Asian Americans' Depressive Experiences and Mental Health Service Use Behaviors: Considering Physical Symptomatology

by

Jacqueline H. J. Kim

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
(Psychology)
in The University of Michigan
2017

Doctoral Committee:

      Professor Donna K. Nagata, Chair
      Professor Edward C. Chang
      Professor Cheryl A. King
      Professor Kerby Shedden

Jacqueline H. J. Kim

jhjkim@umich.edu

ORCID iD: 0000-0002-4827-3927

DEDICATION

To Stephen

and

He who determines my steps (Prov. 16:9)

The many friendships and social support I received during my time at the university have also been invaluable. I could not have accomplished as much without the warm guidance of Teresa Nguyen, Elma Lorenzo-Blanco, Dennis Wendt, Eric Kim, William Hartmann, Phillip Cheng, Ivy Tso, and many others. I am especially thankful to Yay-hyung Cho, Katherine Foster, Yasmin Cole-Lewis, Stephanie Chen, and Johnny Berona for our get-togethers that normalized the often-hectic nature of graduate school; more importantly, they always involved discussions that were inspirational. In particular, I am thankful to the friends who created a "lab" outside of lab with me, keeping me productive and motivated—you know who you are! Recognition is also warranted for the many bright undergraduate research assistants I have worked with throughout the years whose supportive work was crucial for project completion.

Finally, this dissertation is dedicated to my devoted and sacrificing husband. Thank you for your willingness to participate in unforewarned brainstorm sessions, providing instrumental support with your intrinsic talent for creating delicious meals on a graduate student stipend, encouraging me to pick myself back up through the difficult moments, and making sure I had adequate stress relief with our nature walks and karaoke outings with friends. I also thank my family for their unconditional love and support throughout.

TABLE OF CONTENTS

LIST OF TABLES

TABLE

LIST OF FIGURES

FIGURE

LIST OF APPENDICES

APPENDIX

ABSTRACT

As rates of depression continue to increase, problems with mental health service underutilization and premature termination from psychotherapy remain unresolved. This has been most notable for ethnic minority groups in the United States—with Asian Americans showing the greatest mental health service use disparity for over a decade. Asian Americans' use of mental health services, including psychotherapy, may be influenced by the type of depressive symptom experience. In particular, physical symptoms in Asian Americans' distress, such as pain, may differentiate: (a) the mental health services sought for relief, and (b) retention in psychotherapy. This dissertation is composed of two studies using different analytical approaches to examine the role of physical depressive symptomatology in Asian Americans' mental health service use behaviors. First, data from 890 National Latino and Asian American Study (NLAAS) participants were quantitatively analyzed to identify symptoms that characterize Asian Americans' depressive experiences. Then, the relationship between symptom experience and various forms of mental health service utilization was examined. Since the symptom experience may not only influence services sought but also how a person interacts in a psychotherapy setting, the second study analyzed 36 patients' archival data from an outpatient clinic to explore Asian American psychotherapy dropout. The relevance of physical depressive symptomatology was included in this primarily qualitative examination. The first quantitative study revealed that some experiences fit well within established DSM-defined criteria for depression, while others are better characterized by physical symptoms found in culturally salient idioms of distress. After considering other known predictors of mental health service use,

depressive experiences characterized by chronic physical symptoms predicted specific forms of mental health service use (alternative care/self-help and psychological counseling/therapy). The second qualitative mixed-method study gave rise to themes related to psychotherapy dropout and demonstrated that most patients described physical symptoms as part of their depressive distress. However, the clinician-documented physical symptom emphasis did not relate to an early drop from or longer stay in outpatient psychotherapy. Overall, results from this dissertation indicated a presence of heterogeneity in Asian Americans' depressive experiences, with physical symptoms being an important part of the experience for some Asian Americans. Structural barriers influenced both the utilization of mental health services and retention in psychotherapy, after accounting for the symptom experience. Implications for clinical services and future research are discussed.

CHAPTER I

Introduction

Mental Health Service Use in Asian Americans

Underutilization of mental health services persists despite the increasing rates of psychiatric disorders such as depression (Mojtabai & Jorm, 2015)—a leading cause of premature mortality and disability (Mathers & Loncar, 2006; McKenna, Michaud, Murray, & Marks, 2005; Whiteford et al., 2013). A minority of the U.S. population utilize mental health services (13.4%, NSDUH 2002-2008 (Substance Abuse and Mental Health Services Administration, 2009)), with only 56.4% of those with any mood disorder seeking services and only 21.6% of these help-seekers receiving minimally adequate treatment (Wang et al., 2005). The problem of underutilization is even more pronounced among ethnic minority populations for whom adequate care is less available (U.S. Department of Health and Human Services, 2001). Adding to the disparity, research suggests that clinicians are less likely to detect mental illness when assessing ethnic minorities (Alegría et al., 2008). When ethnic minorities finally access mental health services, the severity of illness is not addressed adequately and there is a high rate of treatment drop-out (Alegría et al., 2008; Leong, 1986). For those suffering from depression, this delay in access and inadequate provision of services are especially a problem because it can result in severe mental health outcomes such as suicide (Chung et al., 2003; Marin & Escobar, 2007).

