Explaining sex differences in existential isolation research

Peter J. Helm*, Lyla G. Rothschild, Jeff Greenberg, Alyssa Croft

University of Arizona, United States

ARTICLE INFO

Keywords:
Existential isolation
Sex differences
Loneliness
Communal and agentic values

ABSTRACT

Existential isolation (EI) is the subjective experience of feeling fundamentally separate from other human beings. Recent studies examining EI have observed a consistent sex difference wherein men report higher levels of EI than women. Our first study used a large undergraduate survey. It replicated the sex difference in EI and showed that controlling for loneliness and self-esteem did not account for this difference. Study 2 replicated this pattern using an online sample, and tested the hypothesis that this difference may be mediated by the sex difference in endorsement of communal and agentic values. We found that sex differences in endorsement of communal (but not agentic) values mediated the sex difference in EI. However, agentic value endorsement played no role. These findings indicate that men may be higher in existential isolation because they do not endorse communal values as much as women do. This suggests that one way to reduce the disproportionate experience of EI among men may be to increase their endorsement of communal values.

1. Introduction

Only a small handful of studies have begun to examine the construct of existential isolation (EI; Yalom, 1980). However, what has been published has observed a consistent sex difference between men and women regarding their relative levels of EI with men consistently scoring higher than women. However, to date, no research has attempted to explain why men and women report differing levels of existential isolation. In the following sections, we first define the construct of EI and highlight previous findings regarding EI in men and women. We then present a possible explanation of this difference and present two studies that replicate the effect and test for possible explanations. Since EI research has only been conducted in a limited number of samples, we felt it was necessary to first replicate the general finding before extrapolating and identifying a possible mechanism.

1.1. Existential isolation

Yalom (1980) defines existential isolation as the “unbridgeable gulf between oneself and any other being” (p. 352). Since humans are unable to experience the world through another person’s sensory organs and each person has a rich web of personal experiences from which he or she experiences reality, all humans are inherently existentially isolated from one another. This concept has been discussed in philosophical and psychoanalytic circles (e.g., Yalom, 1980; Rank, 1945; Fromm, 1941) but has only recently been operationalized by empirical psychologists (e.g., Pinel, Long, Landau, & Pyszczynski, 2004; Pinel, Long, Murdoch, & Helm, 2017).

Pinel et al. (2017) created and validated the Existential Isolation Scale to measure trait feelings of EI. In this work the researchers differentiated the construct of EI from possible related constructs such as loneliness, need to belong, introversion, and alienation. Following Yalom (1980), these researchers defined feelings of EI as the subjective sense that one has a unique perspective that others are unable to validate or understand. For example, participants indicate their level of agreement with statements such as “I usually feel like people share my outlook on life” (reverse coded). Feelings of EI can be contrasted with feelings of social isolation, or loneliness, which refer to the subjective sense that one has fewer connections than desired (Peplau & Perlman, 1982; Russell, Peplau, & Cutrona, 1980), and with objective isolation, which refers to the objective condition of having few contacts with others (Cacioppo, Fowler, & Christakis, 2009; Townsend, 1968).

By differentiating the terms EI, loneliness, and objective isolation, we are not arguing these are completely distinct and unrelated. We maintain that each type of isolation is a facet of interpersonal isolation. Indeed, Yalom (1980) notes that the boundaries between EI and other forms of interpersonal isolation (i.e., loneliness) are “semipermeable” and that experiences of one type of isolation can lead to feelings of another, and vice versa. Likewise, research in loneliness acknowledges that loneliness is a “complex set of feelings that occurs when intimate and social needs are not adequately met” (Cacioppo et al., 2006). Thus, it is likely that EI and loneliness are often conflated in research. For example, a commonly used loneliness scale, the UCLA Loneliness Scale version 3 (Russell, 1996) includes items such as “How often do you feel

* Corresponding author at: Department of Psychology, University of Arizona, Tucson, AZ 85721, United States.
E-mail address: phelm@email.arizona.edu (P.J. Helm).

https://doi.org/10.1016/j.paid.2018.06.032
Received 9 April 2018; Received in revised form 15 June 2018; Accepted 18 June 2018
Available online 22 June 2018
0191-8869/ © 2018 Elsevier Ltd. All rights reserved.
that you are ‘in tune’ with the people around you?’” and “How often do you feel that there are people who really understand you?” which clearly appears to relate more to existential isolation than to feeling as though one has fewer social connections than desired.

