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From Social Alienation to Physical Health Concerns: Depression and Alcohol Proneness as Disconnection Pathways

Benjamin F. Shepherd, M.Ed., and Paula M. Brochu, Ph.D.

Abstract

It is well established that social isolation is a robust predictor of poor health outcomes, both mental and physical, yet little is known about whether and how personality characteristics related to social isolation (e.g., social alienation) affect health. Grounded in relational-cultural theory, the present study examined depression and alcohol proneness as parallel mechanisms underlying the association between social alienation and physical health concerns. As hypothesized, social alienation was positively associated with depression and alcohol proneness, and depression and alcohol proneness were both positively associated with health concerns. Notably, social alienation was indirectly associated with health concerns through depression for both men and women and through alcohol proneness for only men. Findings suggest depression, alcohol proneness, and gender play critical roles in understanding the association between social alienation and physical health. These findings support a growing body of social cure-focused research showing that the quality of social connections can have a profound effect on mental and physical health. Such knowledge can inform clinical assessments, interventions, and policies in a variety of healthcare settings.

Introduction

In the field of positive psychology, social well-being is broadly defined as a person's capacity to develop and maintain meaningful relationships with others and, in turn, to feel valued and connected to the social world (Feeney et al., 2015; Keyes, 1998; Keyes & Shapiro, 2004). Social well-being is important because humans are social by nature, thriving in relationships and in groups that foster a sense of belongingness (Cacioppo et al., 2011; Slepian & Jacoby-Senghor, 2020). Belongingness, defined as the state or feeling of acceptance and inclusion by others, is often described as a fundamental human need that drives behavior and has a profound effect on well-being, including satisfaction in life and relationships (Baumeister & Leary, 1995; Lavigne et al., 2011). A major threat to belongingness is social alienation (Slepian & Jacoby-Senghor, 2020). Social alienation can be conceptualized as a pattern of inner experience and behavior, personality trait, or condition in social relationships that reflects "a low degree of integration or common values and a high degree of distance or isolation between individuals, or between an individual and a group of people in a community or work environment" (Ankony et al., 2015, paragraph 2). Social alienation may adversely impact cognitions, emotions, and bodies (Hosseinbor et al., 2014; Wang et al., 2018). Research shows social isolation, or the absence of social connections, is a risk

factor for a variety of health outcomes, including depression and alcohol abuse—both of which are associated with each other and a wide range of physical health concerns (e.g., heart disease, sexually transmitted infections, disordered eating, premature death; De Santis et al., 2012; Fridell et al., 2019; Hosseinbor et al., 2014; Johnson et al., 2018; Kuria et al., 2012; Ohrnberger et al., 2017; Santini et al., 2020; Schulte & Hser, 2014). However, little is known about the health consequences and mechanisms underlying social alienation.

Relational-cultural theory (Jordan, 2008) posits that every aspect of human psychology, including personality and health, cannot be understood outside of the context of relationships and the culture in which those relationships develop. A core element of this theory is the "central relational paradox," which recognizes that human beings crave relationships to feel belonging, yet do not always act in accordance with their innermost desires for fear of rejection and isolation. As a result, people learn to develop "strategies of disconnection" (e.g., social alienation, depression, alcohol proneness) to hide and escape parts of themselves that have been socially shamed or stigmatized over the course of their lives. However, these strategies prevent people from forging healthy, mutually growth-fostering relationships that allow them to not only survive but also thrive in their respective environments, resulting in interpersonal problems and, in turn, psychological distress. Mutually growth-fostering relationships are characterized by a sense of zest or energy, self-worth, clarity about oneself and relationships with others, productivity both inside and outside of a relationship, and desire for more connection due to past satisfying experiences, whereas social alienation is characterized by the opposite (e.g., feeling misunderstood, unhappy, unloved, and dissatisfied with certain elements of society; Lystad, 1972).

