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## Effects of Perceived Social Status and Discrimination on Hope and Empowerment among Individuals with Serious Mental Illnesses

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### Abstract

Hope and empowerment are key elements of recovery in the context of serious mental illnesses (SMI). We examined predictors of hope among individuals with SMI and tested a hypothesized path model in which perceived social status and perceived discrimination adversely impact hope, directly and through their impacts on depressive symptoms. Data from 232 individuals with SMI receiving care in public-sector settings were used in both a multiple linear regression (predicting

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Declaration of interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Herth Hope Scale scores), and in path analyses examining both direct and indirect effects of perceived social status (Social Status Ladder) and perceived discrimination (Everyday Discrimination Scale). Depressive symptoms, perceived social status, and perceived discrimination were predictive of hope. Path analyses revealed that perceived social status has a direct effect on hope and empowerment but also impacts hope through its effects on depression. Similarly, perceived everyday discrimination affects hope and empowerment, though this effect is mediated through its effects on depression. Two alternative models and a trimmed hypothesized model did not fit the data or improve fit. These social determinants of mental health should provoke program and policy change to improve mental health and enhance recovery among persons with SMI.

## Keywords

Bipolar disorder; Depression; Empowerment Scale; Functional recovery; Herth Hope Scale; Mental health policy; Schizophrenia; Social determinants; Social Status Ladder

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## 1. INTRODUCTION

Serious mental illnesses (SMI) are chronic conditions often requiring continuous treatment that is shaped both by advances in psychopharmacology and the ongoing restructuring of the mental health system (e.g., transitions from institutional to community-based care). Longitudinal studies show that individuals with SMI can show significant clinical and functional improvements over time (Ciompi, 1980; Gagné et al., 2007; Harding et al., 1987a, 1987b; Liberman et al., 2002; McGlashan, 1987, 1988; Pevalin and Goldberg, 2003; Rogers et al., 2005). The concept of *recovery* in the context of SMI remains a continually evolving paradigm now centered around being “in recovery,” as opposed to “recovery from” in the sense of cure. That is, while “recovery from” might suggest that the individual’s health and wellbeing will return to a pre-illness state, being “in recovery” describes the process toward a successful acclimatization to SMI, somewhat analogous to functional recovery (Davidson and Roe, 2007; Piat, 2009), even if some symptoms persist. This acclimatization embodies a range of individual goals and expectations that vary between those living with SMI and their clinicians.

Hope has been described as the “catalyst of the recovery process” (Substance Abuse and Mental Health Services Administration, 2006). Hope heavily influences functional recovery outcomes in persons with SMI (Corrigan et al., 2001; Coskun et al., 2018; Hoffman et al., 2000; Kern et al., 2009; Kylma et al., 2006; Yanos et al., 2007) and inspires people to reach their goals by serving as a positive coping mechanism that increases self-efficacy and empowerment (Herth, 1995; Lysaker et al., 2001, 2005). Additionally, the presence of hopelessness reduces functional recovery, decreases treatment adherence, and increases suicide risk in persons with SMI (Kavak and Yilmaz, 2018; Littrell et al., 1996; Lysaker et al., 2001, 2005; Lyu and Zhang, 2014). Consequently, recovery-oriented mental health professionals seek to promote hope and empowerment through a variety of strategies. To develop and strengthen such strategies, there must be more research on predictors of hope in persons with SMI.

Perceived social status and perceived discrimination could be determinants of hope, though research is lacking in this area. Persons with mental illness report lower subjective social status compared to people without mental illnesses (Scott et al., 2014; Singh-Manoux et al., 2005). The stigma/discrimination around SMI is extremely pervasive, with a majority of persons with SMI reporting discrimination due to mental illness (Dickerson et al., 2002; Koschorke et al., 2014; Mantovani et al., 2016; Oh et al., 2014; Thornicroft et al., 2009; Vass et al., 2015). Other studies have found that lower perceived social status and discrimination have many negative effects on a variety of physical and mental health conditions (Gabbidon et al., 2014; Kessler et al., 1999; Scott et al., 2014; Singh-Manoux et al., 2005; Todorova et al., 2010; Üçok et al., 2013; Vass et al., 2015). Consequently, perceptions of both social status and discrimination are of interest, but their effects as predictors of hope and empowerment among individuals with SMI have seldom been explored (Vass et al., 2015).

We sought to gain a better understanding of several constructs associated with hope among those with SMI, including perceived social status and discrimination. After examining the effects of such constructs through regression analysis (i.e., predicting variance in hope scores based on a number of independent variables), we then further explored associated variables through path analysis, which allows simultaneous analysis of all the variables in the model through a series of regressions applied sequentially to the data to allow for tests of theoretical propositions in nonexperimental data. Identifying such a model could enhance our understanding of the diverse ways in which functional recovery can be maximized by enhancing hope and empowerment.