The causes and consequences of EI and loneliness should also differ. The consequences of loneliness have been well documented. For example, loneliness predicts higher mortality (Caspí, Harrington, Moffitt, Milne, & Poullot, 2006), greater cardiovascular risk (Hawkley, Masl, Berry, & Cacioppo, 2006), personality disorders (Richman & Sokolove, 1992), depressive symptoms (Cacioppo, Hughes, Waite, Hawkley, & Thisted, 2006), and more (for a review, see Hawkley & Cacioppo, 2010).

In contrast, to loneliness, which has been extensively studied for decades, research in EI is only beginning. However, Pinel, Bernecker, and Rampy (2015) argue that EI particularly threatens human needs for belief validation (Greenberg, Solomon, & Arndt, 2008), meaning (Baumeister, 1991), prediction (Seligman & Maier, 1967), and control (Langer & Rodin, 1976) because humans rely on one another to validate our subjective experiences (Berger & Luckmann, 1966; Cornell, Franks, & Higgins, 2017). Evidence has found that although correlated with each other, loneliness and EI have been shown to relate quite differently to the Big Five and other personality constructs. For example, Pinel et al. (2017) found that loneliness was positively correlated with the need to belong while EI was uncorrelated with the construct. Additionally while EI was only moderately correlated with alienation, $r = 0.32$, loneliness was strongly correlated with alienation, $r = 0.78$ (Pinel et al., 2017). However, additional research is needed to continue to unpack and understand the differences between these constructs.

1.2. A sex difference observed in EI research

One interesting pattern of results that has emerged in EI research is that men consistently score higher than women on the EI scale. In the scale validation paper, Pinel et al. (2017) found that men reported significantly higher EI than women, $d = 0.34$. Costello (2017) replicated this finding and found that again men reported significantly higher EI than women, $d = 0.32$.

In contrast to EI research, literature on sex differences in loneliness tends to be inconsistent (Bersh & Perlman, 1985; Luhmann & Hawkley, 2016; Pinquart & Sörensen, 2001; Schultz & Moore, 1986) and appears to vary as a function of measurement. In general, women tend to report greater loneliness when single-item measures are used while men tend to report higher loneliness when multi-item measures are used (e.g., the UCLA Loneliness Scale).

Research on sex differences in objective isolation often depends on age and family size (e.g., Dunbar & Spoors, 1995) and tends to find that men and women often have similarly sized social networks (Dunbar & Spoors, 1995) but that each sex tends to have a higher proportion of same sex members in their network than opposite sex (Roberts, Wilson, Fedurek, & Dunbar, 2008). Although historically women tended to have a higher proportion of kin in their social networks than men, and men tended to have a higher proportion of non-kin in their social networks than women (e.g., Moore, 1990), recent studies have found these gender discrepancies to be diminishing (e.g., McPherson, Smith-Lovin, & Brashears, 2006).

Notably, whereas research on sex differences in loneliness has been inconsistent and sex differences in objective isolation are minimal, research regarding EI has consistently found a sex difference. Of course EI research is relatively new compared to the expansive literatures examining social and objective isolation.

Pinel et al. (2017) speculated that stereotypes and gender roles might explain these differences. However, to date, no research has been conducted to test these speculations. Work exploring gender roles has found that western culture dictates that males are encouraged to be agentic, independent, and emotionally distant while females are encouraged to be more nurturing, passive, and emotionally in-tune with others (e.g., Durik et al., 2006; Fiske, Cuddy, & Glick, 2007). Additionally, research has found that men have lower emotional contagion than women (Costello & Long, 2014), which may result from social pressure for men to be more emotionally distant than women (Simon & Nath, 2004).

These socialization processes may lead men to discuss their inner states less often than women do, which may lead to a greater sense that others are unable to understand their experiences (i.e., to feel EI). Although socialization processes themselves are difficult to capture, a body of research has found that socialization impacts the degree to which men and women endorse agentic and communal values. In particular, men tend to endorse more agentic values while women tend to endorse more communal values. We review that literature next.

1.3. Sex differences in value endorsement

As Pinel et al. (2017) speculated, one reason for the difference in EI between men and women may lie in differences in the socialization of men and women in our society. According to Social Role Theory (Eagly, 1987), sex differences are largely the result a long history of differential role distribution of the sexes. In other words, the various roles men and women have taken on historically (for both evolutionary and social reasons) have become the basis for stereotypes attributed to each gender in our modern world.