Although originally developed to help explain the elevated mental and physical health risks experienced by women, relational-cultural theory (Jordan, 2008) has evolved over time to be inclusive of other socially oppressed groups (e.g., sexual minorities; Mereish & Poteat, 2015) and is supported by a large body of empirical evidence linking a low quantity or quality of social connections to poor mental health, health behavior engagement, and physical health, as well as mortality risk (Umberson & Montez, 2010; Wakefield et al., 2020). Most alarmingly, a recent longitudinal study of 8,650 adults from Finland found that social isolation was a significant predictor of mortality, even after controlling for loneliness, demographic variables, and behavioral, psychological, and clinical risk factors (e.g., age, gender, education level, self-reported health, frequency of alcohol consumption; Tanskanen & Anttila, 2016). The same researchers found that loneliness became a nonsignificant predictor when examined simultaneously with social isolation. Similarly, Steptoe and colleagues (2013) found that social isolation was significantly associated with mortality after adjusting for demographic factors and baseline health, whereas loneliness was not independent of demographic characteristics or health problems and did not contribute to the risk associated with social isolation. Although both isolation and loneliness have a negative impact on quality of life and well-being, these findings suggest social isolation is a distinct and stronger pathway to mortality and health compared to loneliness, which typically reflects a loss or lack of social contact that is more temporary and involuntary in nature. Social alienation may also contribute to the risk associated with social isolation and loneliness. Unlike social isolation and loneliness, social alienation represents a more chronic state of being, a personality trait that severely limits people's access to important social resources that can help people manage stress more effectively and improve overall quality of life, including social identity resources that stem from internalized group memberships (e.g., support, solidarity, belonging; Ankony & Kelley, 1999; Muldoon et al., 2019; Wakefield et al., 2020). Not coincidentally, socially isolated and lonely people generally experience higher stress levels compared to those who are socially active

and connected (Tanskanen & Anttila, 2016). With a sturdy sense of belonging and social support, humans are better equipped to cope with life's challenges (e.g., long-term health conditions, anxiety, loneliness; Wakefield et al., 2020).

As social creatures, all human beings have needs rooted in the social world, such as the need to belong; however, socially alienating personalities may impact the mental and physical health of women and men differently due to pervasive and persistent social inequalities (Jordan, 2008). A literature review shows women are more likely than men to be lifetime abstainers, drink less, and avoid abusing alcohol, compared to men (Erol & Karpyak, 2015), possibly as a function of being biologically less tolerant to alcohol than men and therefore more susceptible to its physical health consequences (e.g., high blood pressure, heart disease, stroke, liver disease, and digestive problems; Greenfield, 2002; National Institute on Alcohol Abuse and Alcoholism, 1999). Higher rates of alcohol consumption among men contribute to higher rates of mortality at all ages, which is unsurprising given alcohol's health consequences and relationship to accidents and injuries (Verdonk et al., 2010). In fact, Wu and colleagues (2021) found that men have a 60% higher risk of death worldwide compared to women, and that this contrast grew wider when accounting for both alcohol consumption and depression. Women are twice as likely as men to develop depression than men, according to a recent meta-analysis (Salk et al., 2017). Another recent study found that men have a higher risk of developing a chronic disease sometime during their lives (compared to women) due to modifiable lifestyle habits (i.e., smoking, drinking, diet, and physical activity; Ng et al., 2020). Such differences are likely related to socialization—the process of learning to behave in ways that are socially acceptable—as masculine norms center around competitiveness and nonchalant attitudes towards health, whereas taking care of health is seen as more feminine and, as a result, is more frequently avoided by men (Verdonk et al., 2010; Weisberg et al., 2011).

Although prior research provides a thorough foundation for identifying the consequences of social isolation and other constructs related to social well-being (e.g., social support, community belonging) on health risk, the connection between social alienation, mental health, and physical health remains largely unexplored by researchers (Mehrabi & Beland, 2020; Ohrnberger et al., 2017; Umberson & Montez, 2010). In particular, a dearth of knowledge characterizes the psychological pathways through which social alienation is associated with physical health. The present study aims to address this critical gap in the literature by examining (1) whether depression and alcohol proneness are mechanisms that underlie the association between social alienation and health concerns, and (2) whether and how these associations differ by gender as a relational-cultural characteristic, as has been shown to influence personality and health (Weisberg et al., 2011; Woo & Oei, 2006). It was hypothesized that social alienation will be directly and indirectly associated with physical health concerns via depression and alcohol proneness, and that the strength of these associations will differ by gender, with depression being a stronger mediator for women, and alcohol proneness being a stronger mediator for men (Erol & Karpyak, 2015; Jordan, 2008; Salk et al., 2017).

