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ABSTRACT
Objectives: The gap between mental health needs and service use in racial/ethnic minorities continues to be a major public health concern. Focusing on older Korean immigrants, the present study examined linkages among mental distress, self-rated mental health (SRMH), and the use of professional mental health services. We hypothesized that SRMH would play a mediating role in the relationship between mental distress and the use of professional mental health services.
Method: Using data from the Study of Older Korean Americans (SOKA; $N = 2,150$, Mean age $= 73.4$), the direct and indirect effect models were tested.
Results: Nearly 30% of the sample fell within the category of experiencing mental distress, but only a small proportion (5.7%) had used professional mental health services. Supporting our hypothesis, the pathway from mental distress to the use of professional mental health services was influenced by an individual's subjective perception of mental health status: the indirect effect of mental distress on service use through SRMH (.04 [.01]) was significant (bias-corrected 95% confidence interval for the indirect effect $= .02, .06$).
Conclusion: The findings of this study not only contribute to our understanding of help-seeking processes in a group at high mental health risk but also suggest avenues to promote their use of mental health services.

Introduction

Despite advancements in mental healthcare systems and the proven effectiveness of treatments, many Americans in need of mental health care remain untreated (U.S. Department of Health and Human Services, 2011). According to the 2017 National Survey on Drug Use and Health, only 43% of U.S. adults with any mental health problems received mental health services (Substance Abuse and Mental Health Services Administration, 2018). This statistic shows negligible improvement from the 41% rate reported in the National Comorbidity Survey-Replication more than a decade ago (Wang et al., 2005). The persistent gap between mental health needs and service use is even more prominent among racial/ethnic minorities and older populations (Jimenez, Cook, Bartels, & Alegría, 2013; Wang et al., 2005).

Although Asian Americans are the fastest growing U.S. minority group (Pew Research Center, 2012), relatively little is known about their mental health and service needs, and this is particularly true for older Asian Americans. This lack of information can be attributed to the absence of national data that include representative samples of older Asian Americans. National surveys often use English as a primary survey language, which creates problems in studying older Asian Americans, a majority of whom are foreign-born and limited in English (Pew Research Center, 2012). To the extent that national surveys do exclude many non-English speakers, it is plausible that the current knowledge about older Asian Americans' mental health may be based on upward-biased samples and that the problems are accordingly underestimated (Jang, Yoon, Park, Rhee, & Chiriboga, 2019).

Responding to the aforementioned population needs and characteristics, the present study addresses mental health and service use in a sample of older Korean Americans, collected via culturally and linguistically sensitive approaches. This group is an appropriate target because (1) they are the fifth largest Asian American subgroup, (2) they are predominantly foreign-born first-generation immigrants, and (3) they are underrepresented in national data due to linguistic barriers (Hoeffel, Rastogi, Kim, & Shahid, 2012; Jang et al., 2019; Pew Research Center, 2017). Several regional and community-based studies that do include the Korean language in their surveys or interviews have reported Korean Americans' vulnerabilities in mental health. For example, in the California Health Interview Study, older Korean Americans showed the highest level of mental distress among diverse racial/ethnic

groups (Kim et al., 2010; Sorkin, Nguyen, & Ngo-Metzger, 2011). Yet despite these heightened needs for mental health care, the rate of mental health service use in older Korean Americans has been low, particularly in the use of mental health specialty care (Jang et al., 2019; Le Meyer, Zane, Cho, & Takeuchi, 2009; Park, Cho, Park, Bernstein, & Shin, 2013).

In an effort to identify a factor that might expand our knowledge concerning the gap between mental health needs and service use in older Korean Americans, the present investigation focused on *self-rated mental health* (SRMH). Following a long tradition of research on self-rated *health* (SRH), an increasing number of studies have employed a single SRMH item that asks "How would you rate your *mental* health?" (Ahmad, Jhajj, Stewart, Burghardt, & Bierman, 2014). Strong associations of SRMH with more objectively-defined mental health status and the use of mental health services have been reported in studies with diverse populations (e.g. Fleishman & Zuvekas, 2007; Jang, Park, Kang, & Chiriboga, 2014; Jang, Yoon, Chiriboga, Molinari, & Powers, 2015; Kim et al., 2011; Zuvekas & Fleishman, 2008), including older Korean Americans (e.g. Jang et al., 2012; Yoon & Jang, 2014).

