is associated with lower self-esteem (Model 3; $b = -0.12$, $SE = 0.05$), running counter to Hypothesis 2a. Panel D includes the results for mastery, with negligible effect sizes ($-0.06 \leq b \leq 0.07$) and high standard errors ($SE \geq 0.06$) for all the independent measures. Thus, we find support for Hypothesis 2b: that is, neither reciprocity nor under-benefitting or over-benefitting in emotional support are associated with men's self-concept.

Discussion and conclusions

First, the present study explored whether the association between receiving and giving (emotional and instrumental) support and self-concept (self-esteem and mastery) differed for women and men. Methodologically, we examine differences in means versus locations for our key study measures and we compare results from bivariate correlations with results from regression analyses to ascertain if and when results are congruent. Second, applying social psychological theories of social exchange, we assessed whether the psychological effects of under-benefitting, reciprocity, and over-benefitting differed for women and men. Using *Social Support from Peers: Mended Hearts Visitors Study* data, this study uncovered important distinctions for women and men as well as inconsistencies when one compares.

In the comparison of means and standard deviations with locations and scales, we find convincing evidence that the typical summary statistics used in most social psychological research (e.g., means, standard deviations, Cohen's d), at times, can be misleading (Trafimow et al., 2018). For example, when comparing men and women's self-esteem, Cohen's d suggested similarity by gender, but the effect size that relies on skew-informed locations and scales reflect relatively higher self-esteem among men, which is consistent with prior research on the gender patterning of self-concept (Kling et al. 1999). Furthermore, receiving and giving emotional and instrumental support patterns by gender differ in the direction of their effects (when comparing Cohen's d to the effect sizes that rely on locations and scales). Thus, these results challenge the validity of studies that do not assess the extent to which study measures are skewed (which is often the case, more so than not).

Taking into account the results from the type of analysis used, (zero-order correlation versus regression), we find that generally there is a commonality in the interpretation of results. For instance, for receiving emotional and instrumental support, the bivariate correlation and the regression analysis suggest little discernable effects of receiving support on self-concept among women or men. Perhaps receiving support is less psychologically consequential for female and male volunteers in particular because, as individuals who are "in the business" of providing support, giving support may have a larger influence on their self-concept. In fact, some of the findings for giving support are consistent with this proposition.

Unlike the consistent results between the correlation and regression analysis for *receiving* social support and self-concept, we find some differences in the results based on the analysis used for *giving* support. For example, in the bivariate correlation, there was a positive, but weak correlation between giving instrumental support and self-esteem for women. Yet, in the regression analysis, there was a substantial effect of giving instrumental support on self-esteem for this group. These opposing results lead to inconsistent conclusions about the relationship between giving instrumental support on self-esteem for women. The question raised is then, which results are accurate, the zero-order correlations, or the regression analyses? On the one hand, one may see the correlations as more parsimonious because the latter is susceptible to suppressor and other effects. On the other hand, the regression may be accepted as more precise because multivariate regression models adjust for potential confounders.

Among men, there was only a distinction in the relative strength of the instrumental support and self-concept association when comparing the zero-order correlation to the regression analysis. The bivariate correlation reveals a moderate relationship, while results from the regression analysis suggests a very strong association. Thus, the difference in the results between the two analyses is the strength of the association and not whether the association exists for giving instrumental support for men.

Another discrepancy in our results is in the relationship between emotional support given and self-esteem for men. Here, the discrepancy again is less worrisome (than the one between instrumental support given and self-esteem for

women) because the inconsistency is in the strength of the relationship (moderate versus very strong in the correlation and regression analysis, respectively) as opposed to whether the association between the two measures are notable. Thus, giving emotional support is consistently associated with higher self-esteem among men. The last divergence is in the association between emotional support given and mastery for this group. The correlation indicates a weak relationship while the regression analysis uncovers a moderate relationship between the two variables. Again, we are confronted with the question of, which set of analyses is accurate?

In sum, the inconsistent findings from the correlation versus regression analysis do not raise the question of whether men benefit from providing emotional support. There is at minimum a moderate association between the two concepts for this group regardless of the analyses favored. Instead, the seemingly inconsistent results suggest the need for further research on the effect of giving emotional support on self-concept for men. The takeaway is that if we take the discrepancy in the correlation and regression analysis seriously, as we do, we are left wondering if emotional support given is better for a man's self-esteem or their level of mastery. Future research should investigate this further.

What we can say with confidence is that our results consistently show from a theoretical perspective that inconsistent with traditional gendered beliefs, this sample of mid- to late-life men psychologically benefit through higher self-esteem and/or mastery when providing emotional support to others as much as women, if not more. This suggests that men reap psychological benefits when they stray from traditional gender norms that restrict offering expressions of emotional support to others. Relative to their younger counterparts, older men may transition to more valuable relationships centered on emotional connections such as engaging with close friends and family and reflecting on life, as opposed to employment-related aspirations and instrumental provisions rooted in hegemonic masculinity (Carstensen, 1992). Furthermore, the nature of volunteer work, providing support to individuals who have suffered from a serious health condition, may heighten awareness of providing emotional support more generally. Given the positive impact of giving emotional support and the relatively small effect of instrumental support on men's self-concept, the findings here lend support to these notions.

Next, we assessed if women and men differed in whether under-benefitting, over-benefitting, or reciprocal social exchanges were beneficial for self-concept. Table 8 summarizes the extent to which we find empirical support for the three theories of social exchange.