## 2. METHODS

### 2.1 Setting, Sample, and Procedures

Participants were drawn from a parent study ( $n=240$ ) in Southeast Georgia focused on the effectiveness of a new form of recovery-oriented case management and community navigation (Compton et al., 2011; Compton et al., 2016); those included in this analysis ( $n=232$ ) had complete data on the variables of interest. All participants were adults with SMI recruited from three inpatient psychiatric facilities. Staff at each facility referred eligible patients to the research team; enrollment occurred as patients were about to be discharged from a stay of at least two nights in a state hospital or one of two crisis stabilization units. Research diagnoses were obtained using the mood disorders and psychotic disorders modules of the *Structured Clinical Interview for DSM-5: Clinical Version (SCID5-CV)*. The SCID is considered the gold standard instrument to obtain psychiatric diagnoses in clinical research settings due to its high validity and reliability (First et al., 2015; Lobbsteal et al., 2011; Segal and Williams, 2014). Interviews lasted 2–4 hours, and covered the measures and rating scales described below, along with others that were part of the parent study. All procedures were reviewed and approved by the university's and the State's Institutional Review Boards. In this analysis, we make use of baseline data obtained prior to discharge and before randomization to either of the two arms of the overarching study, which then followed participants longitudinally.

Inclusion criteria consisted of the following: (1) 18–65 years of age; (2) English speaking; (3) a clinical diagnosis of a psychotic disorder or a mood disorder (confirmed with the

SCID); (4) two separate inpatient psychiatric admissions for two or more days in the past 12 months; (5) being able and willing to provide written informed consent for research participation; and (6) being discharged to reside within the eight counties served by the Community Service Board (public mental health agency) hosting the research. Exclusion criteria included: (1) known or suspected developmental or intellectual disability, or dementia; and (2) presence of a serious medical condition that would interfere with study participation (e.g., shortness of breath, pain).

## 2.2 Materials

Patients were evaluated using the following scales. The assessments were presented verbally, and patients were provided with cue cards showing the response options.

The *Herth Hope Scale* (HHS) is a 30-item, 4-point scale with response options ranging from “Never applies to me” to “Often applies to me.” Total scores can range from 0 to 90 (observed range, 3–90), with a higher score denoting greater hope. Examples of items include: “I have plans for the future,” “I believe that good is always possible,” “I can seek and receive help,” and “I know my life has meaning and purpose.” High internal consistency reliability has been reported, with a Cronbach’s alpha of .94, remaining high at .91 after a 3-week re-test (Herth, 1991). The alpha value in the present sample was .93. The HHS has divergent validity of  $-.69$  with the Beck Hopelessness Scale (Herth, 1991).

The *Empowerment Scale* is a 28-item scale with a 4-point Likert rating ranging from “strongly agree” to “strongly disagree” for statements such as “I see myself as a capable person” and “People working together can have an effect on their community,” “I generally accomplish what I set out to do,” and “Very often a problem can be solved by taking action.” A higher score indicates more empowerment. The scale has demonstrated good reliability and validity across a number of samples (Corrigan et al., 1999; Rogers et al., 1997; Rogers et al., 2010). The Cronbach’s alpha internal consistency reliability value in the present sample was .76.

The *Socioeconomic Status Ladder* (SSL) is a MacArthur scale pictorial ladder with 10 rungs (Adler and Stewart, 2007). The instructions read to participants are as follows: “*Think of this ladder as representing where people stand in the United States. At the top of the ladder are the people who are the best off—those who have the most money, the most education, and the most respected jobs. At the bottom are the people who are the worst off—who have the least money, the least education, and the least respected jobs or no job. The higher up you are on this ladder, the closer you are to the people at the very top; the lower you are, the closer you are to the people at the very bottom. Where would you place yourself on this ladder? Please place a large “X” on the rung where you think you stand at this time in your life, relative to other people in the United States*” (Adler and Stewart, 2007). As such, higher rungs (and thus scores) indicate greater perceived social status. This test has established test-retest reliability ( $r=.62, p<.01$ ) (Giatti et al., 2012; Operario, 2004). It has consistent validity documented through correlations with other similar measures both in the U.S. and internationally (Adler et al., 2000; Miyakawa et al., 2011; Scott et al., 2014; Singh-Manoux et al., 2005).