In the present study, we conceptualized SRMH as a mediator in the relationship between mental health status and service use. This conceptualization draws on literature highlighting the importance of self-awareness and recognition as part of the process of help-seeking (Pescosolido & Boyer, 1999). Our study also draws from the theory of planned behavior (Ajzen, 1991), which highlights the role of subjective norms, beliefs, and perceptions in shaping individuals' behavioral intentions and behaviors (Glanz, Rimer, & Viswanath, 2015). The theory has been used to explain various health and social behaviors in diverse populations (e.g. Magaard, Seeralan, Schulz, & Brütt, 2017; Schnyder, Panczak, Groth, & Schultze-Lutter, 2017), including mental health service use in Koreans (e.g. Lee, Choi, & Park, 2015). Recognizing the importance of subjective perceptions, it was anticipated that lack of awareness of mental health problems would keep individuals in need of professional help away from needed attention.

Taken together, we hypothesized that (1) mental distress and SRMH would have a direct effect on professional mental health service use and (2) the effect of mental distress and professional mental health service use would be mediated by SRMH. The greater levels of mental distress would make older individuals rate their mental health more poorly or make them more likely to recognize their mental health problems, which in turn would lead to their use of mental health services. To place the proposed mediation model in context, we also considered various sets of covariates: demographic variables (age, gender, marital status, education, and region), immigration-related variables (time since immigration and acculturation), and health and access variables (chronic medical conditions, functional disability, and health insurance coverage). The selection of covariates was based on the literature on mental health and service use in immigrant populations (e.g. Jang et al., 2019; Jimenez et al., 2013; Le Meyer et al., 2009; Park et al., 2013; Wang et al., 2005).

Method

Participants

Data were drawn from the Study of Older Korean Americans (SOKA), a multi-state survey of Korean immigrants age 60 or older. In an effort to increase the generalizability of findings, study sites were selected from populations with differing proportions of Korean densities: California, New York, Texas, Hawai'i, and Florida. Their respective proportions of the total Korean population residing in the U.S. are, respectively, 29.3%, 8.0%, 5.2%, 2.7%, and 2.2% (Hoeffel et al., 2012). In each state, a primary metropolitan statistical area with a representative proportion of Korean Americans was selected: Los Angeles, New York City, Austin, Honolulu, and Tampa. Combined, these sites present a continuum of Korean population densities.

Community-based samples were recruited by a team of bilingual investigators. The project began with the compiling of a database of Korean-oriented resources, services, and amenities at each study site; this database not only facilitated the research team's efforts at community engagement but also guided the selection of specific locations for data collection. In the development of each database, the input of community advisors was actively solicited. The surveys took place at multiple locations and events (e.g. churches, temples, grocery stores, small group meetings, and cultural events) from April 2017 to February 2018. The survey questionnaire was in Korean, developed through a back-translation and reconciliation method. It was designed to be self-administered; trained interviewers, however, were onsite so that participants could get assistance when needed. All participants were paid U.S. $20 for their participation. Approved by a university's Institutional Review Board, all participants were informed of the study's goals and signed an informed consent document. A total of 2,176 individuals participated in the survey. After removal of those who had more than 10% of data missing in the variables used in the present analyses ($n = 26$), the final sample consisted of 2,150 participants.

Measures

Mental distress

The Kessler Psychological Distress Scale 6 (K6; Kessler et al., 2002) was used to assess participants' level of mental distress. This scale, developed as a screening tool for non-specific mental distress, has been widely used in mental health research and practice. It measures the frequency of experiencing six different manifestations of psychological distress over the past 30 days: (1) so depressed that nothing could cheer you up, (2) nervous, (3) hopeless, (4) restless or fidgety, (5) worthless, and (6) everything was an effort. Each item was rated on the 5-point scale ranging from 0 (*none of the time*) to 4 (*all of the time*). Responses are summed to create a composite score, ranging from 0 to 24. A score of 6 or greater indicates mental distress (Kessler et al., 2003). Due to its brevity, ease of administration, and ability to detect the possibility of diagnosable cases, the K6 scale has been used widely in national and international population-based studies (Stolk, Kaplan, & Szwarc, 2014). It has been translated into Korean, and its psychometric properties have been validated in samples of Koreans and Korean

Table 1. Descriptive characteristics of the sample (N = 2,150).