While the mental health care disparity exists for all ethnic minority groups, Asian Americans are especially noteworthy given that they are also less likely to seek mental health

services than other ethnic groups (Kearney, Draper, & Barón, 2005; Matsuoka, Breaux, & Ryujin, 1997) with similar stressors such as acculturative stress and discriminatory experiences (Hwang & Ting, 2008). In contrast to other ethnic minority groups' mental health service use rates (7.9%-18.1%), only 5.3 percent of Asian Americans utilize mental health services and this gap has remained unchanged for over a decade (Substance Abuse and Mental Health Services Administration, 2012). Many efforts have been made to increase Asian Americans' mental health service use, as with cultural adaptations of evidence-based treatments and mental health literacy campaigns. Nevertheless, Asian Americans' mental health service use rates continue to pale in comparison, even after adjusting for the known difference in their rates of disorders (Sue, Yan Cheng, Saad, & Chu, 2012).

When reviewing the mental health service use research, common explanations for Asian Americans' rejection of mental health services have included: cultural values that increase stigma and shame (Eisenberg, Downs, Golberstein, & Zivin, 2009; Lin & Cheung, 1999; Ting & Hwang, 2009); a lack of financial or language resources (Reeves & Bennett, 2004; U.S. Department of Health and Human Services, 2001); and culturally incongruent treatment (Sue et al., 2012; U.S. Department of Health and Human Services, 2001). [1] Yet, given that studies have not always included a comprehensive set of explanatory variables nor examined important barrier subtypes that may influence help-seeking behavior differentially (e.g., subtypes of stigma: public, self, systematic (Corrigan, Druss, & Perlick, 2014)), the degree to which these factors influence mental health service use is unclear. Consistent with this, some national sample studies including Asian Americans indicate that previously highlighted explanations such as perceived

---

[1] This is similar to what is found for ethnic minority groups more generally: mistrust towards medical providers, mental health literacy, nonmedical illness conceptualization, stigma, world beliefs such as fatalism, health insurance issues, language abilities, socioeconomic difficulties, and geographic limitations (Marin & Escobar, 2007).

stigma and finances do not fully account for the underutilization of mental health services (e.g., Eisenberg et al., 2009; Eisenberg, Gollust, Golberstein, & Hefner, 2007).

Other studies, assessing the impact of individual-level psychological processes on mental health service use, recognize perceived need and level of distress as key predictive factors (e.g., Bauer, Chen, & Alegría, 2010; Mojtabai et al., 2011; S. Y. Park, Cho, Park, Bernstein, & Shin, 2013). A perceived need, created by a comparison of one's symptoms and distress to social norms (Mojtabai, 2008), is considered necessary in beginning the process of seeking care (Pescosolido, Gardner, & Lubell, 1998). While this may be the case, other relevant predictors could influence Asian Americans' mental health service use beyond distress or perceived need. Influential individual-level characteristics that uniquely predict Asian Americans' mental health service use are being identified (e.g., physical symptoms (Bauer, Chen, & Alegría, 2012)). Such individual-level characteristics are important to uncover since a majority of mental health treatment outcomes (e.g., symptom reduction, increased well-being) are due to client-related factors (e.g., symptom experience, life context) (Asay & Lambert, 1999; Lambert, 1992; Wampold, 2001), and there is a need to work towards individualized treatment (Norcross & Wampold, 2011).

One of these client-related factors deserving study, in relation to mental health service use, is the individual's symptom experience prior to feeling distress or perceiving a need for help. Symptoms are being increasingly recognized as predicting service use for ethnic minority populations (e.g., Lee, Xue, Spira, & Lee, 2014; Nguyen & Bornheimer, 2014). In particular, physical symptoms demonstrate a strong association with perceived need (Nadeem, Lange, & Miranda, 2009) and can motivate service use more than cognitive symptoms, after controlling for sociodemographic variables (Lee et al., 2014). For Asian Americans, physical symptoms were

found to be associated with more utilization of both Western and Chinese medicine in a community sample (Mak & Zane, 2004), and with medical care for a subsample with anxiety disorder and depression (Kung & Lu, 2008). Bauer, Chen, & Alegría (2012a) also found physical symptoms to be significantly correlated with Asian Americans' medical and mental health service use. Similarly, Lee et al. (2014) found that physical symptoms related to greater service use for their Asian American subsample, albeit the included physical symptoms were limited to sleep, fatigue, and weight change. Finally, while there is a dearth of information about whether initial symptomatology is indicative of psychotherapy outcomes for Asian Americans, somatic presentations could reflect more biological illness conceptualizations (Hwang, 2006; Hwang, Wood, Lin, & Cheung, 2006) that influence psychotherapy engagement and outcomes. One study found that somatic symptoms related to an avoidant coping style and predicted lower functioning after beginning psychotherapy (Kim, Zane, & Blozis, 2012). Taken together, these findings suggest that Asian Americans' physically experienced distress may have a crucial influence on their use of mental health services, and that a greater focus on establishing the link between depressive symptomatology and service use is needed.