Method

Participants and Procedure

Participants were recruited at a community mental health clinic at a southern university between the years of 1995 and 2019. After providing informed consent and demographic information, participants completed the Minnesota Multiphasic Personality Inventory-2 (MMPI-2; Graham, 1993), which included measures of social alienation, depression, alcohol proneness,

and health concerns. A total of 224 participants completed these measures of interest in full. Of these respondents, five were excluded from analyses because they did not provide sufficient demographic information. All decisions regarding participant exclusion took place before data analyses were conducted.

The final sample consisted of data from 219 participants (100 women and 119 men). A majority of participants identified as White (N = 160, 57%); of the remaining participants, 25 (25%) identified as Latinx/Hispanic, 24 (6%) as Black/African American, and 10 (7%) as another race/ethnicity. Participants ranged in age from 17 to 80 years (M = 32.92, SD = 12.22). Participants' level of education ranged from 3 years (i.e., primary school) to 20 years (i.e., postgraduate study), with a mean of 14 years (i.e., some college education; SD = 2.63).

Measures

Social alienation, depression, alcohol proneness, and physical health concerns were measured using the MMPI-2 (Graham, 1993). The MMPI-2 is a true-false self-report measure that consists of internally-reliable scales covering a wide range of personality traits related to psychopathology. The MMPI-2 was validated using a normative sample of 2,600 adults and is widely used in the field of psychological science to assess an array of enduring patterns of inner experience and behavior, ranging from depressive symptoms to chronic pain (Drayton, 2009; Gatchel, 2012). For each subscale used, final scores were calculated based on responses to true-false questions, with "true" coded as 1 and "false" coded as 0, then converted to t-scores.

Social Alienation. The extent to which participants experienced social alienation was assessed with 13 items from the Psychopathic Deviate clinical subscale (Harris & Lingoes, 1955). Higher scores represent endorsement of trait descriptions such as alienated, estranged, feeling misunderstood, unhappy and unloved, overly sensitive, self-centered, and inconsiderate, whereas lower scores represent trait descriptions such as possesses a sense of belonging, perceives significant others as loving and understanding, and maintains satisfying social relationships.

Depression. The extent to which participants experienced depression was assessed with 57 items from the Depression clinical scale (Hathaway & McKinley, 1942). This scale has demonstrated excellent incremental validity, detecting depressive symptoms at higher rates than the Beck Depression Inventory-Second Edition (BDI-II; Serrano Burneo et al., 2016). Higher scores represent endorsement of trait descriptions such as pessimism and feelings of guilt, whereas lower scores represent trait descriptions such as cheerful and competitive.

Alcohol Proneness. The extent to which participants reported a psychological tendency toward alcohol abuse was assessed with 57 items from the revised version of the MacAndrew Alcoholism scale (MAC-R; MacAndrew, 1965). This scale has demonstrated strong convergent validity in terms of alcohol abuse severity for men and women (Sher & McCrady, 1984). Higher scores represent greater alcohol use and an addiction-prone personality (e.g., risk-taker, impulsive, sensation-seeker).

Physical Health Concerns. Physical health was measured using 36 items from the Health Concerns content scale (Butcher et al., 1990). Higher scores represent greater concerns with physical health or somatic symptoms, including gastrointestinal symptoms, neurological symptoms, sensory problems, dermatological problems, respiratory problems, and pain.

Statistical Analyses

To better understand the associations between social alienation, depression, alcohol proneness, and physical health, three types of statistical analyses were conducted using SPSS

Version 27 for Windows (IBM Corporation, 2017). First, bivariate correlations were conducted to examine the associations between the variables in the sample. Second, a parallel mediation analysis was conducted using Hayes' (2018) PROCESS macro (v3.5; model 4) to examine the indirect associations between social alienation and physical health concerns via depression and alcohol proneness. A parallel multiple mediation analysis allows for simultaneous tests of each mediator in the model while accounting for the association between them. Lastly, a moderated mediation model was tested using Hayes' (2018) PROCESS macro (v3.5; model 59) to determine whether and how the direct and indirect associations differed by gender. Each mediation analysis utilized 5000 bootstrap samples; a significant effect is interpreted when the 95% confidence interval (CI) excludes zero.