We hypothesized that reciprocity in emotional and instrumental support would be associated with positive self-concept among women (Hypothesis 1). However, inconsistent with our prediction, we found that *for women, over-benefitting and under-benefitting in emotional support were both associated with higher levels of self-concept*. Nevertheless, this finding is partially supported by previous research on the topic (Vinen et al., 2008). We had not anticipated that over- and under-benefitting emotionally would be associated with positive self-concept. However, stereotypes of women as unconditional givers might legitimize inequitable support exchanges and an imbalance with exchanges may be perceived as natural (Jost & Banaji, 1994), particularly in the domain of emotional support.

On the other hand, *instrumental under-benefitting and over-benefitting negatively affected women's self-concept*. This finding lends support to the notion that reciprocity is ideal for women (Hypothesis 1). Traditional stereotypes suggest that women are nurturing and thus exceedingly give of themselves. These findings suggest, however, that it is deleterious to women's well-being to give too much, without receiving something in return. This implies that women would ideally engage with a social network that meets instrumental needs and does not simply take without offering in-kind support. In sum, *for women, reciprocal instrumental support is psychologically beneficial: thus, the results lend support for equity theory*.

For men, contrary to our prediction (Hypothesis 2a), instrumental under-benefitting (giving more than one receives) was associated with lower self-esteem. This finding is not consistent with gender role socialization perspectives but lends partial support to equity theory. We believed that because men are often perceived as providers of financial and other forms of instrumental support, they may find under-benefitting more palatable than balanced instrumental support (Väänänen et al., 2008). However, these findings reveal that instrumental reciprocity is most beneficial for men's self-esteem. Our findings parallel Antonucci et al.'s (1990) study that found a negative association between under- and over-benefitting and life satisfaction. However, consistent with Hypothesis 2b, we find no discernable effects of emotional support exchanges on men's self-concept.

In sum, subscription to strict traditional stereotypes might not be psychologically constructive for women or men in practice. Additionally, consistent with prior work (Erving & Irby-Shasanmi, 2018), the effect of support exchange on health appears to be specific to the psychological outcomes measured and the type of support exchanged. However, our results clearly demonstrate that women and men differ with regard to the social exchange conditions optimal for their self-concept. For women, equity and reciprocity are associated with the greatest gains in self-concept when support is instrumental. Inconsistent with previous literature, under-benefitting and over-benefitting in emotional support are associated with positive self-concept among women. In other words, reciprocity in instrumental support and imbalances in emotional support are beneficial for women's self-concept. For men, instrumental under-benefitting is detrimental to self-concept, which does not clearly support any social exchange theories but is suggestive that equity and reciprocal exchanges are ideal for men's self-concept. These findings indicate that social psychological theories used to amplify our current understanding of psychological processes must also seriously consider how men and women may differentially internalize the same social support exchanges.

Despite its strengths, the study has some limitations. First, the sample consists of respondents who are mostly White, older, and middle-class living in the United States. Our analyses might yield different results among a diverse or non-western population. However, current theory and empirical research suggest that some gender differences, particularly the notion that women are more communal than men, exist broadly in both collectivistic and individualistic societies (Kashima et al., 1995). Nonetheless, it is possible that the interplay between self-concept and social exchange may differ in collectivistic societies because the meaning associated with levels of social exchange (under-, over-benefitting, or reciprocity) may vary for women and men and thus have a substantial, little, or no bearing on self-concept. Second, longitudinal analyses are needed to assess causality to determine the ordering of associations among support exchanges and self-concept. When data are available, future research should assess the temporal ordering of support exchanges and self-concept using data collected over time. Third, received and provided support measures are indirect measures, with the assumption that the perceived likelihood of giving/receiving support is based on past actual exchanges. However, perceived social support measures are useful because they are more likely to be associated with psychological health outcomes (Turner & Turner, 2013; Wethington & Kessler, 1986) and are adequate measures of construct validity (Van Horn et al., 2001). Related, perceptual measures might be more psychologically consequential than measures of enacted support since the support-psychological health association is more likely to emerge as a result of perceptions of giving and receiving than enacted support exchanges (Vinen et al., 2008). Last, while we assumed that because our sample was comprised of older adults they would be likely to subscribe to traditional gender norms, a measure assessing gender ideological views would be ideal. However, data limitations do not allow us to examine this. Future research should examine whether social support, social exchanges, and its relationship to self-esteem and mastery operate differently for older adults who do not adhere to traditional gender roles.

Despite these limitations, the current study reveals distinctions in the effects of giving and receiving social support for women and men, which provides further justification for examining gender as an important status characteristic in future social exchange theory research for aging adults. It is possible that the observed effects are magnified for those who have more functional limitations because they are less able to offer instrumental support or to reciprocate and thus have low mastery and/or self-esteem. To our knowledge, this paper is among the first to provide a gendered assessment of the applicability of social exchange theories to self-esteem and mastery, central self-concepts that are linked to a variety of health outcomes in older adulthood. In sum, by focusing on the way gender complicates how social exchange theories apply to self-concept, this paper has implications for theoretical development in social psychology, sociology of health, and gender socialization. Methodologically, our study results suggest reexamining studies that report the most commonly used summary statistics (i.e., means, standard deviations) when analyzing skewed data. Practically, these findings can be used to better understand how to serve our current aging population, especially those who adhere to traditional gender ideology.

Ethical approval

This study was approved by the IRB at Indiana University; Protocol number, 1011003446, Protocol Title, Social Support from Peers: The Well-Being, Motivations, and Experiences of Mended Hearts Visitors.

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Disclosure statement

The authors declare that they have no conflict of interest.

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