Depression Epidemiology in Asian Americans: An Etic Approach

"Every man is in certain respects: a) like all other men, b) like some other men, and c) like no other man" (Kluckhohn & Murray, 1948).

National and regional epidemiological studies conclude that the overall prevalence of psychiatric disorders in the Asian American population appears to be lower than for other groups. There is also a lower prevalence rate for depression compared to what is known for non-Hispanic Whites, African Americans, and Hispanics (Substance Abuse and Mental Health Services Administration, 2012; Takeuchi et al., 1998; Takeuchi, Hong, Gile, & Alegría, 2007).

However, a closer examination of how the prevalence rates were determined and how depression was defined calls into question whether it is accurate to conclude that Asian Americans have less distress and less depression overall.

The epidemiological studies typically cited for psychiatric prevalence rates use a form of structured interviewing (i.e., Diagnostic Interview Schedule (DIS) or Composite International Diagnostic Interview (CIDI)) that asks respondents specific questions for each mental disorder diagnosis. The screening questions used are derived from Western criteria as determined by the Diagnostic and Statistical Manual of Mental Disorders (DSM; American Psychiatric Association, 2013) and the International Classification of Disorders (ICD; World Health Organization, 1992). Major depression, defined in this manner focuses primarily on depressed affect and anhedonia. While this provides a reliable way of measuring DSM-defined depression, interview outcomes based on this approach may underdetect the presence of depressive states and may be biased against presentations that are not dominantly affective (Kirmayer & Jarvis, 2006; Makaju, de Jong, Thapa, Sharma, & van Ommeren, 2000). For instance, those who do not endorse depressed affect in the initial screening portions of the interview are not always asked more detailed questions about depressive symptoms. Therefore, such respondents with differences in symptom reporting within a solicited interview context are excluded from depression prevalence summaries. This may result in an exclusion of Asian Americans who are, nevertheless, suffering from depressive syndromes. A study by Chang et al. (2008) found such an occurrence when comparing the prevalence of depression in a Korean sample vs. a U.S. sample as assessed by the CIDI. Their item response theory and differential item functioning analyses revealed that Koreans may have been underdiagnosed with depression since they are more likely to express concentration difficulty and low energy earlier on rather than depressed mood as in the DSM.

Multiple studies examining the factor structure of DSM-based depression screening measures confirm the possibility of differential symptomatology for the Asian American population: original factors have not always held (Edman et al., 1999) and the reported symptoms differed in frequency (Kanazawa, White, & Hampson, 2007). Furthermore, the necessary diagnostic component of self-reported impairment or distress adds to the limitations of determining Asian American depressive epidemiology using DSM criteria. Some Asian Americans may not self-report impairment or distress in an interview context, due to cultural values that encourage enduring distress and fulfilling roles regardless of difficulties (Hicks, 2002). Such culturally normative behavior may also result in false negatives for Asian Americans who feel depressive distress.

When research is conducted in a manner that suggests a universal human experience of depression, as outlined by DSM/ICD criteria, there is a logical fallacy. This type of approach is limited by a "category fallacy", in which categories developed for use with a particular cultural group are taken out of context and applied to members of another group for whom the categories lack relevance and validity (Kleinman, 1988). In these types of etic approaches (which emphasize generalization), category fallacy can contribute to a circular reasoning that reifies existing depression criteria that may not be applicable to all cases. Researchers relying on DSM/ICD criteria for examining depressive experiences in ethnocultural or cross-cultural populations limit the scope of evaluation from the outset and add to an evidence-base that "confirms" the universality of a DSM-defined depression. Thus, it is important to keep in mind the limitations of depressive epidemiology in the Asian American population and to conduct more research that is not heavily predefined by existing diagnostic criteria.