Results

Descriptive statistics and correlations between the measures are provided in Table 1.

Table 1

Descriptive Statistics and Correlations Between Measures

	M (*SD*)	1	2	3	4
1. Social alienation	59.25 (13.21)	--			
2. Depression	63.73 (15.07)	.52**	--		
3. Alcohol proneness	49.61 (10.64)	.30**	-.03	--	
4. Physical health concerns	59.09 (13.56)	.47**	.62**	.28**	--

**$p < .01$.

Based on MMPI-2 interpretive cutoff scores ($t \geq 65$; Graham, 1993), 96 (44%) participants had high depression scores, 76 (35%) had high scores on physical health concerns, 56 (26%) had high social alienation scores, and 23 (11%) had high alcohol proneness scores. It should be noted that elevated scores on MMPI-2 measures do not indicate that individuals meet diagnostic criteria for major depressive disorder, alcohol use disorder, or any other mental disorder (American Psychiatric Association, 2013); rather, elevated scores represent the possible presence of personality traits and characteristics that are commonly associated with psychopathology (Drayton, 2009; Gatchel, 2012). Social alienation was positively correlated with depression, alcohol abuse, and physical health concerns. Depression and alcohol abuse were positively correlated with physical health concerns. Unexpectedly, depression was not correlated with alcohol proneness.

Bivariate correlations were conducted to determine whether there was statistical justification for including age and educational attainment as covariates in the mediation analysis, given their potential influence on MMPI-2 scores and health outcomes (Butcher et al., 1991; Franssen et al., 2020; Raghupathi & Raghupathi, 2020; Williams & King, 2010). Age was positively correlated with physical health concerns, $r(217) = .14$, $p = .035$, and depression, $r(217) = .17$, $p = .011$. Age was not correlated with social alienation, $r(217) = .10$, $p = .150$, or alcohol proneness, $r(217) = .03$, $p = .68$. Education was negatively correlated with social alienation, $r(217) = -.15$, $p = .026$, physical health concerns, $r(217) = -.14$, $p = .042$, and alcohol proneness, $r(217)$

= -.24, $p < .001$. Education was not correlated with depression, $r(217) = -.05$, $p = .443$. As such, age and education were included as covariates in the mediation models.