Much research has shown that agentic values are stereotypically defined as ‘masculine’ (e.g. assertive, independent, achievement-oriented, self-efficient), whereas communal values are defined as more ‘feminine’ (e.g. warm, affectionate, others-oriented, kind; Bakan, 1966; Eagly, 1987; Twenge, 1997; Trappnell & Paulhus, 2012; Castillo-Mayén & Montes-Berges, 2014; Durik et al., 2006; Fiske, 1998; Fiske et al., 2007). However, in recent decades there has been an increase in females who self-identify as more agentic, sometimes to the point of showing no differences in self-identification on this value compared with men (Diekman & Eagly, 2000; Twenge, 1997, 2001). Some attribute this to increasing female representation in the workplace, which in turn leads to an increased sense of agency and independence (e.g. Rudman & Glick, 2001). By taking on ‘non-traditional’ roles for women, women may endorse more agentic values providing evidence for social role theory: the more one is assigned to a specific role, the more they will adapt to fit said role. Yet despite this increase in agency, women simultaneously continue to self-endorse communal values more than men, and often rate themselves lower on agentic values than men (Spence & Buckner, 2000), demonstrating how resistant to change these stereotypes are.

Sex differences in agentic and communal values may help to explain sex differences in self-reported EI. As mentioned above, agentic values tend to be associated with independence and self-reliance, which may lead an individual to see themselves as separate from others. In contrast, communal values tend to be associated with interdependence and group-orientation, which may lead an individual to see themselves as interconnected with others. Those who are more group-oriented should report lower EI than those who are more self-oriented. Thus, the extent to which men and women report differences in agentic and communal value endorsement may help explain sex differences in EI.

1.4. Overview of present research

The present studies seek to offer an explanation for the sex differences observed in previous EI research. Since EI has only been empirically studied at a limited number of locations and only a limited number of times, we first conducted Study 1 with a large undergraduate sample in order to replicate previous findings that men and women differ in their self-reported EI. Study 2 was then conducted to test our primary hypothesis that sex differences in reported EI could be explained by differences in communal and agentic value endorsement. In
both studies, we control for loneliness because it is the most conceptually similar variable to EI and we want to be sure that any relationship we identify between EI and another construct cannot be explained by loneliness. Additionally, because Study 1 was conducted as part of a larger survey, it offered the possibility to assess whether controlling for self-esteem would affect sex differences in reported EI.

2. Study 1

Study 1 was conducted to replicate the sex difference observed in previous EI studies (Costello, 2017; Pinel et al., 2017). The variables of interest were included in a larger survey on attitudes and preferences administered to introductory psychology students. We included in this survey the 3-item loneliness scale (Hughes, Waite, Hawkley, & Cacioppo, 2004). Because loneliness is correlated with EI and sex differences in loneliness are sometimes reported, we wanted to control for loneliness to ensure that any sex differences we observed in reported EI were not the result of sex differences in reported loneliness.

The Rosenberg Self-Esteem Scale (Rosenberg, 1965) was included in the survey for other research purposes; however, because sex differences are often found with regard to self-esteem (Kling, Hyde, Showers, & Buswell, 1999) and evidence suggests self-esteem may correlate with EI (Pinel et al., 2017), we also sought to determine if controlling for self-esteem would alter the predicted sex difference in EI.

We did not expect that controlling for loneliness or self-esteem would eliminate the sex difference in EI, but if they did, it would suggest these other variables may account for that sex difference. We did not expect they would though because the evidence regarding sex differences in loneliness is mixed, and men typically report higher self-esteem than women.

Thus, in the current study, we predicted there to be sex differences in self-esteem, loneliness, and EI such that men report higher self-esteem, lower loneliness, and higher EI compared to women, but we did not expect that loneliness or self-esteem would account for the sex difference in EI.