<center>**Asian Americans' Depressive Experiences**</center>

Influence of Written Self-Report and the Presence of Affective Symptoms

The interaction between culture and modality of symptom assessment is important to consider when examining identified rates of depression in Asian Americans. Research indicates that the survey modality changes how Asian Americans respond to depression items, such that fewer symptoms are elicited through interviews than through a written self-report instrument (Okazaki, 2000; Park, Upshaw, & Koh, 1988). Additionally, self-reported symptoms may also be influenced by the Asian American respondents' individual ideas about which symptoms of depression are more commonly experienced (Okazaki & Kallivayalil, 2002). This type of social referencing, prior to self-report, may be enhanced by how much an individual identifies as interdependent and collectivist (Hyun, 2001; Okazaki, 1997). Studies, in which depressive symptom measures (e.g., CES-D, ZSDS, BDI) were filled out in their entirety, also support the possibility that current Asian American depression prevalence rates may be underestimated due to a screening-out phenomenon in diagnostic interviews with skip logic. These studies using self-report measures find that Asian Americans score similarly or much higher in comparison to other ethnic groups (Aldwin & Greenberger, 1987; Kuo, 1984; Kuo & Tsai, 1986; Okazaki, 1997). While the group comparisons typically do not contrast individual symptoms of depression and the prevalence of each specific symptom is unclear, one study by Kim and López (2014) found that Asian Americans may report affective symptoms such as feeling sad/depressed at a lower rate than European Americans. Considering this, in comparison to the interview method, the availability of the entire range of depressive symptoms in studies using a written self-report format may have made Asian Americans' depressive experiences more detectable.

When synthesizing findings from studies measuring negative affectivity, in relation to depressive symptoms, Asian Americans endorse greater levels of negative affectivity in comparison to Caucasian Americans (E. C. Chang, 2002; Okazaki, 1997). These findings supporting a greater endorsement of affective symptoms may be somewhat counterintuitive. One might expect Asian Americans to report lower levels of affective symptoms due to cultural values that encourage emotional restraint and discourage affective expression (Bond, 1991; Uba, 1994). However, expressing negative emotions may be acceptable since the value of emotional restraint could represent a conformity to hypo-optimism, muting positive emotionality, rather than suppressing negative emotions (E. C. Chang, 1996). Therefore, such nuances in the application of cultural values may partially explain elevations shown on written self-report measures. While it is unclear whether the elevated scores on written measures truly represent more severe levels of depression for Asian Americans or a culturally admissible response style, it is clear that Asian Americans' depressive experiences includes affective symptoms.

Somatization and Physical Symptoms: An Emic Approach

In contrast to etic research based on DSM/ICD criteria, emic "bottom-up" studies conducted with non-Caucasian ethnocultural groups have documented a heavy emphasis on somatization as a primary form of distress for depression-like states (Cheung, Tseng, & Wu, 1985; Kleinman, 1988). Somatization—a state in which psychological distress is expressed in a purely physical manner (Lipowski, 1986)— may mean that depression is expressed as aches, pains, fatigue, etc. Somatization has been thought to be a culturally-specific presentation (idiom) for depression and other emotional problems (e.g., Kleinman, 1977; Parker, Gladstone, & Kuan, 2001) for many Asian American ethnocultural groups who have a more holistic view of the body and mind (Kleinman, 2004). Some Asian cultures may interpret depression differently altogether

(Yeh, 2000), while other Asian cultures may not have originally had words to describe depressive mood (e.g., W.-S. Tseng & Hsu, 1970) resulting in physical descriptions that best reflected what was felt. For example, past research on Koreans found that they mainly expressed emotional distress as physical malfunctions (Kang, 1982; Kim & Rhi, 1976). *Hwabyung* and *Shingyungsayak* are examples of these types of physical depressive experiences, which include reports of a "lump in the epigastric and respiratory regions... fatigue... headaches... digestive disturbances and insomnia" (Pang, 1998). Physical descriptions are not only used to describe actual felt symptoms, but are also used routinely in language to metaphorically imply emotional states: a stomachache for jealousy/anger/hatred, a headache for problems/worries, and blood drying up for panic/horrible situations (Pang, 1998).

A primary reason posited for the variation in Asian Americans' depression has been that somaticizing (not presenting emotional symptoms) may help avoid the shame and stigma of a psychiatric diagnosis (Kang, 1982) and prevent disharmony in interpersonal relationships (Kirmayer, 1989). However, more recent evaluations of Asian American depressive experiences suggest that physical symptoms can be present concurrently with affective symptoms (e.g., Grover et al., 2013; J. M. Kim & López, 2014; Parker, Cheah, & Roy, 2001; Simon, VonKorff, Piccinelli, Fullerton, & Ormel; Suen & Tusaie, 2004; Young & Pang, 2000) rather than presenting in isolation. Asian American depressive symptomatology may comprise a gradient of depressive presentations with varying degrees of psychologizing and somaticizing, depending on the sociocultural context of the individual (Pang, 1998; Robbins & Kirmayer, 1986). Therefore, while full somatization may not be common and Asian Americans do endorse depression affectively, physical symptoms are an important part of their depressive experience and measures

of depression based on Western psychiatry may not fully capture culturally-relevant

symptomatology (Leong, Okazaki, & Tak, 2003).