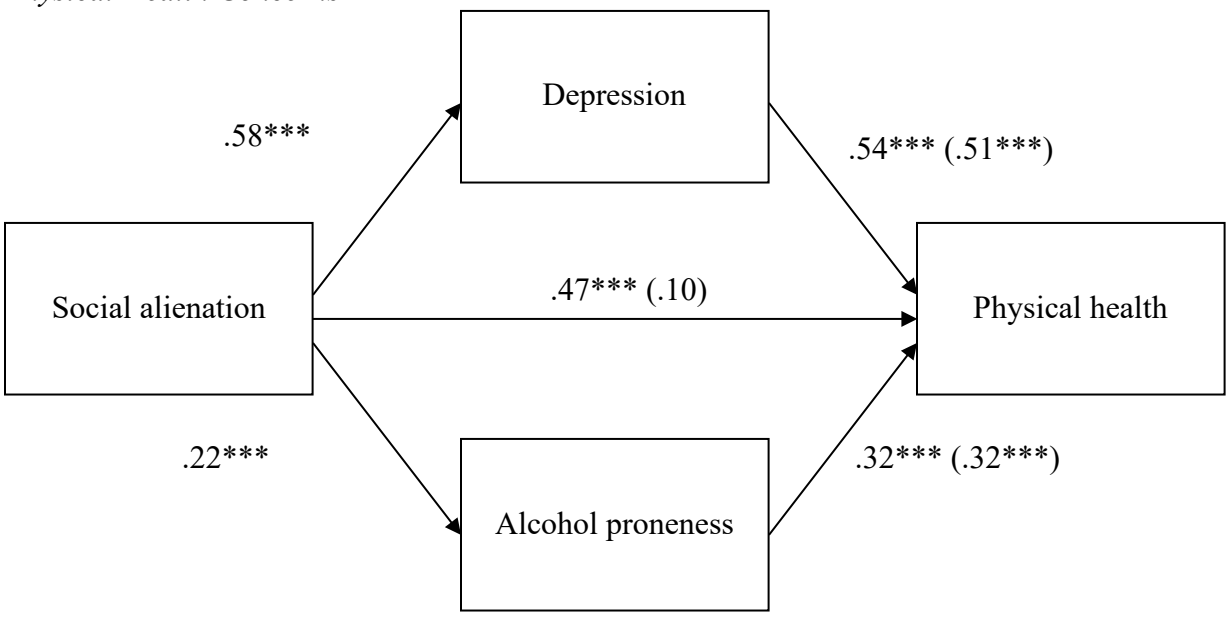
Given the potential gender and racial/ethnic differences in health, illness, and personality (Dunlop et al., 2003; Lee et al., 2012; Regitz-Zagrosek, 2012; Timbrook & Graham, 1994; Vlassoff, 2007), independent-sample *t*-tests were conducted. Gender (i.e., women and men) and race/ethnicity (i.e., White and non-White) were treated as dichotomous categorical variables due to the lack of gender and racial/ethnic diversity in the sample. Men ($M = 61.88$, $SD = 12.89$) reported higher levels of social alienation than women ($M = 50.04$, $SD = 13.11$), $t(217) = 2.74$, $p = .007$, Cohen's $d = 0.91$. No significant gender differences were observed in depression, alcohol proneness, or physical health, all ts(217) < 1.40, ps > .164. No significant racial/ethnic differences were observed on social alienation, depression, alcohol proneness, or physical health, all ts(217) < 1.48, ps > .140. As such, gender was also included as a covariate in the parallel mediation analysis.

Parallel Mediation Analysis

A parallel mediation analysis was conducted to test the hypothesis that social alienation is indirectly associated with physical health concerns through depression and alcohol proneness. In this analysis, age, educational attainment, and gender were included as covariates.

Figure 1

Depression and Alcohol Proneness Mediate the Association between Social Alienation and Physical Health Concerns



Note. Unstandardized beta coefficients are indicated on figure paths. Numbers in parentheses represent betas when social alienation, depression, and alcohol abuse were entered together in the analysis. Participant age, educational attainment, and gender were included as covariates in the model.
*** $p < .001$.

The overall model was significant, accounting for 49% of the variability in physical health concerns, $F(4, 214) = 27.33$, $p < .001$ (see Figure 1). When the mediating variables were not included in the model, social alienation was positively associated with health concerns, $b = .47$, $SE = .06$, $p < .001$, 95% CI [0.3408, 0.5917]. However, when depression and alcohol proneness were included as mediating variables in the model, social alienation was no longer associated with health concerns, $b = .10$, $SE = .07$, $p = .140$, 95% CI [-0.0322, 0.2273]. Social alienation was associated with health concerns indirectly through depression, $b = .30$, $SE = .04$, 95% CI [0.2171, 0.3868]. This was also the case for alcohol proneness, $b = .07$, $SE = .02$, 95% CI [0.0336, 0.1210]. Interestingly, the indirect association with depression was stronger than the indirect association with alcohol proneness, $b = .22$, $SE = .05$, 95% CI [0.1283, 0.3258]. The results of this mediation analysis remained the same when the covariates were not included in the model. Thus, as hypothesized, social alienation and physical health concerns were associated indirectly through depression and alcohol proneness.