2.1. Methods

2.1.1. Participants

Data for Study 1 were collected in introductory psychology classes as part of a survey on attitudes and preferences. The participants completed the survey voluntarily during class for credit toward their research requirement. After excluding the data of participants who had missing data on the variables of interest or self-identified as non-native English speakers, the data of 1429 participants were analyzed. Of these, 488 were male and 941 were female ($M_{age} = 18.52$, $SD = 1.59$). We report ethnic and racial breakdown of our sample by sex. Among males, 330 reported being white, 20 Black or African-American, 31 Asian, 6 American Indian or Native Alaskan, 50 multiracial, and 54 reported other. Further, 123 males reported being Hispanic or Latino and 359 reported being non-Hispanic or Latino, while 6 did not report ethnicity. Among females, 626 reported being white, 46 Black or African-American, 46 Asian, 21 American Indian or Native Alaskan, 7 Native Hawaiian or Pacific Islander, 86 multiracial, and 106 reported other. Further, 293 females reported being Hispanic or Latino, 636 reported being non-Hispanic or Latino, while 12 did not report ethnicity.

2.1.2. Materials and procedure

Participants completed the survey in class on their computers. Students were instructed before attending class to bring laptops, tablets, or smart phone in order to complete the in-class survey. Participants were informed that the survey was voluntary and a broad survey measuring student attitudes and preferences. Participants were able to access the survey link on a class website. The online survey was hosted by Qualtrics.com and was only active during class time to prevent participants from completing the study in a different setting. While the survey was conducted in a group setting, participants completed the questionnaires individually on their own computers. Participants completed the scales in the order presented below.

2.1.2.1. Demographics. First, participants were asked for their age, sex, race, ethnicity, and whether they were a native English speaker.

2.1.2.2. Rosenberg Self-Esteem scale. Following the demographic section, participants completed the 10-item Rosenberg Self-Esteem scale (Rosenberg, 1965), which asks participants to indicate their level of agreement to items from 1 (Strongly Disagree) to 4 (Strongly Agree). Example items include “On the whole, I am satisfied with myself” and “I take a positive attitude toward myself” ($\alpha = 0.87$).

2.1.2.3. Existential isolation scale (EIS). Next, participants completed the Existential Isolation Scale (Pinel et al., 2017), which asks participants to give their level of agreement with six items from 1 (Strongly Disagree) to 7 (Strongly Agree). Example items include “I often have the same reactions to things that other people around me do” (reverse coded), and “Other people usually do not understand my experiences”. Responses were averaged to compute a composite EIS score ($\alpha = 0.82$).

2.1.2.4. Three-item loneliness scale. Following the EI scale, participants completed the 3-item loneliness scale (Hughes et al., 2004), which asks participants to rate how often they experience the various items from 1 (Never) to 5 (Always). Example items include, “How often do you feel like you lack companionship?” and “How often do you feel left out?” ($\alpha = 0.71$).

2.2. Results

First we examined correlations within our data. EI was significantly correlated with sex, $r(1428) = -0.163$, $p < 0.001$ (Males were coded as 1, Females as 2; loneliness), $r(1428) = 0.258$, $p < 0.001$; and self-esteem, $r(1428) = -0.234$, $p < 0.001$. In addition to EI, sex was correlated with both loneliness, $r(1429) = 0.150$, $p < 0.001$ and self-esteem, $r(1429) = -0.127$, $p < 0.001$. Self-esteem and loneliness were negatively correlated, $r(1429) = -0.611$, $p < 0.001$.

Next we sought to test whether men and women differed on our variables of interest. We found that men reported significantly higher EI ($M = 3.89$, $SD = 1.01$) than women ($M = 3.54$, $SD = 1.00$), $F(1,1428) = 38.89$, $p < 0.001$, $d = 0.33$; men reported less loneliness ($M = 2.74$, $SD = 0.75$) than women ($M = 2.97$, $SD = 0.70$), $F(1,1427) = 32.74$, $p < 0.001$, $d = 0.30$; and men reported higher self-esteem ($M = 30.71$, $SD = 4.78$) than women ($M = 29.45$, $SD = 4.64$), $F(1,1427) = 23.33$, $p < 0.001$, $d = 0.26$.

Confirming that EI differed between sexes, we wanted to test whether self-esteem or loneliness could account for the sex difference in EI. To test this, we entered sex, centered self-esteem, and centered loneliness into a simultaneous regression predicting EI. Results indicated sex, $t(1423) = 6.72$, $p < 0.001$, $\beta = -0.18$; self-esteem, $t(1423) = 3.46$, $p = 0.001$, $\beta = -0.11$; and loneliness, $t(1423) = 5.95$, $p < 0.001$, $\beta = 0.19$, were all significant predictors. In other words, sex remains a significant predictor of EI even when controlling for self-esteem and loneliness.