Pain as a Physical Symptom Bridging Emic and Etic Work

Why have important emic findings on Asian American depression symptomatology not

been easily incorporated into current mental healthcare practices? Emic approaches have

strength in their high internal validity of the depressive-state construct studied in an ethnocultural

group in a specific context. However, there can be a loss of generalizability because there are

various kinds of physical symptoms applicable to different ethnocultural groups, and to

subgroups within those ethnocultural groups. This heterogeneity may explain some of the

hesitancy in placing more emphasis on non-DSM physical symptoms (i.e., other than sleep,

appetite, or energy). Moreover, the incremental clinical significance of paying extra attention to

other non-DSM physical symptoms remains unclear. Given the need for a guiding diagnostic

frame in both research and clinical work, more research is needed to conceptually bridge emic

and etic descriptions of depressive syndromes.

One way to bridge this gap, and create a broadened view of depression, may be to

pinpoint types of physical symptoms that predict different depressive trajectories and different

mental health service engagement or treatment outcomes.[2] Within the gradient of depressive

presentations, a presence of pain may be especially important for Asian Americans given

---

[2] One lingering question, in the effort to map broader depressive experiences in relation to service utilization, concerns the phenomena of highly comorbid psychiatric conditions. Are the variations found in a group's depressive experiences merely reflecting individuals with many co-existing DSM diagnoses? While an interesting question, the determination of whether to give a depressive disorder diagnosis or to add more comorbid diagnoses may not be very meaningful. Outlining all specific diagnoses is not the most helpful for predicting outcomes, and can produce false positives lacking in validity (e.g., Rosenhan, 1973). This is especially the case for the purposes of screening, psychoeducation, providing access to services, and providing treatment. More recent notions of psychopathology suggest working towards a transdiagnostic approach for clinically meaningful description and intervention planning (e.g., a general p-factor that best explains longitudinal psychopathology (Caspi et al., 2014)), or examining a general dimension (e.g., neuroticism in anxiety-related disorders (Barlow, Sauer-Zavala, Carl, Bullis, & Ellard, 2014)).

previous research documenting the association between chronic pains or health conditions with emotional distress (Pang, 1998). While the connection between depression and pain may not be a novel concept, it has not been studied extensively within the Asian American population and is important to include since physical pain alongside other depressive symptoms has been found to be indicative of hard-to-treat cases (Henningsen & Löwe, 2006), functional impairment (Demyttenaere et al., 2008), and worse outcomes (Berman & Hegel, 2014; Scott et al., 2010).[3] Therefore, this thesis adds physical pain in its conceptualization of Asian American depressive experiences.

Overview of Proposed Studies

Research documenting Asian Americans' varied depressive experiences and underutilization of mental health services points to the continued need for studying symptomatology and identifying what is most influential in predicting mental health service use behaviors. [4] In particular, there is a need for more investigation of: (a) the range of depressive symptoms experienced among Asian Americans when including culturally-salient physical symptoms, (b) how these symptoms relate to Asian Americans' mental health service use behaviors, and (c) how understudied physical symptoms such as pain impact Asian Americans' mental health service use.

This dissertation addresses these gaps by using two different methodological approaches and samples. Chapter 2 presents a quantitative study using nationally representative complex

---

[3] Physical symptoms in the context of depression, such as pain, can also indicate a recurrence of depression (Gerrits et al., 2014), increased mortality and disability (Scott, et al., 2010). In a global study with 14 nations, chronic physical conditions including pain significantly predicted suicide attempts after accounting for mental disorders, and the risk was greater if physical symptoms occurred earlier in life (Scott, et al., 2010).

[4] Conceptually, the help-seeking of, engagement in, and disengagement from mental health services all fit within the scope of behaviors comprising mental health service use. Therefore, I propose considering all of these as occurring within the realm of mental health service use behaviors for this thesis.

sample survey data to capture Asian Americans' lifetime depressive experiences when considering chronic physical symptomatology. Latent classes of depressive experiences and latent factors of depressive symptoms are identified, and their relationship to mental health service use is investigated. Chapter 3 presents a qualitative mixed-methods study using naturalistic archival data from a smaller outpatient clinic sample, to explore psychotherapy disengagement and dropout in Asian Americans with depressive distress. Themes of psychotherapy disengagement and dropout are identified based on an evaluation of patients' records, and the role of physical symptoms is examined.

This dissertation focuses on uncovering the varied depressive experiences and patterns of mental health service use behaviors, without disaggregating the Asian American data by ethnocultural subgroups, to highlight the diversity and similarities across subgroups in a minority population.[5] Few studies have examined the heterogeneity of depressive experiences in Asian Americans, when including a wider range of physical symptoms, in conjunction with mental health service use behaviors. Findings from this dissertation will clarify the significance of considering depressive experiences that may not fit neatly into DSM diagnostic criteria, for improving mental health service utilization and psychotherapy outcomes.

---

[5] The criticism of combining different ethnocultural groups into one large Asian American category usually stems from differences in study results when these groups are analyzed separately. These differences can often be explained by sociodemographic factors that characterize each group's past history. Therefore, this thesis will include sociodemographic factors in the analyses to account for potential differences.