Moderated Mediation Analysis

A moderated mediation analysis was conducted to test whether gender moderated the finding that social alienation is associated with physical health concerns indirectly through depression and alcohol proneness. In this analysis, age and educational attainment were included as covariates. The path from social alienation to depression was significantly moderated by gender, $b = .41$, $SE = .13$, $p = .002$, 95% CI [.1521, .6737]. The positive association between social alienation and depression was stronger for women, $b = .77$, $SE = .09$, $p < .001$, 95% CI [.5895, .9412], than men, $b = .35$, $SE = .10$, $p = .001$, 95% CI [.1563, .5487]. The path from alcohol proneness to physical health concerns was significantly moderated by gender as well, $b = -.28$, $SE = .14$, $p = .043$, 95% CI [-.5491, -.0085]. The positive association between alcohol proneness and physical health concerns was significant for men, $b = .46$, $SE = .10$, $p < .001$, 95% CI [.2649, .6514], but not for women, $b = .18$, $SE = .10$, $p = .069$, 95% CI [-.0141, .3728]. As expected, depression mediated the association between social alienation and physical health concerns for both men, $b = .17$, $SE = .05$, 95% CI [.0726, .2876], and women, $b = .41$, $SE = .06$, 95% CI [.2940, .5378], but more so for women, $b = .24$, $SE = .08$, 95% CI [.0756, .3980]. In addition, alcohol proneness mediated the association between social alienation and physical health concerns for men, $b = .09$, $SE = .04$, 95% CI [.0181, .1899], but not for women, $b = .04$, $SE = .03$, 95% CI [-.0069, .0991]. The results of the moderated mediation analysis remained the same when age and educational attainment were not included in the model as covariates. Thus, social alienation and physical health concerns were associated indirectly through depression for both women and men, but especially for women, and through alcohol proneness for men only.

Discussion

Based on previous and current research, a psychological propensity towards depression and alcohol proneness appears to be related to social alienation and poor physical health outcomes. Reflective of a personality structure possessing a certain degree of social dissatisfaction, non-conformity, and isolation, social alienation may increase the risk for mental health conditions, such as depression and alcohol abuse (Harris & Lingoes, 1955; Hathaway & McKinley, 1942). However, minimal research has examined the association between social alienation and physical health. As hypothesized, results of a parallel moderated mediation analysis revealed that depression mediates the association between social alienation and physical health concerns for women and men, albeit more strongly for women, and that alcohol proneness mediates the

association between social alienation and physical health concerns for men, but not women. Although significant parallel mediators, depression and alcohol proneness were not related to each other, indicating both are distinctly related to physical health concerns. Men reported higher levels of social alienation than women, yet social alienation was more strongly related to depression among women, suggesting that the deleterious effects of social alienation on mental health may be greater for women. One reason why women may experience more severe depression when socially alienated is because they are more sensitive to the rewarding actions of oxytocin derived from social interactions (Borland et al., 2018). This difference may be an evolutionary, biological, or social adaptation in response to greater relational-cultural pressures to be empathic caretakers (Vongas & Al Hajj, 2015; Wellenreuther & Otto, 2015). Furthermore, women are more likely than men to experience poverty, abuse, inequality in household chores and work, and caregiver burden, all of which potentially contribute to higher rates of depression in the face of social alienation (Arokach, 2006; Cawthorne, 2008; Mulia et al., 2008; Rokach, 2007; Scott & McManus, 2016; Sumra & Schillaci, 2015; Swinkels et al., 2019). Given the emerging evidence showing transgender women have a brain structure similar to that of cisgender women (Guillamon et al., 2016), it would be interesting to investigate whether transgender women (assigned male at birth) are more sensitive to social rewards and, in turn, the negative mental health consequences of social alienation in this population. It is also possible that transgender people are more sensitive to social rewards, regardless of gender or sex, given recent evidence indicating that transgender children who have socially transitioned (i.e., changed their pronouns, names, clothing, and hairstyles) and are affirmed in their identities, rather than alienated, experience better mental health over time (Olson et al., 2016).