	%	M ± SD	Range
Demographic variables			
Age		73.4 ± 7.97	60 − 100
Gender			
Male	33.2		
Female	66.8		
Marital status			
Married	60.6		
Not married	39.4		
Education			
≤ High school graduation	60.0		
> High school graduation	40.0		
Region			
California	30.2		
New York	25.5		
Texas	15.0		
Hawai'i	15.0		
Florida	14.3		
Immigration-related variables			
Time since immigration		31.5 ± 12.1	.17 − 80
Acculturation		12.3 ± 7.07	0 − 35
Health and access variables			
Chronic medical conditions		1.57 ± 1.40	0 − 10
Functional disability		1.70 ± 3.49	0 − 32
Health insurance coverage	93		
Mental distress		3.87 ± 4.03	0 − 24
Self-rated mental health (SRMH)		2.46 ± 1.13	1 − 5
Excellent	21.3		
Very good	37.2		
Good	19.9		
Fair	17.4		
Poor	4.2		
Professional mental health service use	5.7		

Americans (e.g. Min & Lee, 2015). Cronbach's alpha for the present sample was .91.

Self-rated mental health
Participants were asked if they would say their overall mental health was *excellent* (1), *very good* (2), *good* (3), *fair* (4), or *poor* (5).

Professional mental health service use
Participants were also asked how many times they had used professional mental health services (e.g. a psychiatrist, psychologist, counselor, or social worker) during the past 12 months. Responses were recoded into a binary variable (0 = *no use*, 1 = *use*).

Covariates
Demographic information included age (in years), gender (0 = *male*, 1 = *female*), marital status (0 = *married*, 1 = *not married*), education (0 = ≤*high school graduation*, 1 = >*high school graduation*), and region (0 = *California*, 1 = *New York*, 2 = *Texas*, 3 = *Hawai'i*, 4 = *Florida*).

Time since immigration (in years) and acculturation were included as immigration-related variables. The 12-item inventory of acculturation (Jang, Kim, Chiriboga, & King-Kallimanis, 2007) addresses English proficiency, media use, food consumption, social relationship, sense of belonging, and familiarity with culture and custom. Each response was coded from 0 to 3, and total scores could range from 0 to 36; a higher score indicates a greater level of acculturation to mainstream American culture. Internal consistency in the present sample was high (α = .91).

Chronic medical conditions, functional disability, and health insurance coverage were included as health and access variables. Chronic medical conditions were measured with a checklist that included 10 diseases and conditions (e.g. heart disease, stroke, diabetes, cancer, and arthritis), with the total number used in the analysis. Functional disability was indexed by a composite measure of basic and instrumental activities of daily living (Fillenbaum, 1988). On a list of 16 activities (e.g. eating, dressing, traveling, and managing medication), participants were asked whether they could perform each activity *without help* (0), *with some help* (1), or are *unable to do* it (2). Total scores range from 0 (*no disability*) to 32 (*severe disability*), and internal consistency was high in the present sample (α = .89). As an access variable, health insurance coverage was coded as *not insured* (0) or *insured* (1).

Analytic strategy

Following review of the sample's descriptive characteristics, bivariate correlations were assessed for underlying relationships among study variables and to ensure the absence of collinearity. Logistic regression models of the use of professional mental health services were tested by first entering mental distress, followed by SRMH. Covariates were adjusted for all analyses. The hypothesis of mediation by SRMH was tested using the PROCESS macro version 3.2.01 (Hayes, 2018) for bootstrap estimation with 10,000 samples; all analyses were performed using IBM SPSS Statistics 25 (IBM Corp., Armonk, NY).

Results

Descriptive characteristics of the sample

Table 1 presents the sample's descriptive characteristics. The mean age of the participants was 73.4 years (*SD* = 7.97), with a range from 60 to 100. More than 60% of the participants were women (66.8%) and married (60.6%) and had an educational attainment of a high school degree or less (60%). The participants were from California (30.2%), New York (25.5%), Texas (15%), Hawai'i (15%), and Florida (14.3%). Their years of residence in the U.S. and level of acculturation averaged 31.5 (*SD* = 12.1) and 12.3 (*SD* = 7.07), respectively. With regard to health and access variables, mean scores for chronic medical conditions and functional disability were 1.57 (*SD* = 1.40) and 1.70 (*SD* = 3.49), respectively, with 7% of the sample having no health insurance coverage. K6 scores averaged 3.87 (*SD* = 4.03). When the cut-off score (≥6) was applied (Kessler et al., 2003), nearly 30% of the sample fell into the category of mental distress. SRMH averaged 2.46 (*SD* = 1.13), with about 22% of the sample rating their mental health as either *fair* or *poor*. The rate of professional mental health service use was 5.7%.