References

Aldwin, C., & Greenberger, E. (1987). Cultural differences in the predictors of depression. *American Journal of Community Psychology*, *15*(6), 789–813. http://doi.org/10.1007/BF00919803

Alegría, M., Chatterji, P., Wells, K., Cao, Z., Chen, C., Takeuchi, D. T., … Meng, X.-L. (2008). Disparity in depression treatment among racial and ethnic minority populations in the United States. *Psychiatric Services*, *59*(11), 1264–1272.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders: DSM-5.* Arlington, VA: American Psychiatric Publishing.

Asay, T. P., & Lambert, M. J. (1999). The empirical case for the common factors in therapy: Quantitative findings. (M. A. Hubble, B. L. Duncan, & S. D. Miller, Eds.)*The Heart and Soul of Change: What Works in Therapy*. Washington, DC, US: American Psychological Association. http://doi.org/10.1037/11132-001

Barlow, D. H., Sauer-Zavala, S., Carl, J. R., Bullis, J. R., & Ellard, K. K. (2014). The Nature, Diagnosis, and Treatment of Neuroticism Back to the Future. *Clinical Psychological Science*, *2*(3), 344–365. http://doi.org/10.1177/2167702613505532

Bauer, A. M., Chen, C.-N., & Alegría, M. (2010). English Language Proficiency and Mental Health Service Use Among Latino and Asian Americans With Mental Disorders: *Medical Care*, *48*(12), 1097–1104. http://doi.org/10.1097/MLR.0b013e3181f80749

Bauer, A. M., Chen, C.-N., & Alegría, M. (2012). Associations of physical symptoms with perceived need for and use of mental health services among Latino and Asian Americans. *Social Science & Medicine*, *75*(6), 1128–1133. http://doi.org/10.1016/j.socscimed.2012.05.004

Berman, M. I., & Hegel, M. T. (2014). Predicting depression outcome in mental health treatment: A recursive partitioning analysis. *Psychotherapy Research*, *24*(6), 675–686. http://doi.org/10.1080/10503307.2013.874053

Bond, M. H. (1991). *Beyond the Chinese face: insights from psychology*. Hong Kong ; New York: Oxford University Press.

Caspi, A., Houts, R. M., Belsky, D. W., Goldman-Mellor, S. J., Harrington, H., Israel, S., … Moffitt, T. E. (2014). The p Factor: One General Psychopathology Factor in the Structure of Psychiatric Disorders? *Clinical Psychological Science*, *2*(2), 119–137. http://doi.org/10.1177/2167702613497473

Chang, E. C. (1996). Evidence for the cultural specificity of pessimism in Asians vs Caucasians: a test of a general negativity hypothesis. *Personality and Individual Differences*, *21*(5), 819–822. http://doi.org/10.1016/0191-8869(96)00110-9

Chang, E. C. (2002). Cultural differences in psychological distress in Asian and Caucasian

American college students: Examining the role of cognitive and affective concomitants. *Journal of Counseling Psychology*, *49*(1), 47–59. http://doi.org/10.1037//0022-0167.49.1.47

Chang, S. M., Hahm, B.-J., Lee, J.-Y., Shin, M. S., Jeon, H. J., Hong, J.-P., … Cho, M. J. (2008). Cross-national difference in the prevalence of depression caused by the diagnostic threshold. *Journal of Affective Disorders*, *106*(1–2), 159–167. http://doi.org/10.1016/j.jad.2007.07.023

Cheung, F. M. (1985). An overview of psychopathology in Hong Kong with special reference to somatic presentation, in Chinese culture and mental health. In W. S. Tseng & D. Wu (Eds.), *Chinese Culture and Mental Health* (pp. 287–304). Orlando, FL: Academic Press, Inc.

Chung, H., Teresi, J. A., Guarnaccia, P., Meyers, B. S., Holmes, D., Bobrowitz, T., … Ferran Jr., E. (2003). Depressive symptoms and psychiatric distress in low income Asian and Latino primary care patients: prevalence and recognition. *Community Mental Health Journal*, *39*(1), 33–46.

Corrigan, P. W., Druss, B. G., & Perlick, D. A. (2014). The Impact of Mental Illness Stigma on Seeking and Participating in Mental Health Care. *Psychological Science in the Public Interest*, *15*(2), 37–70. http://doi.org/10.1177/1529100614531398

Demyttenaere, K., Bonnewyn, A., Bruffaerts, R., De Graaf, R., Haro, J. M., & Alonso, J. (2008). Comorbid painful physical symptoms and anxiety: Prevalence, work loss and help-seeking. *Journal of Affective Disorders*, *109*(3), 264–272. http://doi.org/10.1016/j.jad.2007.12.231

Edman, J. L., Danko, G. P., Andrade, N., McArdle, J. J., Foster, J., & Glipa, J. (1999). Factor structure of the CES-D (Center for Epidemiologic Studies Depression Scale) among Filipino-American adolescents. *Social Psychiatry and Psychiatric Epidemiology*, *34*(4), 211–215. http://doi.org/10.1007/s001270050135