The *Everyday Discrimination Scale* (EDS) is a 9-item measure that begins by asking, “In your day-to-day life, how often do any of the following things happen to you?” (Williams et al., 1997). Participants then rate statements such as “You are treated with less respect than other people are,” “People act as if they think you are not smart,” and “You are threatened or harassed,” with response options on a 6-point Likert-type scale ranging from “never” to “almost every day” Scores are proportional to levels of perceived discrimination. The EDS has been demonstrated to be reliable among diverse racial and ethnic populations, as well as patients with SMI (Gabbidon, 2014; Harangozo, 2013; Koschorke et al., 2014; Oh, 2014; Üçok et al., 2013). It also has high convergent and divergent validity in addition to internal consistency (Barnes et al., 2004; Gordon and Meyer, 2004; Shariff-Marco et al., 2011; Taylor et al., 2004). Studies have reported Cronbach’s alpha values of .85 (Gordon and Meyer, 2007) and .90 (Oh, 2014). The alpha value in the present sample was .86.

Given that the study included patients with both mood disorders and psychotic disorders, symptom severity was thoroughly measured with instruments covering depressive symptoms, manic symptoms, and the full array of psychotic and general psychopathology symptoms. First, the *Patient Health Questionnaire-9* (PHQ-9) is a 9-item measure of depressive symptoms (Fann et al., 2005; Kroenke and Spitzer, 2002). Response options range from “not at all” (0) to “nearly every day” (3) to questions such as “Over the last month have you been bothered by feeling down, depressed, or hopeless?” and “Over the last month have you been bothered by feeling tired or having little energy?” The PHQ-9 has high sensitivity and specificity and can predict depression outcomes and changes over time (Lowe et al., 2003; Wittkamp et al., 2007). It strongly correlates with the Beck Depression Inventory ( $r=.77$ ), General health Questionnaire-12 ( $r=.59$ ), Hospital Depression and Anxiety Scale, and WHO Well Being Index 5, showing high construct validity (Adewuya et al., 2006; Kung et al., 2012; Lowe et al., 2004; Martin et al., 2006). Second, the 11-item *Young Mania Rating Scale* (YMRS) was used to assess symptoms of mania. The YMRS has demonstrated reliability and validity in prior studies. (Jensen, 2007; Lukasiewicz et al., 2013; Pavuluri et al., 2006; Young et al., 1978; Youngstrom et al., 2003). Third, patients were also assessed using the *Positive and Negative Syndrome Scale* (Jerrell and Hrisko, 2013; Kay et al., 1987; PANSS), and for this analysis we used the grandiosity item, which defines grandiosity as “exaggerated self-opinion and unrealistic convictions of superiority, including delusions of extraordinary abilities, wealth, knowledge, fame, power, or moral righteousness.” Scores range from 1 (absent) to 7 (extreme).

### 2.3 Data Analysis

Distributional properties of all study variables were examined. A stepwise multiple linear regression (with an entry criterion of  $p$  0.05 and a removal criterion of  $p$  0.10) was calculated to predict hope scores, using IBM SPSS version 25. We then constructed a path model and tested its fit to the data using LISREL (**L**inear structural **r**elations) 10.20. In addition to our hypothesized model, two alternative models were tested, as well as several trimmed models.

### 3. RESULTS

Table 1 shows the sociodemographic characteristics of study participants. The mean age was  $35.9 \pm 11.7$  years and the sample was 64.7% male. Race was split nearly evenly between African Americans and Caucasians (46.8% and 48.9%, respectively). Overall, the sample was socially and economically disadvantaged. About one-third (32.3%) of the sample had less education than a high school degree, and 28.8% were homeless. A large majority were uninsured (73.6%).

#### 3.1 Multiple Linear Regression Model of Herth Hope Scale Scores

HHS scores ranged from 3 to 90 (possible range of 0–90), with a mean of  $62.3 \pm 15.9$ . A stepwise multiple linear regression was conducted to predict HHS scores in patients with SMI based on depression severity (PHQ score), mania severity (YMRS score), grandiosity severity (PANSS grandiosity item score), perceived social status, perceived everyday discrimination, empowerment, diagnostic category (mood disorder versus psychotic disorder), age, and gender. A significant regression equation was found ( $F(5, 226) = 43.767$ ,  $p < 0.001$ ), with an  $R^2$  of 0.492. Details are given in Table 2. Variation in HHS scores was best explained by PHQ-9 scores ( $R^2$  change = 0.334), followed by empowerment ( $R^2$  change = 0.075), perceived social status ( $R^2 = 0.047$ ), perceived everyday discrimination ( $R^2 = 0.021$ ), and age ( $R^2 = 0.015$ ). The excluded variables were: YMRS score, grandiosity severity, diagnostic category, and gender. There were no significant collinearity problems between the remaining variables.

