The Moderating Effect of Values on the Relationship between Subjective Social Status and Depression: Evidence from MIDUS

Emily A. Ekl[1] iD, and Benjamin Gallati[1]

Abstract

The relationship between subjective social status (SSS) and mental health and its underlying mechanisms remain an area of interest in the social sciences. Using data from the Midlife in the United States 2 (MIDUS 2), we examine how individual differences in valuing achievement and autonomy moderate the relationship between SSS and symptoms of depression. We find evidence of a moderation effect; there is a weaker relationship between SSS and depression for individuals who strongly hold the values of achievement or autonomy. In addition, at low levels of SSS, there are significant differences in the number of depression symptoms depending on personal values which are not seen at higher rungs of the SSS ladder, indicating a difference in this relationship dependent on how strongly one holds values of achievement and autonomy. We conclude by speculating on the mechanisms by which values shape the link between SSS and mental well-being and suggest future directions in studying values.

Keywords

depression, values, subjective social status, stress process

A house may be large or small; as long as the neighboring houses are likewise small, it satisfies all social requirement for a residence. But let there arise next to the little house a palace, and the little house shrinks to a hut. The little house now makes it clear that its inmate has no social position at all to maintain, or but a very insignificant one; and however high it may shoot up in the course of civilization, if the neighboring palace rises in equal or even in greater measure, the occupant of the relatively little house will always find himself more uncomfortable, more dissatisfied, more cramped within his four walls—Karl Marx, Wage Labor and Capital ([1844] 2000:284)

INTRODUCTION

Subjective social status (i.e., an individual's perception of one's social rank; hereafter SSS) correlates with a variety of both physical and mental health measures (Adler et al. 2000; Singh-Manoux, Adler, and Marmot 2003). In fact, SSS is a better predictor of health status and change in health over time than objective social status

[1]Indiana University Bloomington, Bloomington, IN, USA

Corresponding Author:
Emily A. Ekl, Department of Sociology, Indiana University Bloomington, 1020 E. Kirkwood Avenue, 7th Floor, Bloomington, IN 47405, USA.
Email: eekl@iu.edu

(e.g., measures of income, education, and occupation; hereafter OSS) (Singh-Manoux, Marmot, and Adler 2005). Objective measures of status can only partially predict the relationship between status and health because OSS measures do not perfectly map onto perceptions of status. Perception is essential to one's understanding of their position in society, contributing to SSS being a more comprehensive measure of social positioning than OSS (Adler 2009). As such, the relationship between SSS and health persists even when OSS is controlled for (Andersson 2021; Demakakos et al. 2008; Quon and McGrath 2014; Shaked et al. 2016).

More specifically, SSS has been found to have a strong association with mental health, including depression. Empirical findings show that the higher one's SSS, the less likely one is to experience depression (Demakakos et al. 2008; Euteneuer 2014). The psychosocial mechanisms associated with subjective status appraisal indicate a strong correlation with feelings of inferiority when comparing with others with greater status. Some scholars have gone as far to argue these results likely even describe a relationship where low SSS causes incidence of depression (Schubert et al. 2016).

Thus, subjective measures of status are an essential component of understanding the relationship between status and health (Adler and Tan 2017). The stress process model (Pearlin et al. 1981) accounts for this subjectivity within the structured relationship between social characteristics (such as SSS) and health outcomes (such as depression). Expansions to the stress process model argue social conditions contribute to distress by influencing both objective life circumstances and the "perception of significance" of those circumstances (McLeod 2012:174). Leonard I. Pearlin (1989) himself argued for the inclusion of values in the stress process model to capture subjective appraisal of stressors. Indeed, there is a growing body of research that supports examining the *meanings* individuals hold for stressful stimuli such as low subjective social standing (Andersson 2018; Hoebel and Lampert 2020; McLeod 2012; Schnittker and McLeod 2005; Simon 1997).

Building on the observations of Pearlin (1989) and his contemporaries, we argue personal values—such as the extent to which one values achieving at high levels or asserting one's own autonomy (Hitlin 2006; Schwartz 1992)—may

act as moderators in the relationship between SSS and depression. Values form the "core of the self" (Hitlin 2007:249) and reflect an internalization of cultural frameworks, shaping how one assesses social situations (Stolte and Fender 2007). Values potentially offer a protective effect, giving an actor agency to refocus her priorities to factors that reflect more favorably on the self (Shaked et al. 2016). The degree to which one values achievement and autonomy may contribute to how one perceives her subjective social standing, and the interpretation of life circumstances and experiences of distress (McLeod 2012).

In this study, we use data from the Midlife in the United States 2 (MIDUS 2) survey to examine if two values—achievement and autonomy[1]—moderate the relationship between SSS and depression. We first review the literature on the relationship between SSS and depression. Then, we make the case for the values of achievement and autonomy as moderators of this relationship. We next review our methodologies and results. We find that valuing achievement and autonomy moderates the relationship between SSS and depression, whereby a weaker association between SSS and depression is present for those who place higher value on these constructs. We conclude with potential explanations why this association might be present and future directions for this line of research.

BACKGROUND

SSS and Mental Health

SSS captures a cognitive appraisal of one's position in society in reference to the positioning of other social actors (Hoebel and Lampert 2020). SSS is important because one's relative position in the social world, and how one perceives that position, informs one's understanding of social hierarchy and her own place in it (Schubert et al. 2016). While SSS is partially rooted in the material conditions of one's immediate environment (Demakakos et al. 2008), it cannot be fully accounted for by traditional components of socioeconomic status—such as income, occupation, and education (Andersson 2018; Singh-Manoux et al. 2005). Indeed, the effects of SSS on health often persist even when measures OSS are controlled for (Singh-Manoux et al. 2005).

Research has found a persistent, robust relationship between SSS and mental health

(Euteneuer 2014). In fact, SSS has been observed to have a stronger correlation with mental health than it has on other health dimensions (e.g., self-rated health, physical health; Quon and McGrath 2014). For example, both men and women who report low SSS experience a higher incidence of depression than those who report high SSS (Demakakos et al. 2008). In addition to depression, SSS has been found to correlate with stress, negative affect, and pessimistic thoughts (Adler et al. 2000). The subjective appraisal aspect of status is particularly important when considering the relationship between status and depression, with researchers arguing mental well-being is more strongly correlated with the fulfillment of one's psychological needs than it is with material wealth (an indicator of OSS) (Ng and Diener 2019). Still, the base relationship between SSS and depression introduces questions as to what the mechanisms behind this relationship are and how they can be explained (Hoebel and Lampert 2020).

Scholars propose SSS influences mental health through the relational aspects of status and the social comparisons inherent in the process of subjective status appraisal (Andersson 2018; Hoebel and Lampert 2020; Tan et al. 2020). Comparison of one social actor's status to another's is made frequently and spontaneously and can be made consciously or subconsciously or be primed by environmental cues (Hoebel and Lampert 2020; Tan et al. 2020). Social comparison sets SSS apart from OSS as SSS comprises both the individual's assessment of her objective markers of status (contributing to the correlation between SSS and OSS) and the social comparisons that inform evaluative judgment of that status (Schnittker and McLeod 2005; Tan et al. 2020). Thus, it is not so much the relative position of one compared with another that correlates with mental health as it is the understanding and interpretation of that relative positioning (Hoebel and Lampert 2020; Wilkinson 1996).