Eisenberg, D., Downs, M. F., Golberstein, E., & Zivin, K. (2009). Stigma and Help Seeking for Mental Health Among College Students. *Medical Care Research and Review*, *66*(5), 522–541. http://doi.org/10.1177/1077558709335173

Eisenberg, D., Gollust, S. E., Golberstein, E., & Hefner, J. L. (2007). Prevalence and Correlates of Depression, Anxiety, and Suicidality Among University Students. *American Journal of Orthopsychiatry*, *77*(4), 534–542. http://doi.org/10.1037/0002-9432.77.4.534

Gerrits, M. M., van Oppen, P., Leone, S. S., van Marwijk, H. W., van der Horst, H. E., & Penninx, B. W. (2014). Pain, not chronic disease, is associated with the recurrence of depressive and anxiety disorders. *BMC Psychiatry*, *14*(1), 187. http://doi.org/10.1186/1471-244X-14-187

Grover, S., Avasthi, A., Kalita, K., Dalal, P. K., Rao, G. P., Chadda, R. K., … Deka, K. (2013). IPS multicentric study: Functional somatic symptoms in depression. *Indian Journal of Psychiatry*, *55*(1), 31–40. http://doi.org/10.4103/0019-5545.105502

Henningsen, P., & Löwe, B. (2006). Depression, pain, and somatoform disorders. *Current*

Opinion in Psychiatry, *19*(1), 19–24. http://doi.org/10.1097/01.yco.0000189880.11059.8d

Hicks, M. H.-R. (2002). Validity of the CIDI Probe Flow Chart for Depression in Chinese American Women. *Transcultural Psychiatry*, *39*(4), 434–451. http://doi.org/10.1177/136346150203900403

Hwang, W.-C. (2006). The psychotherapy adaptation and modification framework: Application to Asian Americans. *American Psychologist*, *61*(7), 702–715. http://doi.org/10.1037/0003-066X.61.7.702

Hwang, W.-C., & Ting, J. Y. (2008). Disaggregating the effects of acculturation and acculturative stress on the mental health of Asian Americans. *Cultural Diversity and Ethnic Minority Psychology*, *14*(2), 147–154. http://doi.org/10.1037/1099-9809.14.2.147

Hwang, W.-C., Wood, J. J., Lin, K.-M., & Cheung, F. (2006). Cognitive-Behavioral Therapy With Chinese Americans: Research, Theory, and Clinical Practice. *Cognitive and Behavioral Practice*, *13*(4), 293–303. http://doi.org/10.1016/j.cbpra.2006.04.010

Hyun, K. J. (2001). Is an Independent Self a Requisite for Asian Immigrants' Psychological Well-Being in the U.S.? The Case of Korean Americans. *Journal of Human Behavior in the Social Environment*, *3*. http://doi.org/10.1300/J137v03n03_12

Kanazawa, A., White, P. M., & Hampson, S. E. (2007). Ethnic Variation in Depressive Symptoms in a Community Sample in Hawaii. *Cultural Diversity and Ethnic Minority Psychology*, *13*(1), 35–44.

Kang, C. S. (1982). Clinical Study on the Chief Complaints of Depression Neurosis. *Human Science*, *6*(9), 55.

Kearney, L. K., Draper, M., & Barón, A. (2005). Counseling Utilization by Ethnic Minority College Students. *Cultural Diversity and Ethnic Minority Psychology*, *11*(3), 272–285. http://doi.org/10.1037/1099-9809.11.3.272

Kim, J. E., Zane, N. W. S., & Blozis, S. A. (2012). Client predictors of short-term psychotherapy outcomes among Asian and white American outpatients. *Journal of Clinical Psychology*, *68*(12), 1287–302. http://doi.org/10.1002/jclp.21905

Kim, J. M., & López, S. R. (2014). The expression of depression in Asian Americans and European Americans. *Journal of Abnormal Psychology*, *123*(4), 754–63. http://doi.org/10.1037/a0038114

Kim, K.-I., & Rhi, B. Y. (1976). A review of Korean cultural psychiatry. *Transcultural Psychiatry*, *13*(2), 101–114.

Kirmayer, L. J. (1989). Cultural variations in the response to psychiatric disorders and emotional distress. *Social Science & Medicine*, *29*(3), 327–339. http://doi.org/10.1016/0277-9536(89)90281-5

Kirmayer, L. J., & Jarvis, E. (2006). Depression across cultures. *Textbook of Mood Disorders*, 699–715.

Kleinman, A. M. (1977). Depression, somatization and the "new cross-cultural psychiatry." *Social Science & Medicine (1967)*, *11*(1), 3–9. http://doi.org/10.1016/0037-7856(77)90138-X

Kleinman, A. M. (1988). *Rethinking psychiatry: from cultural category to personal experience*. New York : London: Free Press ; Collier Macmillan.