Given that perceived social status and perceived everyday discrimination were significant predictors, we then computed independent samples  $t$ -tests to identify any differences in scores on these two variables by gender and race. There was a significant difference between social status ladder scores between females ( $3.6 \pm 2.2$ ) and males ( $4.3 \pm 2.5$ );  $t(234) = 1.97$ ,  $p = 0.050$ . However, there was no significant difference in everyday discrimination scores between females and males ( $19.8 \pm 11.4$  and  $21.4 \pm 12.2$ , respectively);  $t(237) = 0.943$ ,  $p = 0.035$ . There was a significant difference in social status ladder scores between African Americans ( $4.5 \pm 2.4$ ) and Caucasians ( $3.6 \pm 2.4$ );  $t(225) = 2.70$ ,  $p = 0.008$ , though there was no difference in everyday discrimination scores ( $20.8 \pm 12.0$  in both groups).

#### 3.2 Path Analysis

Based on results from the MLR, we then sought to gain a deeper understanding of the ways in which the various independent variables drive HHS scores. In the path analysis we only included variables that the MLR had identified as having the greatest impact on HHS scores. We constructed a hypothesized model that might best describe the connections between the variables, based on our analysis of the literature and clinical experience. Our hypothesized model, depicted in Figure 1, shows that depression is associated with hope and empowerment, and that hope also has a direct link with empowerment. The model indicates that both perceived social status and perceived everyday discrimination are associated with hope; they also impact hope, however, through their link with depression. This hypothesized model fit the data well, as given by the fit indices in Table 3. For example, adjusted goodness



of fit index (AGFI), non-normed fit index (NNFI), and comparative fit index (CFI) were all  $>0.90$ .

To ensure that this model fits the data better than other potential models, we tested two alternative models, shown in Figure 2. The first alternative model swapped the predictors (perceived social status and everyday discrimination) and outcomes (hope and empowerment). As such, empowerment and hope are predictive of depression, which in turn is associated with perceptions of discrimination and social status. The second model used everyday discrimination and empowerment as predictors, and perceived social status and depression as mediators of our outcome of interest: hope. In the trimmed models, we removed the path from the mediator to one of the outcomes in accordance with suggested modification indices. As indicated by the fit indices (Table 3) both the original alternative models and two subsequent trimmed models (based on modification indices) did not fit the data well. Across the four alternative models, for example, AGFI dropped from 0.903 to ranging from 0.157 to 0.692, and TLI dropped from 0.920 to ranging from 0.509 to 0.761.

Having determined that the hypothesized model fit the data better than either of two alternative models (and a subsequent trimmed model for each), we then sought to determine whether the fit of the hypothesized model could be further improved through select trimming. We first removed the path with the lowest coefficient ( $-0.15$ ) from perceived everyday discrimination to hope. This model no longer fit the data, as shown by the fit indices in Table 3. We then instead removed the path with the next lowest coefficient ( $-0.21$ ) from depression to empowerment. This was a better fitting model than the previous trimmed model (e.g., AGFI, TLI, CFI of 0.827, 0.825, and 0.948, respectively), though, as expected, the fit was not as good as in the original hypothesized model. Finally, we removed both of the previously mentioned paths concurrently, and the fit remained roughly the same, with fit indices generally in the accepted ranges (also shown Figure 1).

#### 4. DISCUSSION

With regard to hope and empowerment among individuals with SMI—two key constructs known to be associated with recovery—several findings were noteworthy, each of which will be discussed in turn. First, we identified several factors that were associated with hope, with regression results showing a prominent role of depressive symptoms, but also associations with socially relevant variables including perceived social status in relation to others and perceived experiences of everyday discrimination. Second, in our path analyses, perceived social status appears to have a direct connection with hope (and thus empowerment), and to also impact hope through its association with depression. Third, perceived everyday discrimination links to hope (and thus empowerment), but this effect is primarily one that is mediated through its association with depression.

Although we did not find gender or race differences in everyday discrimination scores, this is likely due to the broad nature of that measure. Specifically, the *Everyday Discrimination Scale* does not parse the source of the discrimination, whether it be racism, sexism, ageism, ableism, a combination of these, or stemming from something else entirely. It is well established that persons with SMI are discriminated against and perceive that discrimination



(Dickerson et al., 2002; Koschorke et al., 2014; Mantovani et al., 2016; Oh et al., 2014; Thornicroft et al., 2009; Vass et al., 2015). It is possible that everyday discrimination scores did not vary by gender or race because of this overarching factor (the mental illness itself) that accounted for most of the discrimination perceived in the sample (thus over-riding the effects of felt sexism and racism. A study of community mental health clients found that the most prevalent attributions for everyday discrimination were mental illness at 39%, appearance at 17%, and race/ethnicity at 11% (Gabbidon et al., 2014), which could account for our results. Group differences regarding subjective social status were evident in that women and Caucasians reported lower social status. While the former is not surprising given gender-based discrimination and gender inequality, the fact that Caucasians reported a lower perceived social status in this sample was unexpected and requires further exploration.