This is especially the case when considering SSS and mental health because (1) SSS is contingent upon an actor's understanding of her status relative to others, (2) it is the relational aspects of status that contribute to well-being, and (3) the chosen reference groups are the foundation of experiencing meaning and "profoundly influence personal well-being apart from material conditions" (Andersson 2018:51). As such, actors can make either upward comparisons—comparing themselves with those with higher status—or downward comparisons—comparing themselves with those with lower status. This is important because perceptions of social regard are negatively correlated with the incidence of depression (Markowitz et al. 2020). Upward social comparison can lead to relatively poorer mental health—as the actor perceives her status to be worse than the referent—while downward social comparisons can lead to relatively greater mental health—as the actor perceives her status to be better than the referent (Andersson 2018; Hoebel and Lampert 2020).

Therefore, it is essential for SSS and depression research to consider the reference group to which any given individual is comparing herself with (Wolff, Acevedo-Garcia, et al. 2010; Wolff, Subramanian, et al. 2010). SSS scholarship uses scales that measure comparisons to others in one's own community or comparisons to others in a national hierarchy (Euteneuer 2014). The MacArthur Scale of Subjective Social Status was developed to measure individuals' perceptions of where they rank in a status hierarchy (Adler et al. 2000). Most frequently, the MacArthur Scale is constructed as a national ladder, with the reference point being where the individual would place themselves relative to the nation as a whole (Euteneuer 2014). Other SSS studies rely on the MacArthur Scale as a community ladder, where respondents are asked to compare themselves with those in their community (Euteneuer 2014). Both community and national ladders find correlations between SSS and mental health (Mama et al. 2016). This study uses the community ladder, as discussed in greater detail in the "METHODS" section.

Values as a Moderator

Given that the relationship between SSS and depression functions through social comparison as a mechanism, we believe it is important for social scientists to study what social actors value in these comparisons. Perception is essential to social comparison, and our perceptions of the social world are informed by the values social actors hold (Schwartz 1992). Values are inherently positive goals, in the sense values are something the individual is striving to achieve, that endure across social situations. They have been described as "cognitive representations of desirable, abstract goals" (Roccas et al. 2002). While values are goals, they are distinct in that they are not built

around specific ends but persist beyond the scope of any individual context and are something the individual is constantly striving toward (Schwartz 1992). Values result in individuals orienting their lifestyle around the realization of these goals (Hitlin 2003). Values can guide desires and behaviors (Schwartz and Bilsky 1987) and can greatly inform an individual's perceptions of the world, helping to orient individuals toward different standards of success depending on the priorities of the individual (Schwartz 1992).

Shalom H. Schwartz (1992) empirically identified 10 values present in more than 64 countries: self-direction, stimulation, hedonism, achievement, power, security, conformity, tradition, benevolence, and universalism. Two values offer relevance when considering hierarchy and its effect on mental health: achievement and autonomy (i.e., self-direction) (Kohn and Schooler 1983). Achievement refers to the enduring goal of "personal success through demonstrating competence according to social standards" (Schwartz 1992:8) and is characterized by adhering to social norms and the goal of demonstrating success to peers by thriving according to those standards. The enduring goal of an autonomy value is "independent thought and action—choosing, creating, exploring . . . derived from organismic needs for control and mastery . . . and interactional requirements of autonomy and independence" (Schwartz 1992:5–7). Autonomy is about valuing freedom of thought and is characterized by prioritizing the ability to be an independent being.

Support for values as a moderator of the relationship between SSS and depression comes from the stress process model (Pearlin 1989; Pearlin et al. 1981). Pearlin (1989) acknowledged the role of values as an important component of the meaning-making process. The stress process model contends social characteristics—such as socioeconomic status—influence one's exposure to stressors—such as the chronic stress associated with poverty—which affects one's physical and mental health. Individuals, however, are not beholden to the effect of these structures alone, as Pearlin and colleagues (1981) accounted for one's personal (e.g., self-esteem) and social resources (e.g., social support), which accumulate and moderate the relationship between exposure to stressors and health (Pearlin et al. 1981). The stress process model was designed to offer a structural approach to stress research. The model proposed that similar structural conditions—shaping

individuals' exposure to stressors and ability to activate stress-buffering resources—would result in similar health outcomes. However, it is not necessarily the case that people exposed to similar stressors experience the same health outcomes. Pearlin (1989) wrote that explaining this phenomenon was one of the most important jobs of stress researchers and offered values as an explanation for the observed discrepancies because the effect of social characteristics as stressors lies in not only how they influence objective circumstances but also the actor's interpretation of those circumstances (McLeod 2012).

As noted above, an unfavorable social comparison can lead to poor mental health, but the extent to which this comparison affects the psyche is likely to be more pronounced "*when the dimension of comparison is important for the self*" (Hoebel and Lampert 2020:175, emphasis added). Values determine how an actor assesses a situation and helps construct judgmental schemas to facilitate assessment (Stolte and Fender 2007), an important component of the meaning-making process within the stress process model (McLeod 2012).

Pearlin (1989) explained that conditions perceived as stressful are only such when they are believed to threaten the self through "loss, unfulfilled needs, violation of the self-image, and blocked aspirations" (p. 249). While certain life-threatening conditions may universally be perceived as threatening, more often the degree to which a stimulus is seen as stressful is dependent on the values of the actor. Social conditions that present a threat to one's realization of one's values are more likely than social conditions that do not threaten one's values to be perceived as stressful. Values, therefore, consist of an essential component of the meaning-making process in the stress process model and should be explicitly considered as a moderator of the relationship between social conditions (e.g., SSS) and health outcomes (e.g., depression) (Pearlin 1989).

HYPOTHESES

Both values—achievement and autonomy—have the potential to correlate with perceptions of SSS and moderate the association of SSS with mental health. Studies have found autonomy to be a "healthy" value, with those who prioritize autonomy experiencing greater levels of well-being (Sagiv and Schwartz 2000; Sortheix and Schwartz

2017). Achievement, on the other hand, can be a multifaceted value that makes it difficult to classify as entirely "healthy" or "unhealthy." Some studies have found achievement to correlate positively with affective components of well-being (Sagiv and Schwartz 2000), whereas other studies have shown that achievement can correlate negatively with well-being (Schwartz and Sortheix 2018) or have no discernable relationship (Sortheix and Schwartz 2017). While autonomy and, to a lesser extent, achievement correlate with mental health, we test the extent to which these values will moderate the relationship between subjective assessment of social rank and experience of depression. To examine this relationship, we present three hypotheses:

> **Hypothesis 1:** SSS will correlate negatively with depression.

As discussed above, findings have consistently shown a negative correlation between SSS and depression (Euteneuer 2014). We expect to find this relationship as well.

> **Hypothesis 2:** SSS will be more strongly associated with depression for those who rank high in valuing achievement.

Building on this main relationship, we believe achievement will act as a moderator for the observed relationship between SSS and depression. We hypothesize SSS will be more strongly associated with depression for those who value achievement. The positive correlation between values and mental health is dependent on one being able to realize that value (Oishi et al. 1999; Sagiv and Schwartz 2000), and social factors such as inequality put constraints on the ability to realize said goals (Sortheix and Lönnqvist 2014). Achievement will be difficult to realize for those with low SSS and likely result in mostly upward social comparisons, contributing to a sense of depression (Hoebel and Lampert 2020; Pearlin 1989). Higher standards for achievement likewise contribute to feelings of disappointment if those goals are not reached (Hitlin, Erickson, and Brown 2015). For these reasons, we expect SSS to be more strongly associated with depression for those who value achievement.