Similarly, other socially marginalized groups (e.g., older adults, sexual and gender minorities, immigrants) who experience additional social stressors (e.g., ageism, sexism, racism) may be especially at risk for experiencing poor health outcomes in the absence of positive social connections (Meyer, 2003; Shepherd & Brochu, 2020; Wong et al., 2014). Furthermore, as a result of various forms of social marginalization, these groups tend to have thinner social support networks and experience greater levels of social isolation and loneliness—all of which contribute to health disparities, including higher rates of depression and alcohol abuse (Dunlop et al., 2003; Miyawaki, 2015; Meyer, 2003; Mulia et al., 2008; National Academies of Sciences, Engineering, and Medicine, 2020; Pascoe & Smart Richman, 2009; Singer, 2018). With the exception of gender, moderated mediation analyses could not be reliably carried out to fully evaluate whether and how the associations between social alienation, depression, alcohol proneness, and physical health concerns varied, due to small sample size and lack of diversity in the sample. Although demographic indicators of social marginalization were controlled for in the mediation analyses, this does not mean age, educational attainment, and race/ethnicity do not play a role in understanding the association between social alienation and health. For example, Miyawaki (2015) conducted a longitudinal study based on a nationally representative sample of community-dwelling older adults and found that constructs of relational disconnection are closely connected to physical and mental health, with some racial/ethnic, gender, and educational differences. Overall, older age was negatively with physical and mental health, whereas being male and having higher educational attainment were positively associated with physical and mental health. In White older adults, perceived isolation and social disconnectedness were both negatively associated with physical and mental health; in Black older adults, social disconnectedness was negatively associated with physical health, whereas perceived isolation was negatively associated with mental health; and in Hispanic older adults, social isolation was negatively associated with mental health, but not

physical health. Further, White and Hispanic older adults who were male or college-educated were more likely to rate their physical and mental health as good. Our findings support this research to an extent, suggesting that depression and physical health concerns are positively associated with age and that mental and physical health are positively associated with educational attainment.

However, because this study was cross-sectional, causality and directionality between variables cannot be determined from the mediation analyses conducted. For example, it is possible the tested social alienation-health pathways are bidirectional in nature; in other words, depression and alcohol proneness may be the result of greater physical health concerns or lead to social alienation. Social alienation may cause or be caused by self-isolating attitudes and behaviors that occur as a result of depression and alcohol proneness, such as a loss of interest in social activities or estrangement from family, and physical health concerns may cause or be caused by self-care-compromising depressive states and alcohol intoxication or dependence, as evidenced by research showing depression and alcohol use are directly linked to chronic physical health conditions (Hoy-Ellis & Fredriksen-Goldsen, 2016; Shield et al., 2013). As such, these findings should be considered tentative until replicated in highly powered and preregistered future research.

Future research is encouraged to examine the effects of social alienation, depression, and alcohol proneness, as well as additional possible underlying mechanisms, at various time points in order to develop a clearer understanding of whether and how each variable affects the other over time and across the lifespan. It is also recommended that future research utilize more diverse samples with additional sociocultural variables—such as socioeconomic status, sexual orientation, and a broader range of gender identities, races, and ethnicities—to better articulate the diverse health needs of various sociocultural groups with varying levels of power and privilege in society

Limitations aside, the current study brings attention to the importance of examining the social and psychological determinants of health. This research can inform clinical assessments and interventions in a variety of healthcare settings, ranging from hospitals to community mental health clinics. Specifically, the finding that social alienation is related to physical health through depression and alcohol proneness can inform and promote research and practices that help build and maintain social connections to address healthcare needs. For example, research shows patients experiencing long-term health conditions, isolation, anxiety, or loneliness who were prescribed group memberships reported a greater quality of life over time through increases in belonging and support and decreases in loneliness (Wakefield et al., 2020). Yet, people tend to underestimate the importance of social factors for health (Haslam et al., 2018). Considering the current and ongoing global pandemic which has forced millions of people around the world to socially distance themselves from friends, family, and other sources of social support, this research is important for understanding and treating the short- and long-term health consequences of social alienation, as well as the efficacy and effectiveness of social cure-based health interventions on certain populations (Bethell et al., 2021; Hwang et al., 2020; Jetten et al., 2017; Van Orden et al., 2020). As of now, it is unclear whether current evidence-based strategies designed to combat social isolation and loneliness to improve health have the same effect on individuals with a more social alienating personality. In addition to supporting the development, adaptation, and implementation of individual-level strategies that prevent and treat chronic health conditions through enhancing social connections, these findings can inform public policies aimed at creating services and environments that foster social, mental, and physical well-being among socially marginalized populations.

About the Authors

Benjamin F. Shepherd, M.Ed., is a student in the Clinical Psychology Ph.D. program at Nova Southeastern University. Correspondence concerning this article should be sent via email to bs1759(at)mynsu.nova.edu.

Paula M. Brochu, Ph.D., is an Associate Professor in the Department of Clinical and School Psychology at Nova Southeastern University's College of Psychology.

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