Previous studies have found strong correlations between hope and several positive external support systems including strong interpersonal relationships, social support systems, and recovery outcomes (Hagerty et al., 1992; Rogers, 2010). Instead of focusing on positive external support systems, our study identified two negative external factors that affect hope: perceived social status and everyday discrimination. Unlike diagnostic category and gender, some of the most influential predictors of hope in our regression model were those most heavily influenced by one's external environment (perceived social status and everyday discrimination). Relatedly, our best-fitting hypothesized path model indicates opportunities to intercept the development of depression and thus reduction of hope and poor functional recovery outcomes. These opportunities would include an integration of societal changes, policy reform, and individual psychotherapies targeting depression's precursors, perceived social status and everyday discrimination. Our model also highlights the far-reaching impacts of discrimination and inequality, which should instigate future research and policy reform.

Previous studies have shown that subjective ideas about one's social status are actually a better predictor of mental illness than objective measures like educational level, income, and occupation (Scott et al., 2014; Singh-Manoux et al., 2005). Our results help specify the mechanism through which this may occur. We were able to show that perceived social status can affect hope both directly and through depression as a mediator. Impacting both discrimination and socioeconomic standing require structural interventions at the policy level; this work once again demonstrates that the mental health profession has a vested interest in such policy. Within mental health settings, given that depressive symptoms are associated with hope and empowerment, psychotherapies like resiliency training and Cognitive-Behavioral Therapy (CBT) could help to mitigate the effects of perceived social status on hope and functional recovery in disadvantaged persons with SMI. Resiliency training teaches a patient to adapt in the face of negative experiences and has been shown to reduce hopelessness and suicidal ideation in persons with schizophrenia (Bozikas and Parlapani, 2016; Johnson et al., 2010). CBT aims to change reactions to a negative situation by working on problem solving skills and reducing cognitive biases. In addition, CBT has demonstrated some effectiveness after only one session (Depp et al., 2018; Turkington et al., 2002) which, although not preferred, is noteworthy for persons with SMI who face significant barriers to consistent, continuous treatment. As noted, however, clinical interventions targeting depression, hope, and empowerment must ultimately be accompanied

by policy-level, societal interventions that also reduce and eliminate discrimination and that improve equality, especially among those who are most disadvantaged.

Other studies have found depression to be a mediator between discrimination and other health outcomes, both physical and mental (Kessler et al., 1999; Todovora et al., 2010). Our path analysis also confirmed depression as a mediator between everyday discrimination and hope and empowerment among persons with SMI. As with perceived social status, CBT and resilience therapy can potentially help individuals with SMI keep from internalizing experiences of discrimination and developing self-stigma (Beck, 1979; Beck and Kovacs, 1977; O'Connor et al., 2019). Clinicians can use strengths-based therapy to work with individuals with SMI to stop seeing their diagnosis as a limiting factor and increase empowerment. There should be more effort to introduce clients with SMI to others who may face similar types of discrimination, such as making sure treatment teams are racially and ethnically diverse, and include peer specialists. Although these suggestions focus on resiliency approaches for the individual with SMI, the more upstream conclusion is that stigma surrounding mental illnesses and racial discrimination must be addressed at a societal level. Our results, along with those from many others, show the detrimental effect of perceived discrimination, and thus reinforce the call for lawmakers and other policymakers to address these issues with system-wide reform.

These findings should be interpreted in light of several methodological limitations. First, the data were collected from individuals who were inpatients about to be discharged (because they were participating in a larger, longitudinal project). Findings might not be generalizable to a broader population of individuals with SMI, including those who have maintained stability, achieved a sense of recovery, and not needed to be admitted to inpatient settings. Similarly, because participants were enrolled from public-sector (as opposed to private) mental health settings, results might not be generalizable to those who are not socioeconomically disadvantaged. Second, all data are self-report; as such, social status and everyday discrimination were *perceived* social status and *perceived* everyday discrimination. Nonetheless, it is perceived social status and discrimination that are of interest and that have been measured in prior studies, so the self-report methodology is less of a concern. Third, the Everyday Discrimination Scale was not specific regarding the type of discrimination experienced. Racial discrimination is obviously a major, ongoing issue in American society, and about half of the sample was African American; yet, the intersectionality of other forms of discrimination (including the discrimination associated with having SMI or other types of discrimination due to being a member of other often-discriminated against population groups, such as those who are homeless) must be considered. Future research should study perceived racism, which is more specific than the measure of perceived everyday discrimination that we used. Fourth, although path analysis gives clue about directionality/causality, all data were cross-sectional. Although our testing and disproving of the select alternative models give further credence to our hypothesized model, only a longitudinal and controlled study could more definitively show that perceived social status, for example, leads to depression, which leads to hope and thus empowerment. Fifth, because hope has been shown to influence functional recovery (Coskun et al., 2018), future research should consider our models while measuring functional recovery (especially over time) for a more complete analysis. Finally, because monitoring depression and hopelessness are crucial in

the ongoing screening and assessment of suicidality—and because substance use is a common factor underpinning suicidality—suicidality and substance use are additional variables of interest.