> **Hypothesis 3:** SSS will be less strongly associated with depression for those who rank high in valuing autonomy.

Autonomy, on the other hand, can be realized by those with either high or low SSS. While low-status individuals are often afforded less autonomy (Kohn and Schooler 1983), it is a value that can still be realized independent of financial or social success. Social actors who perceive unfavorable social comparisons often make cognitive adjustments to preserve a sense of self (Festinger 1954; Schnittker 2004; Shaked et al. 2016). This response to dissonance reflects an independent thinking from socially sanctioned displays of achievement, and valuing autonomy may deemphasize the negative effects of unfavorable social comparisons, providing distance from comparisons on dimensions important to the self (Hoebel and Lampert 2020). In some conditions, autonomy itself has acted as a buffer between negative social events and depression (Nietzel and Harris 1990). As such, we expect SSS to be less strongly associated with depression for those who value autonomy (Schnittker and McLeod 2005).

METHODS

Data

We use data from the follow-up to the MIDUS study ($N = 4,963$) conducted by the MacArthur Midlife Research Network with support from the National Institute on Aging (Ryff et al. 2017). The MIDUS 2 survey was conducted from 2004 to 2006 with adults aged 35–86 years. Analyses by Barry T. Radler and Carol D. Ryff (2010) on the respondents who are retained in the second wave showed they tend to be more often White, female, highly educated, healthier, and married compared with the full sample at baseline. Notably, income was not found to be a predictor of retention from MIDUS 1 to MIDUS 2.

MIDUS 2 includes several samples: main random-digit-dialing (RDD), sibling, twin, and city oversamples. We retain pooled samples because we do not believe there is a reason why the relationship between SSS, values, and depression would be different for twins versus nontwins or those with siblings versus those without siblings. We control for sample and family by including an indicator of sample membership into the model and clustering our variance estimates at the family level. We take these steps in an effort to maximize the size of our analytic sample, and we allow for correlated errors within families.

Compared with the baseline, MIDUS 2 provides an entirely new scale on achievement and asks four additional questions measuring respondents' autonomy. This is important for our study as we seek to understand how the value placed on achievement and autonomy is associated with the relationship between SSS and depression. Although there was an additional follow-up wave conducted from 2013 to 2014 (MIDUS 3), we chose to use data from MIDUS 2 because most respondents are still of traditional working age,[2] and the values we have selected are likely to be more salient during midlife compared with later life and retirement (which may be the life stage many respondents are in at MIDUS 3).

Our dependent variable is an indexed measure of depression.[3] This variable was constructed by MIDUS using criteria from the Diagnostic and Statistical Manual of Mental Disorders III-Revised (DSM-III-R; American Psychiatric Association 1987). The variable is constructed as a count variable based on how many questions the respondent selected "yes" for in the set questions asking if, for example, they had more trouble falling asleep than usual; felt more tired out or low on energy than is usual; or felt down, no good, or worthless. Therefore, respondents are coded as 0 for having answered "no" to all questions up through 7 for having answered "yes" to all questions in the scale. This variable is derived from the depressed affect and anhedonia questions found on the World Health Organization Composite International Diagnostic Interview—Short-Form (CIDI-SF; Kessler et al. 1998). See Online Appendix A for full question wording.

Our key independent variable is SSS and is operationalized with the MacArthur Scale of Subjective Social Status (Adler et al. 2000), which asks respondents to place themselves on a 10-rung "social ladder" where they feel they stand compared with those in their community. Respondents are shown an image of a 10-rung ladder with the accompanying text: "Think of this ladder as representing where people stand in their community. Where would you place yourself on this ladder?" Community, in this case, is defined by the respondents themselves. The community ladder is used less often than the national ladder (Reitzel et al. 2013), but offers particularly valuable insight, especially in work looking at localized contexts such as schools (Quon and McGrath 2014). Research even suggests the community ladder provides a more consistent measure of SSS than the national ladder, with the community ladder's ability to capture the effects of SSS on mental health persisting when accounting for additional measures of OSS (Diaz, Guendelman, and Kuppermann 2014). This variable is coded as continuous from 1 to 10, with 1 indicating the lowest status and 10 indicating the highest status.

In addition, we measure individual differences using two values: achievement and autonomy. The achievement scale ($\alpha = .67$)[4] is a composite measure of respondents' agreement with four statements, where the respondents were asked whether the statement is (1) true of you, (2) somewhat true, (3) somewhat false, or (4) false (Patrick, Curtin, and Tellegen 2002). The scale was reverse coded, so that higher scores on the achievement scale correspond to respondents who believe they strongly value work and challenges and transformed by subtracting 4 from all responses so that the lowest value in the scale is 0. The autonomy scale ($\alpha = .71$)[5] is a composite measure of respondents' agreement with seven questions, where the respondents were asked whether they agree or disagree with the statement on a 7-point scale (Ryff 1989): (1) is coded as strongly agree; (4) is neither agree nor disagree; and (7) is strongly disagree. The responses to each statement in each scale are summed for the respondent's total scaled score and transformed by subtracting 7 from all responses so the lowest value in the scale is theoretically 0. Therefore, respondents who score higher on the autonomy scale can be interpreted as believing themselves to be more autonomous. The full set of statements for each scale are listed in Online Appendix B.[6]

In addition to our independent variables of interest, we include several control variables in our models that have been shown to be associated with depression and/or SSS. We control for two measures of OSS: income and education. Income is a continuous, logged measure of annual household income in dollars, and education is a measure of highest degree completed. Education is treated categorically and separated into three categories: (1) no high school degree or high school degree/GED, (2) some college, 2-year college degree, or 4-year college degree, and (3) some graduate school, master's degree, or professional degree (PhD, MD, JD, etc.).[7] OSS is typically correlated with SSS and important to control for separately as OSS better captures one's access to resources and cultural and social capital, while SSS better captures the feelings one has toward their status

Table 1. Descriptive Statistics (*N* = 3,582).

Variable	M/Proportion	SD	Minimum	Maximum
Depression symptoms	0.61	1.73	0.00	7.00
Subjective social status	6.48	1.83	1.00	10.00
Age	55.61	12.15	30.00	84.00
Gender (male)	0.46	—	0.00	1.00
Race				
White	0.92	—	0.00	1.00
Black	0.03	—	0.00	1.00
Other	0.04	—	0.00	1.00
Marital status				
Married	0.72	—	0.00	1.00
Previously married	0.20	—	0.00	1.00
Never married	0.07	—	0.00	1.00
Income (log)	10.88	0.97	4.94	12.61
Education				
High School degree or lower	0.31	—	0.00	1.00
At least some college	0.49	—	0.00	1.00
Graduate degree	0.20	—	0.00	1.00
Achievement scale	8.26	2.22	0.00	12.00
Autonomy scale	30.15	6.93	3.00	42.00
Sample				
Main/Random-Digit-Dialing	0.44	—	0.00	1.00
Sibling	0.16	—	0.00	1.00
Twin	0.30	—	0.00	1.00
City oversamples	0.10	—	0.00	1.00

Note. Categories in parentheses are reference categories. Proportions within a variable may not sum to 1 due to rounding. Those who were previously married include respondents who are separated, widowed, and divorced. Education is separated into three categories: (1) no high school degree or high school degree/GED; (2) some college, 2-year college degree, or 4-year college degree; and (3) some graduate school, master's degree, or professional degree (PhD, MD, JD, etc.).

relative to others' (Anderson et al. 2012). Race is operationalized into three categories: (1) White, (2) Black, and (3) other.[8] Respondents were also coded into one of the three groups regarding marital status: (1) currently married, (2) previously married but not currently married, or (3) never married. Those who were previously married include respondents who are separated, widowed, and divorced.[9] Respondents' sex is coded as (0) female and (1) male. Age is operationalized as continuous in years. Descriptive statistics for dependent, independent, and control variables are presented in Table 1.