2.3. Discussion

The results from our first study replicate previous findings that men report higher EI than women. Additionally, the effect size of our study ($d = 0.33$) is nearly identical to the effect sizes observed in previous literature. Furthermore, controlling for self-esteem and loneliness did not eliminate the sex difference in EI observed in our study. In Study 2, we will test whether agentic and communal value endorsement can explain the sex difference.
3. Study 2

Study 2 was conducted to test whether endorsement of communal and agentic values would explain the sex difference observed in EI research. Specifically, we predicted that including communal and agentic values in a mediation model would cause sex to be a non-significant predictor of EI.

3.1. Methods

3.1.1. Participants

Two hundred and thirty-five undergraduates completed the study online for partial course credit. After excluding the data of 19 non-native English speakers, 2 participants who had missing data, and 3 participants who did not follow instructions, the data of 211 participants were analyzed. Of these, 105 were female and 106 were male ($M_{age} = 18.64, SD$). Racial and ethnicity data were not collected during Study 2 because of an oversight; however, the participants were a subsample from a participant pool similar to that utilized in Study 1.

3.1.2. Materials and procedure

The study was presented to participants online. Students could sign up for the study using an online experiment tracking system via sona.systems.com. Once participants sign up for the study, they were able to access and complete the study from their personal computers. The survey was hosted by Qualtrics.com and first presented participants with a consent form, followed by a series of personality questionnaires. At the end of the study, participants were provided a debriefing form and contact information for the researcher. Once participants completed the study they were awarded partial course credit.

Participants completed the measures in the order listed below.

3.1.2.1. Existential Isolation scale (EIS). Participants first completed the EIS (Pinel et al., 2017) used in Study 1 ($\alpha = 0.87$).

3.1.2.2. Agentic and Communal Values scale (ACV). Participants then completed the ACV (Trappell & Paulhus, 2012), which asks participants to rate 24 different values by relative importance as a “guiding principle” in their lives. Scores ranged from 1 to 9 with anchors at 1 (Not at all important to me), 5 (Quite important to me), and 9 (Highly important to me). Half the values were agentic and half were communal values. Additionally each value provided an example of the value (e.g., WEALTH—financially successful, prosperous; FORGIVENESS—pardoning others’ faults, being merciful). Average scores were computed for both agentic ($\alpha = 0.86$) and communal ($\alpha = 0.86$) values separately with higher scores reflecting greater importance of the value.

3.1.2.3. UCLA Loneliness scale v3. Next, participants completed the UCLA Loneliness scale (Russell, 1996). This 20-item scale asks participants to indicate how often each statement is descriptive of them from 1 (never) to 4 (often) ($\alpha = 0.93$). Example items include “How often do you feel alone?” and “How often do you feel that you lack companionship?” This scale was included because this is a multi-item loneliness measure compared to the 3-item scale used in Study 1. Following previous literature, with this scale, we expected men to report higher loneliness using this scale, but as with Study 1, again did not expect loneliness to account for the sex difference in EI.

3.1.2.4. Demographics. Lastly, we asked participants to report their age, sex, and native language. We included native language as a screening question to ensure that only native English speakers were used in our final sample.

3.2. Results

First we tested whether men and women differed with regard to their EI, agentic value endorsement, communal value endorsement, and loneliness. Similar to previous research, men had significantly higher EI ($M = 3.78$, $SD = 1.10$) than women ($M = 3.47$, $SD = 1.15$), $F(1209) = 4.02$, $p = 0.046$, $d = 0.28$. Men also had significantly lower communal value endorsement ($M = 7.87$, $SD = 1.11$) than women ($M = 8.40$, $SD = 1.08$), $F(1209) = 12.61$, $p < 0.001$, $d = 0.49$. However, there was no sex difference in agentic value endorsement or loneliness ($F < 1$).

Additionally, examining correlations, EI was significantly correlated with less communal values, $r(211) = -0.282$, $p < 0.001$ and greater loneliness, $r(211) = 0.569$, $p < 0.001$, but not with agentic values, $p > 0.68$. Agentic and communal values were significantly correlated, $r(211) = 0.197$, $p = 0.004$, and loneliness was correlated with communal values, $r(211) = -0.285$, $p < 0.001$ but not agentic values, $p > 0.33$. If we examine these correlations for men and women separately, the same pattern of correlations emerges.