Logistic regression models of professional mental health service use

In the bivariate correlations (not shown in tabular format), all variables were correlated in the expected direction. The key variables of mental distress, SRMH, and use of professional mental health services were significantly though moderately intercorrelated (*r*s = .13 to .36, *p*s < .001).

Table 2. Logistic regression models of professional mental health service use.

	Odds ratio (95% Confidence interval)	
Mental distress	1.08*** (1.03, 1.12)	1.05 (1.00, 1.09)
Self-rated mental health (SRMH)	–	1.59*** (1.29, 1.95)
Demographic variables		
Age	1.01 (.98, 1.03)	.99 (.97, 1.03)
Female	.91 (.56, 1.45)	.91 (.56, 1.45)
Not married	.79 (.50, 1.22)	.80 (.51, 1.24)
> High school graduation	.68 (.42, 1.01)	.82 (.50, 1.34)
Region (ref = California)		
New York	1.21 (.75, 1.95)	1.29 (.80, 2.09)
Texas	.64 (.32, 1.29)	.73 (.36, 1.46)
Hawai'i	.69 (.36, 1.33)	.72 (.37, 1.38)
Florida	.08** (.01, .36)	.08** (.01, .35)
Immigration-related variables		
Time since immigration	.98 (.96, 1.01)	.99 (.97, 1.01)
Acculturation	1.04* (1.01, 1.08)	1.05* (1.01, 1.09)
Health and access variables		
Chronic medical conditions	1.27*** (1.12, 1.44)	1.22** (1.06, 1.39)
Functional disability	1.10*** (1.04, 1.15)	1.08** (1.03, 1.13)
Health insurance coverage	.83 (.38, 1.81)	.83 (.38, 1.82)
Summary statistic	−2 Log likelihood = 755.5 χ^2/df = 104.7***/14	−2 Log likelihood = 743.4 χ^2/df = 116.9***/15

*$p < .05$.
**$p < .01$.
***$p < .001$.

Chronic medical conditions and functional disability were found to be common associates of all three variables; those with more physical health constraints were more likely to have a high level of mental distress, to rate their mental health adversely, and to utilize professional mental health services. The highest correlation was found between time since immigration and acculturation ($r = .42$, $p < .001$), and there was no sign of collinearity.

Table 2 summarizes the logistic regression models of professional mental health service use. In the initial model, mental distress was a significant factor after controlling for the effects of covariates. A one-unit increase in mental distress accrued the odds of using professional mental health services by 1.08 times. In the subsequent model with SRMH included, the effect of mental distress disappeared, suggesting a potential mediating effect of SRMH. Increased odds of professional mental health service use were found among those with negative ratings of mental health, high levels of acculturation, and physical health constraints. In comparison with living in California, living in Florida was associated with reduced odds of service use.

Mediating role of SRMH

The mediation model of SRMH was further explored using the PROCESS macro. All direct paths among the independent variable (mental distress), presumed mediator (SRMH), and dependent variable (professional mental health service use) were significant. The indirect effect of mental distress on the use of professional mental health services through SRMH was found to be significant (B [SE] = .04 [.01]), evidenced by the 95% bootstrap confidence interval for the indirect effect not containing zero (.02, .06). This finding suggests that the effect of mental distress on the use of professional mental health services is mediated by individuals' subjective evaluations of their own mental health status. Higher levels of mental distress were associated with older individuals' negative ratings of personal mental health or recognition of mental health concerns, which in turn facilitated professional help-seeking.

Discussion

Underutilization of mental health services among older racial/ethnic minorities, particularly among those who are immigrants (Jang et al., 2019; Jimenez et al., 2013, Wang et al., 2005), prompted the present study. Guided by an emerging literature on SRMH (e.g. Ahmad et al., 2014; Fleishman & Zuvekas, 2007) and applications of the theory of planned behavior in the fields of mental health and service use (Ajzen, 1991; Glanz et al., 2015; Magaard et al., 2017; Schnyder et al., 2017), we hypothesized that SRMH would mediate the relationship between mental distress and professional mental health service use. Our analyses of data from 2,150 SOKA participants supported the proposed hypothesis.