Analysis

We estimate five negative binomial regression models predicting depression using Stata 17. We employ negative binomial regression due to overdispersion, the skewed-right distribution of the outcome variable, and the large proportion of our sample who presents with zero symptoms of depression (88 percent).[10] Our first model examines the main relationship between SSS and depression. The next two sets of models subsequently add achievement and autonomy separately to present their main effects before adding interaction terms. The final two models include interaction terms between each value and SSS. Results from Model 1 will be used to evaluate Hypothesis 1; results from Model 4 will be used to evaluate Hypothesis 2; and results from Model 5 will be used to evaluate Hypothesis 3. We use listwise deletion to account for missingness on independent and control variables. There is no missingness on our dependent variable.[11] This results in a sample size of *N* = 3,582.[12]

Because we employ negative binomial regression, there is a nonlinear association between the

independent and dependent variables. This means we cannot rely on an interaction term's coefficient to determine if significant relationships are present (Mize 2019). Therefore, we use Stata's postestimation commands `margins` and `marginsplot` to understand if the relationship between SSS and depression is moderated by autonomy and/or achievement. We use `margins` to examine the predicted number of depressive symptoms for individuals at the mean and one standard deviation (*SD*) above and below the mean for SSS, achievement, and autonomy. Predicted number of symptoms refers to a respondent's likelihood of reporting that many depressive symptoms if they rank at a particular SSS and value. For example, Table 2 shows that individuals who rank low in valuing achievement and low in SSS (top, left cell) on average experience 0.816 symptoms of depression.

In our tables, we label one *SD* below the mean as "low," at the mean as "average," and one *SD* above the mean as "high." For example, "Average SSS" corresponds to individuals who rank themselves on the sixth rung of the SSS ladder, "Low SSS" corresponds to individuals who rank themselves on the fourth rung, and "High SSS" corresponds to individuals who rank themselves on the eighth rung. These predicted numbers of symptoms are presented in the first three substantive columns of Tables 2 and 3.

In addition, we present the average marginal effects (AMEs) between groups (i.e., the difference in the predicted number of symptoms for those who value autonomy or achievement at the same level across levels of SSS). Using the same example from Table 2, individuals who value achievement at a low level present with 0.816 symptoms on average if they rank themselves low on SSS (top row, first cell) and with 0.576 symptoms on average if they rank themselves average on SSS (top row, second cell). The difference in these two values, or the AME, is −0.240 symptoms (top row, fourth cell). These values are presented in the fourth substantive column of Tables 2 and 3.

However, to test our hypotheses, we are most interested in differences *between* these AMEs, or second differences. In the final column of Tables 2 and 3, we present a "contrast" column which shows the second differences. If moderation is present, we would expect to see significant "contrasts" because this indicates a different relationship (i.e., a different slope) between SSS and

depression dependent on the value level (i.e., autonomy and achievement). Contrasts are calculated between corresponding AMEs across Panels A, B, and C within a table. AMEs correspond if they are in the same row across panels. For example, looking at Table 2, there is a significant difference between the AME in the top row of Panel A (−0.240) and the AME in the top row of Panel B (−0.176). In other words, AMEs can quantify the slope between two points, while second differences (or what we call "contrasts") can test if there are significant differences in these slopes. Figures 1 to 3 use `marginsplot` to present the results graphically. Note that although we graph the entire SSS scale along the X-axis, our tables focus on one *SD* below the mean (SSS = 4), the mean (SSS = 6), and one *SD* above the mean (SSS = 8).

RESULTS

Approximately 88 percent of our sample present with zero symptoms of depression, meaning 12 percent present with at least one symptom. On average, respondents placed themselves between Rungs 6 and 7 on the SSS ladder, with an *SD* just below two rungs.[13] Our respondents also ranked well above the midpoint on both the achievement scale and autonomy scale. On average, respondents scored just above 8 out of 12 on the achievement scale (*SD* = 2.2) and just above 30 out of 42 on the autonomy scale (*SD* = 6.93). The average age for respondents was 56 years and just under half were male (46 percent). Most respondents identified as White (92 percent), with 3 percent identifying as Black and 4 percent identifying as neither White nor Black. Almost three-quarters of respondents were married at the time of the survey (72 percent), 20 percent were previously married, and 7 percent have never been married. On average, respondents had a mean household income of $75,000, with approximately half of the respondents completing some college or a college degree (49 percent), 31 percent receiving a high school diploma or lower, and 20 percent completing at least some graduate school.

In our first model, we examine the main relationship between SSS and depression. On average, respondents who rank higher in SSS are less likely to present with depression, all else equal (*p* < .001), providing support for Hypothesis 1. When examining AMEs, we find for every one rung

Table 2. Number of Depression Symptoms by SSS and Achievement Scale Score: Marginal Effects of Achievement Scale Score and Differences in Effects of Achievement across SSS.

| | SSS | | | | |
Value	Low	Average	High	AME	Contrasts
A. Low achievement	0.816	0.576		−0.240***	B, C
		0.576	0.407	−0.170***	B, C
	0.816		0.407	−0.410***	B, C
B. Average achievement	0.754	0.579		−0.176***	A, C
		0.579	0.444	−0.135***	A, C
	0.754		0.444	−0.310***	A, C
C. High achievement	0.697	0.581		−0.116*	A, B
		0.581	0.484	−0.097**	A, B
	0.697		0.484	−0.212**	A, B

Note. Full model controls for age, gender, race, marital status, income, education, and MIDUS sample. The "contrasts" column reports which achievement scale gaps are significantly different across levels of SSS (second differences) at the $p < .05$ level. SSS = subjective social status; AME = average marginal effect; MIDUS = Midlife in the United States. *$p < .05$. **$p < .01$. ***$p < .001$. (Two-tailed tests).
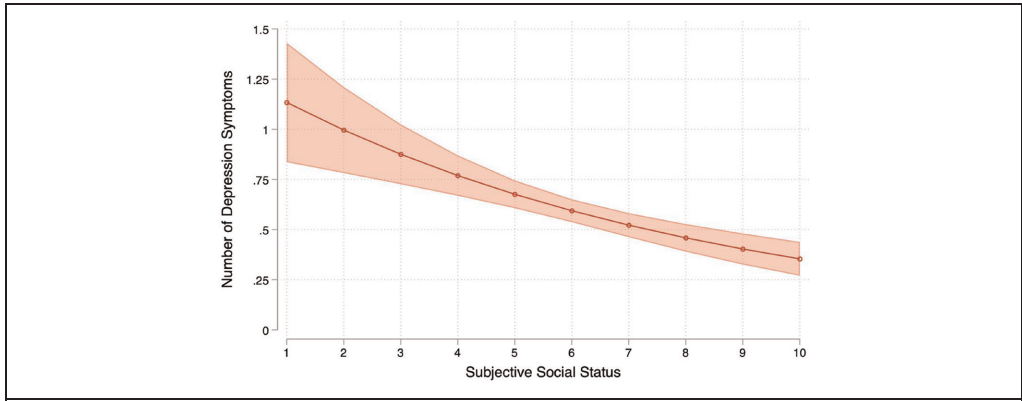
Table 3. Number of Depression Symptoms by SSS and Autonomy Scale Score: Marginal Effects of Autonomy Scale Score and Differences in Effects of Autonomy across SSS.