Since EI was uncorrelated with agentic values and agentic value endorsement did not differ by sex, we only included communal values in our model. To test whether communal values could explain sex differences, we ran a mediation model using sex (1 = Male, 2 = Female) predicting EI via communal value endorsement. The 95% confidence interval obtained for the indirect effect was estimated from bootstrapping (5000 resamples) using the SPSS macro PROCESS (Hayes, 2012). The standardized indirect effect of sex on EI through communal value endorsement was significantly different from zero, $M_{d_{effect}} = 0.063$, 95% CI [0.03, 0.12]. Looking at specific paths, the analysis showed that as expected, sex was associated with communal value endorsement (A path), $r(209) = 0.308$, $p < 0.001$, $\beta = 0.24$, and communal values were negatively associated with EI (B path), $t(208) = 3.87$, $p < 0.001$, $\beta = -0.26$. Sex was negatively predicted EI (C path), $r(209) = 0.201$, $p = 0.046$, $\beta = -0.14$, but this effect was attenuated when we controlled for communal value endorsement (C’ path), $r(208) = 1.10$, $p = 0.278$, $\beta = -0.074$.

When we run the model swapping out communal value endorsement with centered loneliness, both sex and loneliness emerged as significant predictors of EI, $r(208) = 2.32$, $p = 0.021$, $\beta = -0.13$ and $t(208) = 10.09$, $p < 0.001$, $\beta = 0.568$, respectively. Additionally, sex remained a significant predictor of EI when we controlled for each of the three subscales of the UCLA Loneliness Scale (Hawkley, Browne, & Cacioppo, 2005) separately or together.

3.3. Discussion

The results of this study again replicated the sex difference observed in previous research, although our effect size was a bit smaller than our first study and previous research, although both are moderate effect sizes and the difference may not be surprising given the difference in sample size. Additionally, the data supported our hypothesis that communal values would mediate the relationship between sex and EI and that loneliness would not. In this study we opted to measure loneliness with the UCLA Loneliness Scale v3 rather than the 3-item measure used in Study 1. Following previous literature, when a longer measure assessing loneliness was used, men and women scored similarly (Luhmann & Hawkley, 2016). However, the correlation between EI and loneliness was much higher in Study 2 than for Study 1. This could be due to the issues mentioned in the introduction that some items in the UCLA Loneliness Scale conceptually overlap with EI (e.g., “How often do you feel that there are people who really understand you?”), thus inflating the correlation between the constructs. However even with a higher correlation, controlling for loneliness did not reduce the sex difference in EI.

Although we originally expected both agentic and communal values to mediate this relationship, we observed no sex differences with regard
to agentic values and a non-significant correlation between EI and agentic values. One possible reason we did not observe a sex difference with agentic values could be because of our college sample. Undergraduate women are likely to be more agentic than their non-collegiate counterparts. Other previous studies in the U.S. (e.g., Abele, 2000) have also found no sex difference with regard to agentic traits and values among college students. Moreover, recent research on men and women's representation in communal and agentic roles have found that women are increasingly engaging in more agentic roles, but men are not engaging in more communal roles (Croft, Schmader, & Block, 2015). These cultural changes are likely reflected in sex differences in endorsement of communal and agentic values such that sex differences in communal value endorsement remain while sex differences in agentic value endorsement are diminishing. The findings in the present research are in line with these trends.

One possible limitation to this study was that all participants took the survey in a fixed order, thus increasing the possibility of order effects. In the present study, all participants completed the EI Scale before completing the Agentic and Communal Values Scale, thus EI was made salient for all participants before endorsing agentic or communal values. It is possible that these participants may have endorsed communal values less than participants who did not have EI salient. This would imply that EI might cause a divestment in communal values. Alternatively, communal value endorsement may buffer against feelings of EI. Thus it is possible that making EI salient may actually increase communal value endorsement as a means to avoid thinking about or feeling existentially isolated. Counterbalancing the order of the measures in future research could shed light on this question. However, because men and women both got the same order, whatever possible effect measuring EI first might have had could not account for the sex difference in EI or the evidence that level of endorsement of communal values mediated that sex difference.