This sample of older Korean Americans demonstrated a high level of mental health concerns. At 30%, the prevalence of mental distress was notably higher than that reported in national samples of the U.S. older population (11%; Center for Behavioral Health Statistics and Quality, 2016). The proportion of individuals who reported their mental health status to be either fair or poor in the overall sample was 22%, and this rate is substantially higher than the 9% to 10.3% reported in national samples of older non-Hispanic Whites (e.g. Jang et al., 2014; Kim et al., 2011). Despite the adverse status of mental health, only a small proportion of the sample (5.7%) had used professional mental health services, confirming previous findings on the gap between mental health needs and service use among racial/ethnic minorities in general (e.g. Jimenez et al., 2013; U.S. Department of Health and Human Services, 2011; Wang et al., 2005) and older Korean Americans in particular (e.g. Jang et al., 2019; Park et al., 2013).

It is noteworthy that the associations among the key variables—mental distress, SRMH, and professional mental health service use—were significant but moderate. This finding suggests potential disconnects in the process of help-seeking for mental health care among older Korean Americans, who may not recognize mental health problems as a need for care, so that those problems are not linked to mental health services. Indeed, in the multivariate

analyses, the direct effect of mental distress on service use became non-significant when SRMH was included in the model, confirming the mediating role of SRMH. This finding is in line with the theory of planned behavior, in that individuals' subjective evaluations of their own mental health status determine the steps that they take in help-seeking (Magaard et al., 2017; Park et al., 2013; Schnyder et al., 2017). It substantiates the theory's focus on the critical role of subjective norms, beliefs, and perceptions in shaping behaviors related to health promotion and service use (Ajzen, 1991; Glanz et al., 2015).

SRMH not only reflects a cognitive appraisal of one's mental health status but also serves as an intervening step between the presence of mental health problems and the use of mental health services. This calls attention to the importance of self-recognition and awareness of personal mental health status in efforts to close the service gap. Given the findings of previous studies that the association between mental health symptoms and SRMH is lower among racial/ethnic minorities than among non-Hispanic Whites (e.g. Jang et al., 2012) and that SRMH is predicted by social determinants that go beyond mental health status (e.g. Ahmad et al., 2014; Yoon & Jang, 2014), the role of cultural and social factors should be considered in mental health intervention efforts for racial/ethnic minority groups.

In addition to theoretical implications, results also pointed to the importance of physical health for mental health and associated service use. Chronic medical conditions and functional disability were common associates of all three mental health and service use variables; those with more physical health constraints were likely to have higher levels of mental distress, to rate their mental health negatively, and to utilize professional mental health services. This finding accords with literature demonstrating close associations between physical and mental health. In racial/ethnic minorities, mental health problems are often manifested as somatic symptoms due to stigma (Jang et al., 2012). However, the presence of chronic medical conditions and functional disability may familiarize older adults with the healthcare system, thus uncovering their mental health problems and facilitating their access to and use of mental health services. This line of findings call attention to the role of primary healthcare physicians as a liaison to professional mental health care.

There were also some regional differences that added texture to the findings. Compared with those living in California, those in Florida had lower odds of using professional mental health services, which may result from the limited availability of culturally and linguistically appropriate mental health services in Florida. Another contextual factor of note is acculturation. Consistent with previous literature that has demonstrated acculturation as a mobilizing factor for healthcare (e.g. Jang et al., 2007; Park et al., 2013; Sorkin et al., 2011), those with higher levels of acculturation had an increased probability to use mental health services. Given stigmatizing beliefs on mental health and service use often observed in older Asian immigrants (Jang, Gum, & Chiriboga, 2011; Jung, Cho, Rhee, & Jang, 2020), intervention efforts should prioritize those with low acculturation.

Some limitations of the present study should be mentioned. First, due to the cross-sectional design, causality can only be inferred. Second, although participants were drawn from multiple locations, the study's non-probability sampling strategies might not fully represent older Korean immigrants within specific regions or across the U.S. Third, the study's self-report measure may not have been a sufficient indicator of mental distress; for future studies, clinical assessment of mental health is recommended. Lastly, our conceptualization of subjective perceptions of mental health status as a mediator was inspired by the theory of planned behavior; however, the full model could not be tested due to the absence of data on key domains. Future studies need to incorporate relevant domains of the model such as attitudes, subjective norms, perceived control, and intention and explore their dynamic processes toward mental health service use.

However, despite these limitations, the study's findings offer insights on the pathways through which mental distress is linked to mental health service use and highlight the mediating role of SRMH. Intervention efforts should be focused on promoting self-awareness and recognition of mental distress and the use of mental health services among older immigrant populations who are at high risk of mental health problems and in need of professional mental health services.

Disclosure statement

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