| | SSS | | | | |
Value	Low	Average	High	AME	Contrasts
A. Low autonomy	0.902	0.706		−0.196***	B, C
		0.706	0.552	−0.153***	B, C
	0.902		0.552	−0.349***	B, C
B. Average autonomy	0.660	0.557		−0.103*	A, C
		0.557	0.470	−0.087**	A, C
	0.660		0.470	−0.191**	A, C
C. High autonomy	0.484	0.440		−0.044	A, B
		0.440	0.400	−0.040	A, B
	0.484		0.400	−0.084	A, B

Note. Full model controls for age, gender, race, marital status, income, education, and MIDUS sample. The "contrasts" column reports which autonomy scale gaps are significantly different across levels of SSS (second differences) at the $p < .05$ level. SSS = subjective social status; AME = average marginal effect; MIDUS = Midlife in the United States. *$p < .05$. **$p < .01$. ***$p < .001$ (two-tailed tests).

increase on the SSS ladder a respondent ranks themself, they present with 0.06 less symptoms of depression, all else equal. The predicted number of depressive symptoms for individuals who rank low on the SSS ladder (4; −1 *SD*) is approximately 0.77 symptoms, while those who rank average on the SSS ladder (6; mean) present with 0.59 symptoms, and those who rank high on the SSS ladder (8; +1 *SD*) only present with 0.46 symptoms. Therefore, individuals who rank low in SSS present with 0.31 more symptoms of depression compared with individuals who rank high in SSS. Although these values are small, this difference means that those who rank low in SSS present with 67 percent more symptoms of depression compared with individuals who rank high in SSS (0.77 / 0.46 = 1.67). On average, for every *SD* increase in SSS, individuals present with 0.10 more symptoms of depression, all else equal. See Figure 1 for the graphical presentation of the relationship

Figure 1. Predicted number of depression symptoms by SSS.
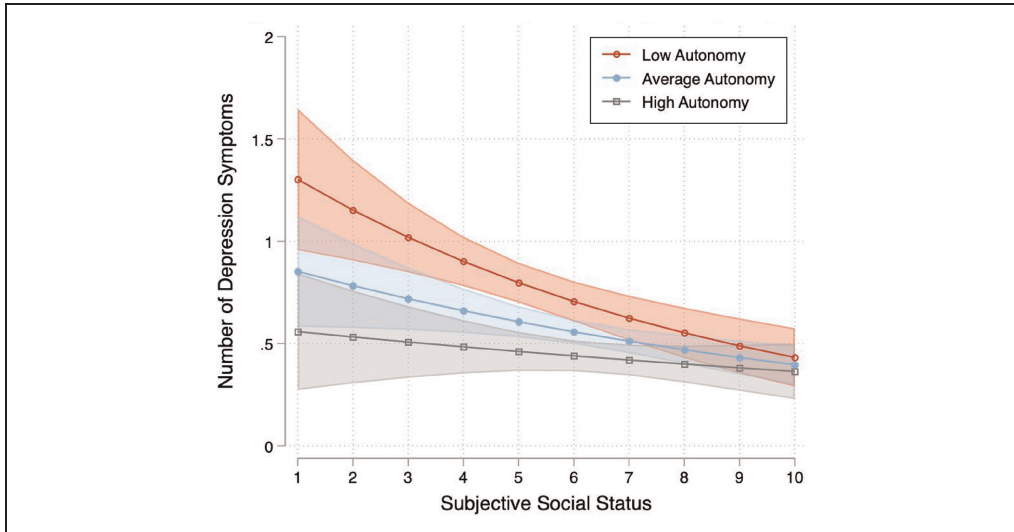*Note.* SSS = subjective social status.
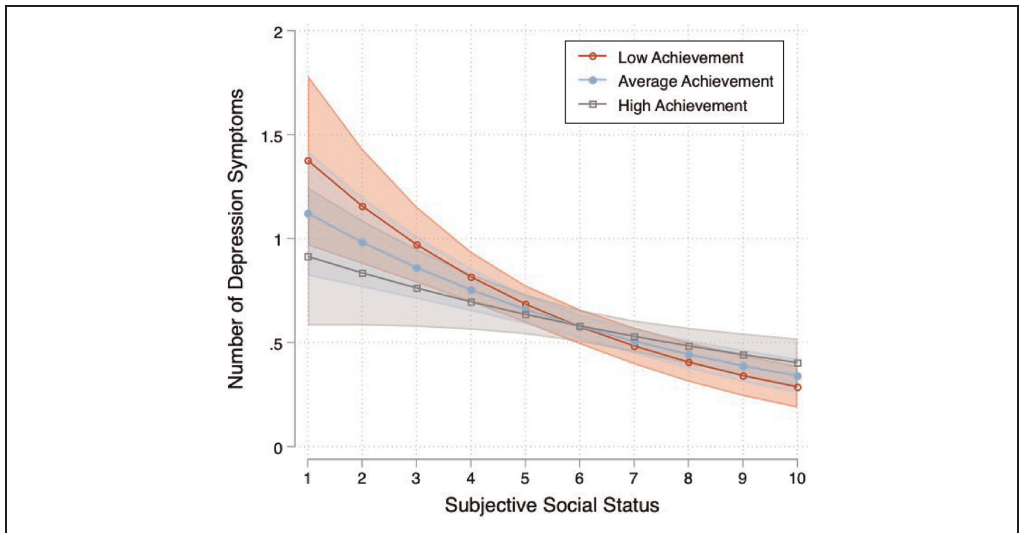
Figure 2. Predicted number of depression symptoms by SSS, moderated by achievement.
Note. SSS = subjective social status.

between SSS and depression, and Online Appendix D for regression results.

We also find that age, gender, race, marital status, and household income are associated with depression. When examining AMEs and holding all other control variables at their means, we find that older respondents are less likely to present with symptoms of depression, and for each *SD* increase (approximately 12 years), they present with 0.12 fewer symptoms of depression ($p < .001$). Male respondents also present with 0.22 fewer symptoms of depression compared with female respondents ($p < .001$), all else equal.

Black respondents present with 0.33 fewer symptoms of depression compared with their White counterparts ($p < .001$).[14] Compared with respondents who are currently married, respondents who were previously married present with 0.29 more symptoms of depression ($p < .01$), and there is no significant difference between currently married and never married respondents. Finally, individuals with higher household incomes are less likely to present with depression ($p < .05$), and there is no significant relationship between educational attainment and depression.

Figure 3. Predicted number of depression symptoms by SSS, moderated by autonomy.
Note. SSS = subjective social status.