Overall, findings lend further support to the accumulating evidence that recovery among individuals with SMI hinges in part on social and societal factors commonly framed as social determinants of mental health (Compton and Shim, 2015a, 2015b) and that mental health professionals thus have a role in addressing those social and societal factors (Shim and Compton, 2018). To further improve the lives of those with mental illnesses (and indeed those at risk for, or even those likely not at risk for, mental illnesses) requires programs and policies that address inequality (and thus perceived social status) and discrimination and social exclusion (and thus perceived everyday discrimination). Addressing these complex, structural aspects of society is not easy—and solutions may not be readily apparent given their entrenched nature—but is necessary if we are to improve mental health, reduce risk for mental illnesses, and enhance recovery among those living with disabling mental illnesses.

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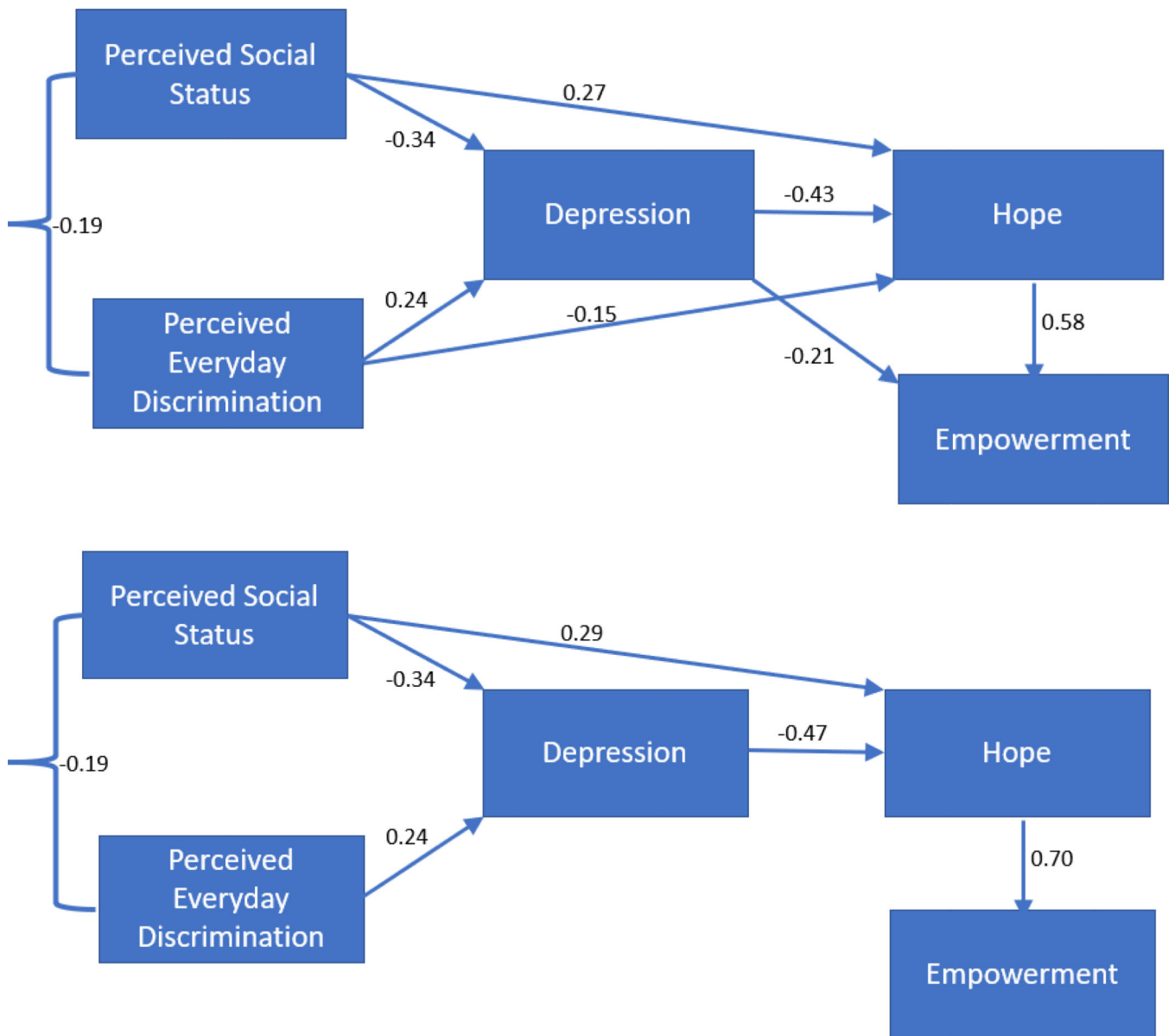
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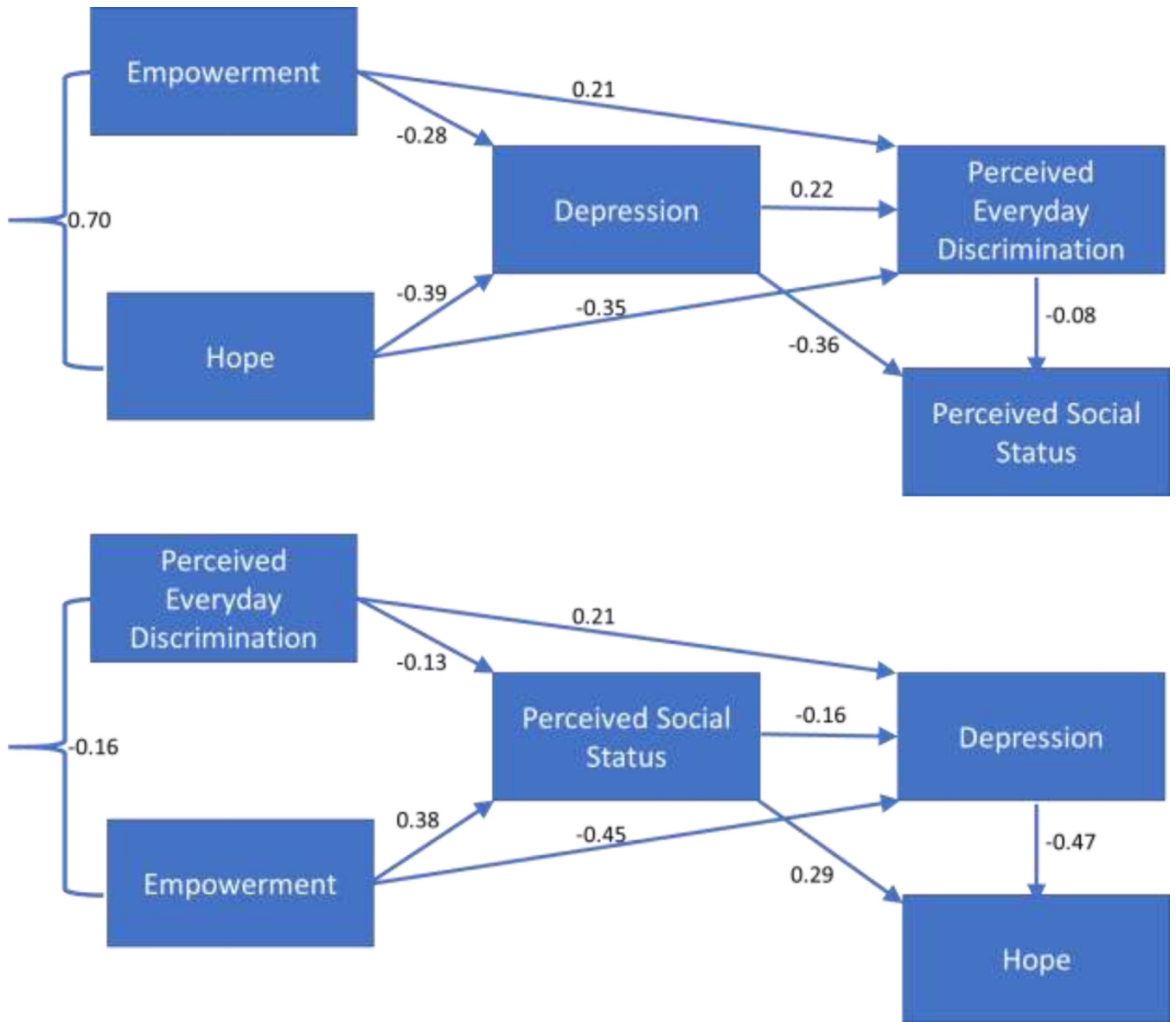


### Highlights

- Hope is decreased by depression, perceived social status, and discrimination.
- Perceived social status directly impacts hope, and indirectly through depression.
- Perceived everyday discrimination affects hope through effects on depression.