4. General discussion

Across both studies, we observed a consistent sex difference in reported EI such that men report higher EI than women. In other words, men consistently indicate that others around them do not share or understand their experiences compared to women. These findings replicate previous studies that reported this sex difference. In Study 1, we found that possible sex differences in self-esteem and loneliness were unable to account for this sex difference in EI. In Study 2, we tested our hypotheses that communal and agentic values mediate this difference. Study 2 found support for the communal value mediation hypothesis. However, there was no sex difference in agentic values, and the agentic value mediation hypothesis was not at all supported. Additionally, Study 2 used a different, more elaborate measure of loneliness to try to account for measurement artifacts in the sex difference regarding loneliness. However, again loneliness did not account for the sex difference observed in EI, nor did any of the three subscales of the loneliness scale.

These studies provide important insights for the emerging literature on existential isolation and contribute to the literature on sex differences. Although the literature on EI is fairly new, researchers are finding that some groups report higher EI than do other groups. For example, Yawger and colleagues (Yawger, Pinel, Miller, & Helm, 2018) explored the implications of EI among targets of stigma and have found that stigmatized groups (e.g., non-whites, non-heterosexual, Hispanic) tend to report higher EI than non-stigmatized groups (e.g., whites, heterosexual, non-Hispanic). Of course women are also disadvantaged in American society relative to men, so it is interesting that they report lower EI than men. Yawger and colleagues suggested that minority group members may be higher in EI because they do not think most people around them can relate to the way they view the world (Yawger et al., 2018). Perhaps the same does not hold for women because they are not a statistical minority and have plenty of fellow women with whom to share and validate their views. Perhaps that fact, combined with their communal values may contribute to them feeling less EI than men.

There are a few limitations to the current research. First, we only examined a possible role of two other variables in the sex difference in EI, self-esteem in Study 1, and loneliness in both studies. It is possible that other variables besides communal value endorsement may also help explain sex differences in reported EI. For example, differences in self-construal, displays of masculinity and femininity, and emotional expressiveness may also lead men more toward EI. Second, the current studies only use American college samples, which may reflect a skewed version of communal and agentic value endorsement. In our study we did not observe sex differences in agentic value endorsement, which may not be true in samples with different demographics or from different cultures. Given the negative correlation between communal values and EI, we might find something quite different in more collectivistic cultures, in which people generally endorse communal values more strongly.

The present research offers a number of implications for future research. First, this research offers additional evidence that EI and loneliness are unique constructs. The present studies consistently found that men reported higher EI than women, but men were not higher in loneliness than women in either study. Indeed, in Study 1 women report higher loneliness than men. These findings are consistent with both previous EI research and previous loneliness literature that found women to report greater loneliness than men when assessing with shorter scales (Lahtmann & Hawkley, 2016).

Recent research has also found that EI is correlated with higher PTSD, alexithymia, and peritraumatic dissociation (Löckert & Pyszczynski, 2018). Coupled with studies that have found that EI is negatively correlated with well-being (Pinel et al., 2017) and with the present studies examining sex differences, it is important for future research to focus on why men report higher EI and to find ways to reduce it.

This research is also the first to find that communal value endorsement is negatively related to self-reported EI. Additional research is needed to assess the causal relationship between these variables. It makes sense that communal values, valuing interconnectedness and being group-oriented, may reduce or protect against feelings of EI. But it is also possible that being high in EI reduces endorsement of communal values. A next step in this line of work may then be to assess whether increasing the investment in communal values in men could help bridge the gap, and reduce men's levels of feeling isolated from their fellow humans.

5. Conclusion

Although men in American society are undoubtedly privileged in many ways, there are also numerous ways in which men fare less well than women. For example men are more likely to suffer from coronary heart disease (e.g., Maas & Appleman, 2010), to experience higher mortality (e.g., Preston & Wang, 2005), to experience fragile and easily threatened gender identity (e.g., Bosslen & Vandello, 2011; Bossen, Vandello, Burnaford, Weaver, & Wasti, 2009), to die from suicide (World Health Organization, 2002), to be diagnosed with attention deficit disorder (e.g., Rucklidge, 2010) and with a substance abuse disorder (e.g., Brady & Randall, 1999). We can now confidently add being higher in existential isolation to this list, and some initial evidence suggests that being high in existential isolation may contribute to some of these other problems (Löckert & Pyszczynski, 2018). And this higher level of EI appears to result in part from American men being lower in endorsement of communal values relative to American women.

Acknowledgements

This research was not supported by any specific grant from any