We find no significant association between valuing achievement and depressive symptoms (i.e., no main effect; Online Appendix D, Model 2). In Model 4, we examine the extent to which valuing achievement moderates the relationship between SSS and depression. Table 2 presents results on the moderation effect of valuing achievement. This table presents the differences at low (-1 *SD*), average (mean), and high ($+1$ *SD*) values of achievement across low, average, and high SSS. To assess moderation, we are most interested in significant contrasts (i.e., second differences) between levels of achievement.

Reading across the first row in Table 2, individuals who rank low in valuing achievement on average experience 0.816 symptoms of depression if they also rank themselves low in SSS, but experience 0.576 symptoms of depression if they rank themselves at the mean in SSS. The AME of these scores ($0.816 - 0.576$) is -0.240, or a difference of 0.24 symptoms of depression. In the final column, we see that the AME in the first row of Panel A (Low achievement) is significantly different from the AME in the first row of Panel B (Average achievement) and the first row of Panel C (High achievement). This means that the AMEs for those who rank themselves low and average on the SSS scale are significantly different across low, average, and high levels of achievement. We

consistently find significant contrasts across all rows in Table 2.

Results from Table 2 correspond with Figure 2. AMEs correspond to slopes, whereas contrasts can be conceptualized as the difference between slopes. The statistical significance of the AMEs for low achievement (Table 2, Panel A) shows that there is a significant decrease in depressive symptoms as those who rank low in valuing achievement increase in SSS. For individuals who rank low in valuing achievement, those who also rank themselves as low SSS have twice as many depressive symptoms compared with those who rank themselves as high SSS ($0.816 / 0.407 = 2.00$). This holds true for individuals who rank average and high in achievement as well. For individuals who value achievement at the mean, those who rank themselves as low SSS have 70 percent more depressive symptoms compared with those who rank themselves as high SSS ($0.754 / 0.444 = 1.698$). For individuals who rank high in valuing achievement, those who rank themselves as low SSS have 44 percent more depressive symptoms compared with those who rank themselves as high SSS ($0.697 / 0.484 = 1.440$).

Even though there is a consistent negative relationship between SSS and depressive symptoms across levels of achievement, the contrast columns convey there is a stronger association between

SSS and depression at lower levels of achievement. This can be seen in Figure 2 as the slope is significantly steeper for individuals who rank low in valuing achievement compared with those who rank high in valuing achievement. Therefore, when including an interaction term between valuing achievement and SSS, we find evidence of a consistent moderation effect, although not in the direction as predicted by Hypothesis 2. Instead, we find that SSS is less strongly associated with depression for those who rank higher in valuing achievement.

Although not having implications for Hypothesis 2, it is important to note that the difference between predicted number of depressive symptoms between low and high values of achievement and within an SSS rung becomes nonsignificant at the third rung. Despite the nonsignificance between depressive symptoms across value levels at higher rungs, there exists a crossover effect which allows for significant differences between slopes,[15] which allows for the moderating effect of achievement on the relationship between SSS and depressive symptoms. In addition, all significant relationships between control variables and depressive symptoms present in Models 1 remain in Model 4 after including the interaction term.

Unlike valuing achievement, we do find a main effect of valuing autonomy (Online Appendix D, Model 3). For every one-unit increase on the autonomy scale, individuals present with 0.02 fewer symptoms of depression on average ($p < .001$), all else equal. On average, individuals who rank one SD below the mean on the autonomy scale present with 0.714 symptoms of depression, compared with individuals who rank one SD above the mean who present with 0.452 symptoms. This means that those who rank low in valuing autonomy present with 58 percent more symptoms of depression compared with individuals who rank high in valuing autonomy (0.714 / 0.452 = 1.580).

In our final model (Online Appendix D, Model 5), we examine the extent to which valuing autonomy moderates the relationship between SSS and depression. In this case, we also find significant evidence of a moderation effect, lending support to Hypothesis 3. The "contrasts" column of Table 3 shows significant second differences in AMEs across all levels of autonomy, providing evidence of the moderating effect that valuing autonomy has on the relationship between SSS and depression.

More specifically, Table 3 shows a significant difference between the number of symptoms of depression for individuals at different levels of the SSS scale at low and average levels of the autonomy scale, but not at high levels of the autonomy scale (see AME column). This suggests that individuals who value autonomy at or below the mean are less likely to exhibit symptoms of depression if they rank themselves as higher SSS. However, there is no significant difference in the number of depressive symptoms across the SSS ladder for individuals who rank high in valuing autonomy (Panel C, AME column; $p > .05$).

For example, Table 3 shows that those who place low value on autonomy and who rank low in SSS on average present with 0.902 symptoms of depression, while those who place a low value on autonomy and who rank average in SSS present with 0.706 symptoms of depression (Panel A, first row). The AME is -0.196 ($p < .001$). In other words, the difference between these two groups is 0.196 symptoms of depression. Those who place a high value on autonomy and who rank low in SSS present with 0.484 symptoms of depression on average, while those who place a high value on autonomy but who rank average in SSS present with 0.440 symptoms of depression (AME = -0.044; $p > .05$) (Panel C, first row). Although the AME is -0.044, substantively, this suggests that individuals who rank high in valuing autonomy have no greater risk of depression regardless of where they perceive their SSS. However, the second difference ("contrasts") between these two groups is significant ($p < .05$), providing evidence of moderation.

Looking at Figure 3, we see the slope for the "high autonomy" line is substantively flat, meaning there is no significant difference in risk of depression regardless of one's SSS ranking. However, the slopes for average and low autonomy are significant, meaning individuals on average present with fewer symptoms of depression as they increase in SSS. In addition, although the difference between the predicted number of depressive symptoms across low and high values of achievement and within an SSS rung becomes nonsignificant at the eighth rung, there is nonetheless a moderating effect of autonomy on the relationship between SSS and depressive symptoms. All other significant relationships for control variables presented in Models 1 and 4 remain significant in Model 5.

DISCUSSION

Scholars have shown for decades SSS negatively correlates with depression (Demakakos et al. 2008; Euteneuer 2014). Research shows the negative social comparisons made by those with relatively lower SSS has a detrimental effect on the psyche, leading to instances of depression (Hoebel and Lampert 2020; Wilkinson 1996). However, not everyone perceives social situations similarly. A negative social comparison that may be stressful for one actor may not necessarily be seen as stressful to another (Hoebel and Lampert 2020; McLeod 2012; Pearlin 1989), as the extent to which stressors are seen as threating to one's mental health is influenced by the values one holds (Pearlin 1989). In this study, we aimed to directly measure the moderating effect of values on the relationship between SSS and depression.

Overall, we find support for Hypotheses 1 and 3, which suggest there is a negative association between SSS and number of depressive symptoms and that valuing autonomy will moderate this association, whereby SSS is less strongly associated with depressive symptoms for those who rank higher in valuing autonomy. We do not find support for Hypothesis 2, which predicts SSS will be more strongly associated with depression for individuals who rank high in valuing achievement. However, we find a moderation effect of achievement on the relationship between SSS and symptoms of depression, just not in the predicted direction. Instead, we find there is a weaker association between SSS and symptoms of depression for individuals who rank high in valuing achievement. Below, we discuss the contribution these findings offer, potential explanations for why autonomy might moderate this association in the expected direction while achievement does not, as well as future research directions.