**Figure 1.**  
The Original and Trimmed Hypothesized Model and Path Coefficients



**Figure 2.**  
The Two Alternative Models and Path Coefficients

**Table 1.**Sociodemographic Characteristics of the Study Sample ( $n=235$ )

Age, years (mean±SD)	35.9±11.7
Sex, male	152 (64.7%)
Ethnicity, non-Hispanic	224 (95.3%)
No health insurance	171 (73.6%)
Race	
<i>African American</i>	110 (46.8%)
<i>Caucasian</i>	115 (48.9%)
<i>Other (self-report given below)</i>	10 (4.3%)
<i>Mixed, biracial, or identified with more than one race</i>	4 (1.7%)
<i>Hispanic or Latino</i>	4 (1.7%)
<i>No race given</i>	2 (0.9%)
Marital Status	
<i>Single and never married</i>	148 (61.7%)
<i>Divorced or separated or widowed</i>	78 (32.6%)
<i>Married or living with a partner</i>	14 (5.8%)
Highest Level of Education	
<i>Junior high school or less</i>	32 (13.65%)
<i>Some high school</i>	446 (19.48.7%)
<i>General Educational Development (GED) diploma</i>	42 (17.97%)
<i>High school graduate</i>	43 (18.31%)
<i>Some college or trade/vocational school</i>	612 (26.2%)
<i>College or professional school graduate</i>	112 (5.14.7%)
Living Situation	
<i>With parents, siblings, or other family members</i>	803 (34.6%)
<i>Homeless, or staying in a homeless shelter</i>	689 (28.98%)
<i>Alone</i>	31 (13.2%)
<i>With friends</i>	189 (7.79%)
<i>With boyfriend, girlfriend, spouse, or partner</i>	24 (10.20%)
<i>Other</i>	14 (5.98%)
Currently working	31 (13.20%)

**Table 2.**

Means and Standard Deviations of Independent Variables, and Multiple Linear Regression Results among 232 Patients with Serious Mental Illnesses; Dependent Variable, Herth Hope Scale Scores

	<b>M</b>	<b>SD</b>	<b>B</b>	<b>SE B</b>	<b><math>\beta</math></b>	<b><i>t</i></b>	<b><i>p</i></b>
Depression (PHQ-9)	12.8	7.2	-0.757	0.124	-0.340	-6.105	<0.001
Empowerment	2.9	0.5	8.180	1.635	0.254	5.002	<0.001
Perceived Social Status	4.0	2.4	1.371	0.343	0.205	3.994	<0.001
Discrimination (EDS)	20.7	11.7	-0.234	0.069	-0.170	-3.376	0.001
Age	35.8	11.6	-0.180	0.070	-0.130	-2.559	0.011

PHQ-9 = Patient Health Questionnaire-9; EDS = Everyday Discrimination Scale

**Table 3.**

Fit Indices for the Hypothesized Model, Two Alternative Models and Respective Trimmed Models, and Three Trimmed Versions of the Hypothesized Model

	Model $\chi^2$	AGFI	NNFI (TLI)	CFI	RMSEA	AIC
Hypothesized Model	7.80	0.903	0.920	0.984	0.111	4061.348
Alternative Model #1	26.65	0.692	0.662	0.932	0.229	4080.195
Alternative Model #1, Trimmed <sup>a</sup>	56.62	0.606	0.509	0.853	0.276	4108.169
Alternative Model #2	89.46	0.157	0.761 *	0.760	0.431	4143.003
Alternative Model #2, Trimmed <sup>b</sup>	115.53	0.328	0.691 *	0.691	0.400	4167.077
Hypothesized model, Trimmed #1 <sup>c</sup>	248.33	0.160	0.336 *	0.326	0.590	4299.877
Hypothesized model, Trimmed #2 <sup>d</sup>	22.08	0.827	0.825	0.948	0.165	4073.630
Hypothesized model, Trimmed #3 <sup>e</sup>	30.06	0.812	0.821	0.928	0.167	4079.610

\* Value given is a Normed Fit Index, rather than Non-Normed Fit Index.

AGFI = Adjusted Goodness of Fit Index; NNFI = Non-Normed Fit Index; TLI = Tucker Lewis Index; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation; AIC = Akaike Information Criterion.

<sup>a</sup> the path from depression to social status was eliminated

<sup>b</sup> the path from perceived social status to hope was eliminated

<sup>c</sup> the path from perceived everyday discrimination to hope was eliminated

<sup>d</sup> the path from depression to empowerment was eliminated

<sup>e</sup> both the path from perceived everyday discrimination to hope, and the path from depression to empowerment, were eliminated