At baseline, we find SSS is negatively correlated with depression even when controlling for objective measures of status. This confirms previous research that shows SSS is a powerful predictor of depression (Adler et al. 2000; Demakakos et al. 2008; Singh-Manoux et al. 2005) and is closely associated with psychological processes and mental health (Quon and McGrath 2014). In terms of OSS, we do not find education to be significant in predicting depression when including SSS in our models. However, contrary to prior work (Singh-Manoux et al. 2005), we still find that income is significantly associated with depression when controlling for SSS.

When including our moderators, we find that there is a weaker relationship (i.e., less steep slope) between SSS and depression for individuals who strongly hold the values of achievement or autonomy. At low levels of SSS, there are significant differences in the number of depressive symptoms for individuals who rank high and low in valuing autonomy and achievement experience. Moving up the SSS community ladder, these differences shrink to become nonsignificant at higher levels—reaching nonsignificant differences for achievement at the third rung (see Figure 2) and for autonomy at the eighth rung (see Figure 3).

Before analyzing our findings for achievement, we will discuss the relatively more straightforward findings regarding autonomy. There is a stronger relationship between SSS and depression for individuals who value autonomy less. In addition, for respondents in our sample, autonomy provides a buffer against depression. For respondents reporting any level of SSS, those who value autonomy are less likely to experience symptoms of depression than those who do not value autonomy (albeit the differences become nonsignificant at the eighth rung). This finding is consistent with previous research on autonomy and mental health. Studies have found autonomy to be a "healthy" value, with those who prioritize autonomy experiencing greater levels of well-being (Sagiv and Schwartz 2000; Sortheix and Schwartz 2017). This is echoed in our results as individuals who more highly value autonomy are less affected by SSS in terms of depressive symptoms. Autonomy provides opportunities for people to feel successful in their occupations, leading to feelings of self-esteem and mastery and protecting against alienation (Kohn and Schooler 1983; Schwalbe 1985). Autonomy is a buffer between negative social events and depression (Nietzel and Harris 1990), and we find support again with the respondents in this sample.

Autonomy acting as a buffer between low SSS and depression also provides valuable insight into the mechanisms behind the correlation of status and health. Human beings desire feedback on the self, gleaned from observations of the self within the social world. This helps inform the accurate self-view humans desire (Festinger 1954). However, those who rank high in valuing autonomy will assess their self based on standards important

to the individual. Social comparisons provide the mechanism connecting status and mental health, yet values provide the metric. We believe the buffering effect of autonomy supports the claim that the correlation between social positioning and health is particularly strong when measured on a metric that is important to the self (Hoebel and Lampert 2020; Schnittker and McLeod 2005). For those who value autonomy, comparison to others is not as important as a social metric and as a result, low social position does not correlate as strongly with depression for those individuals.

For achievement, the relationship appears to be more complex. Similar to our findings with autonomy, we find a weaker relationship between SSS and depression for individuals who more strongly value achievement. This means that at the lower end of the SSS scale, those who rank higher in valuing achievement are *less* likely to display symptoms of depression compared with those who rank low in valuing achievement. This relationship converges at the top of the SSS scale, with those who more strongly value achievement not being any more likely to display symptoms of depression. Unlike strongly valuing autonomy—which presents a consistent protective factor against depression across most of the SSS scale—we observe two distinct effects of valuing achievement contingent upon one's SSS. This finding adds to a body of work describing what has been a complex relationship between achievement and mental health. Studies have found achievement to correlate positively with affective components of well-being (Sagiv and Schwartz 2000), while other studies have shown that achievement can correlate negatively with well-being (Schwartz and Sortheix 2018) or have no discernable relationship (Sortheix and Schwartz 2017).

That the achievement findings run counter to our hypotheses may be explained by aspects of the value itself. Shalom H. Schwartz and Florencia Sortheix (2018) noted that achievement is a notoriously tricky value to categorize in respect to mental health because one aspect of achievement captures a growth-oriented mindset, where individuals are striving to display competence and skill. If individuals successfully realize these aspects of valuing achievement, they will be more likely to be satisfied and experience greater mental health for it. However, another aspect of achievement is displaying this competence according to social standards external to the self. The aspect of achievement relating to striving to achieve social standards generates a sense of anxiety (Sortheix and Schwartz 2017). Individuals constantly comparing themselves with an external standard feel distress when they do not achieve that standard (Festinger 1954; Higgins 1987). Certain aspects of achievement lower anxiety and correlate with better mental health; certain aspects of achievement heighten anxiety and correlate with diminished mental health. The achievement scale in MIDUS 2 (Online Appendix B) captures the growth-oriented aspects of the achievement value, with respondents reporting prioritizing problem-solving ability, hard work, and realizing goals. This measures the growth-oriented aspects of achievement that contribute to its classification as a "healthy" value (Sagiv and Schwartz 2000; Sortheix and Schwartz 2017). Therefore, because our measures capture the "healthy" aspects of achievement, the findings that achievement is correlated with lower levels of depression for low SSS individuals are logically consistent with previous work.

Following this logic, one possible explanation is that despite findings on achievement contradicting Hypothesis 2, low SSS respondents are still realizing the growth-oriented aspects of achievement and this realization of this value correlates with improved mental health. Individuals whose valuing of achievement manifests in a focus on their own competence, instead of competing with others according to external standards, experience some of the buffering effect afforded to those who value autonomy (Nietzel and Harris 1990). Interpreting this evidence, we believe the buffering effect of achievement for low SSS respondents similarly supports social comparison as a mechanism between SSS and depression, with values serving as the metric (Hoebel and Lampert 2020; Schnittker and McLeod 2005).

However, the achievement literature does not offer an explanation for the finding that those with high SSS who rank high in valuing achievement do not experience greater mental health. For high SSS individuals, regardless of whether they value achievement or not, depression is less common. To explain these results, we fall back on the vast body of research showing that high SSS is negatively correlated with depression (Adler et al. 2000; Demakakos et al. 2008; Euteneuer 2014; Quon and McGrath 2014; Shaked et al. 2016). Simply put, high-status individuals are relatively less depressed as a condition of their status attainment.

We acknowledge the limitations of our contributions and offer directions future work should explore to ascertain a more robust understanding of this phenomenon. First, scholars should consider other work-, wealth-, and status-related values that may moderate the association between SSS and depression, as well as other operationalizations of these values (as noted by the various aspects of achievement). We focus on two values—achievement and autonomy—that are universal, while still specifically relevant to American cultural landscapes, particularly the U.S. meritocratic work culture (Kohn and Schooler 1983; Schwartz 1992). While we focus on these values because we believe they are particularly applicable to the context of SSS, other values may be important to consider within the context of this relationship as well. As noted above, Schwartz (1992) identified 10 universal values, some of which—such as power or universalism—may be similarly impactful on mental health. Admittedly, scholars "can only assume that the kinds of values which will produce stressful effects must have relevance to the social conditions under study" (Pearlin 1989:249). For example, a low-status individual who values power may perceive their low SSS as threating much in the way a high-status individual who values universalism may perceive a threat. In addition, other mental health outcomes, such as anxiety, stress, happiness, and flourishing, should be examined, as different social comparisons can correlate with different mental health outcomes (Higgins 1987). Work that further contextualizes the relationship between various social structures and manifestations of mental illness is imperative for this line of research (Schnittker 2012).

Of additional concern is renewed debate about the benefit of a sociological study of values (see Vaisey 2021). While some sociologists have eschewed values in favor of concrete interests (Martin and Lembo 2020), it is precisely the abstract nature of values that should be of interest to cultural sociologists. Values—like much of human cognition—operate through a dual processing system (for greater elaboration on dual process models, see Vaisey 2009 and Lizardo et al. 2016) and function largely through automatic processing (Miles 2015). As stated above, we believe values serve as the metric against which social comparisons are judged. While these data cannot measure whether these values are activated through controlled or automatic processing, scholars should continue to study the content of the correlation of values with mental health and employ methods that can capture how values function as dual process cognitions within the stress process model.

Furthermore, recent research has found that different conceptualizations of subjective status (e.g., the status ladder, social class) are correlated but have independent associations with health outcomes that warrant future examination (Andersson 2021; Zell, Strickhouser, and Krizan 2018). MIDUS asks the less common version of the MacArthur Scale (the Community Ladder), and future work should consider the Society Ladder or other measures of SSS as independent variables. While values research acknowledges values originate from occupational hierarchies (Kohn and Schooler 1983), controlling for occupation was outside of the scope of this dataset. Future studies could examine how values differently moderate the association between status and mental wellbeing among and within various occupational groups and statuses.

We chose to use data from MIDUS 2 for our project based on the large sample size and robust mental health and values measures. Building on results from this project, future research could use MIDUS's longitudinal data to examine how these relationships vary across the lifecourse. However, MIDUS has notable limitations. White respondents make up approximately 90 percent of the sample in MIDUS 2. Based on prior research examining how race and ethnicity are variously associated with mental health outcomes (Williams 2018; Williams, Costa, and Leavell 2010), it is worth examining how values may differently moderate the association between subjective status and mental health for various populations. Finally, respondents in the MIDUS study all live in the United States. Different countries have different cultural ethoses that may value work less than the United States. In this sense, we would likely expect values of autonomy and achievement to moderate the association between SSS and mental health differently. We contend that future research should continue to examine if and how values moderate the association between SSS and mental health in cross-national contexts.

CONCLUSION

We find evidence that valuing autonomy and achievement moderates the association between SSS and depression. Results indicate that the relationship between SSS and depressive symptoms is weaker for individuals who value autonomy and achievement, providing support for Hypothesis 3, but running directionally counter to Hypothesis 2. We believe this may be explained by the achievement scale used in MIDUS 2 measuring growth-oriented aspects of the value of achievement, which has been shown to correlate positively with mental health (Schwartz and Sortheix 2018; Sortheix and Schwartz 2017). We conclude that for those who have not achieved the higher echelons of status, prioritizing personal growth and independence is correlated with better mental health. These findings show that prioritizing success according to one's own standards is a boon for mental health, especially for those who perceive themselves as low status. These findings offer a novel contribution to the study of SSS and mental health, emphasizing the role personal values have in moderating the relationship between SSS and depression and highlighting the importance of values in meaning-making processes surrounding status and health (McLeod 2012).

ORCID iD

Emily A. Ekl 🆔 https://orcid.org/0000-0003-4270-1625

SUPPLEMENTAL MATERIAL

Supplemental material for this article is available online.

NOTES

1. In the values literature, autonomy and self-direction are both used to label the value of free-thought and independence. In his initial classification, Schwartz (1992) used the label self-direction, but subsequent work has described this value as autonomy and the terms are often used interchangeably (e.g., see Sagiv and Schwartz 2000 or Schwartz and Sortheix 2018). The Midlife in the United States 2 (MIDUS 2) data use autonomy to describe its measure, and we adopt the autonomy label in this article to keep consistent with the data.

2. A total of 77 percent of respondents in MIDUS 2 are 65 years old or younger.

3. The MIDUS variable we use is B1PDEPRE.

4. This measure is drawn from the brief version of the Multidimensional Personality Questionnaire (MPQ), which has been used as a validated construct to measure various aspects of personality since the 1980s (Tellegen 1982). Among other traits, those who score high on the achievement portion of this questionnaire tend to describe themselves as "ambitious; putting work and accomplishment before many other things; setting high standards; being perfectionistic" (University of Minnesota Press 2022). Alphas reported here are taken from the MIDUS documentation. Based on our analytic sample after listwise deletion, we find $\alpha = .617$.

5. This measure is drawn from Ryff's psychological well-being scales (Ryff 1989). Someone who scores high on autonomy "is self-determining and independent; able to resist social pressures to think and act in certain ways; regulates behavior from within; evaluates self by personal standards" (Ryff 1989:1072). Alphas reported here are taken from the MIDUS documentation. Based on our analytic sample after listwise deletion, we find $\alpha = .705$.

6. The correlation between achievement and autonomy in our sample is .347.

7. Sensitivity analyses examining the effect of coding education as a binary (less than college vs. college degree), all eight categories continuous, or all eight categories categorical reveal no difference in significance across our models.

8. Only 8 percent of our analytic sample identifies as non-White. Based on this small sample size, we conduct sensitivity analyses by only including respondents who identify as White. Results using an all-White sample show substantively similar results to the ones presented in this article. Due to the overrepresentation of White respondents, we were unable to further break down the "other" category for analysis.

9. We initially included a control for participants having children but found it to be an insignificant predictor of depression and those models without this variable (either coded as continuous variable [number of children] or a binary of [children or no children]) had a better overall fit as indicated by Bayesian Information Criterion (BIC). Furthermore, we choose not to include variables for Latinx ethnicity and employment status due to low variation.

10. Negative binomial models were a better fit for this outcome compared with zero-inflated negative

binomial models, Poisson models, and linear regression (ordinary least squares [OLS]) models, as indicated by BIC and Stata's `countfit` command. A sensitivity analysis using a binary measure of depression (MIDUS variable: B1PDEPDX) is presented in Appendices E1 and E2. In these models, we fit logistic regression models. Following Jennifer Caputo and Robin W. Simon (2013), we also examine negative affect as our dependent variable as a sensitivity check presented in Appendices F1 and F2 (MIDUS variable: B1SNEGAF) using linear regression. We find that results from these OLS models are substantially similar to those presented in our main tables and that results from logistic regression are similar in many regards.

11. Documentation for MIDUS 2 states that depression measures are calculated for respondents with at least one valid value, meaning that all respondents selected a valid response for at least one of the questions used to calculate this variable.

12. The original sample size from all samples (main, sibling, twin, and city oversamples) is $N = 4,963$, meaning we lose 1,381 cases due to missing data. Compared with the full sample, our analytic sample is significantly more likely to be White, but all other variables are proportionally similar. A comparison between the full sample and our analytic sample is presented in Appendix C. In addition, we do not use sampling weights because many of the demographic characteristics we would include in our weights are already included in our regression model. MIDUS does not provide weights for respondents outside of the main RDD sample, which would further reduce our sample size by over 50 percent.

13. Despite other literature suggesting that ladder scores are not evenly distributed but rather are typically multimodal (Andersson 2021; Piketty 2013), the distribution of responses in our sample appears to be normally distributed.

14. There is a nonsignificant difference in the number of depressive symptoms White respondents and respondents who are neither White nor Black present with, as well as a nonsignificant difference between Black respondents and respondents who are neither White nor Black.

15. Below Rung 6, individuals who rank *low* on valuing achievement present with more depressive symptoms on average. Above Rung 6, individuals who rank *high* on valuing achievement present with more depressive symptoms on average, as seen in Figure 2. Importantly, while these values may be different, they are not statistically significantly different.

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