Kleinman, A. M. (2004). Culture and Depression. *New England Journal of Medicine*, *351*(10), 951–953. http://doi.org/10.1056/NEJMp048078

Kluckhohn, C., & Murray, H. A. (1948). *Personality in nature, society, and culture*. New York: A. A. Knopf.

Kung, W. W., & Lu, P.-C. (2008). How symptom manifestations affect help seeking for mental health problems among Chinese Americans. *The Journal of Nervous and Mental Disease*, *196*(1), 46–54. http://doi.org/10.1097/NMD.0b013e31815fa4f9

Kuo, W. H. (1984). Prevalence of Depression among Asian-Americans. *Journal of Nervous & Mental Disease*, *172*(8), 449–457.

Kuo, W. H., & Tsai, Y.-M. (1986). Social Networking, Hardiness and Immigrant's Mental Health. *Journal of Health and Social Behavior*, *27*(2), 133–149. http://doi.org/10.2307/2136312

Lambert, M. J. (1992). Psychotherapy outcome research: Implications for integrative and eclectic therapists. *Handbook of Psychotherapy Integration*, *1*, 94.

Lee, S. Y., Xue, Q., Spira, A. P., & Lee, H. B. (2014). Racial and ethnic differences in depressive subtypes and access to mental health care in the United States. *Journal of Affective Disorders*, *155*, 130–137. http://doi.org/10.1016/j.jad.2013.10.037

Leong, F. T. L. (1986). Counseling and Psychotherapy with Asian-Americans: Review of the Literature. *Journal of Counseling Psychology*, *33*(2), 196–206.

Leong, F. T. L., Okazaki, S., & Tak, J. (2003). Assessment of depression and anxiety in East Asia. *Psychological Assessment*, *15*(3), 290–305. http://doi.org/10.1037/1040-3590.15.3.290

Lin, K.-M., & Cheung, F. (1999). Mental health issues for Asian Americans. *Psychiatric Services*, *50*(6), 774–80.

Lipowski, Z. J. (1986). Somatization: a borderland between medicine and psychiatry. *CMAJ: Canadian Medical Association Journal*, *135*(6), 609–614.

Mak, W. W. S., & Zane, N. W. S. (2004). The phenomenon of somatization among community

Chinese Americans. *Social Psychiatry and Psychiatric Epidemiology*, *39*(12), 967–974. http://doi.org/10.1007/s00127-004-0827-4

Makaju, R., de Jong, J. T., Thapa, S., Sharma, B., & van Ommeren, M. (2000). Limited Cultural Validity of the Composite International Diagnostic Interview's Probe Flow Chart. *Transcultural Psychiatry*, *37*(1), 119–129.

Marin, H., & Escobar, J. I. (2007). Issues in the Diagnosis and Assessment of Mood Disorders in Minorities. In S. Loue & M. Sajatovic (Eds.), *Diversity Issues in the Diagnosis, Treatment, and Research of Mood Disorders* (pp. 17–31). Cary, NC, USA: Oxford University Press, Incorporated.

Mathers, C. D., & Loncar, D. (2006). Projections of global mortality and burden of disease from 2002 to 2030. *PLoS Medicine*, *3*(11), 2011–2030. http://doi.org/10.1371/journal.pmed.0030442

Matsuoka, J. K., Breaux, C., & Ryujin, D. H. (1997). National Utilization of Mental Health Services by Asian Americans/Pacific Islanders. *Journal of Community Psychology*, *25*(2), 141–145. http://doi.org/10.1002/(SICI)1520-6629(199703)25:2<141::AID-JCOP3>3.0.CO;2-0

McKenna, M. T., Michaud, C. M., Murray, C. J. L., & Marks, J. S. (2005). Assessing the burden of disease in the United States using disability-adjusted life years. *American Journal of Preventive Medicine*, *28*(5), 415–423. http://doi.org/10.1016/j.amepre.2005.02.009

Mojtabai, R. (2008). Social comparison of distress and mental health help-seeking in the US general population. *Social Science & Medicine*, *67*(12), 1944–1950. http://doi.org/10.1016/j.socscimed.2008.09.059

Mojtabai, R., & Jorm, A. F. (2015). Trends in psychological distress, depressive episodes and mental health treatment-seeking in the United States: 2001–2012. *Journal of Affective Disorders*, *174*, 556–561. http://doi.org/10.1016/j.jad.2014.12.039

Mojtabai, R., Olfson, M., Sampson, N. A., Jin, R., Druss, B. G., Wang, P. S., … Kessler, R. C. (2011). Barriers to mental health treatment: results from the National Comorbidity Survey Replication. *Psychological Medicine*, *41*(8), 1751–1761. http://doi.org/10.1017/S0033291710002291

Nadeem, E., Lange, J. M., & Miranda, J. (2009). Perceived Need for Care among Low-Income Immigrant and U.S.-Born Black and Latina Women with Depression. *Journal of Women's Health*, *18*(3), 369–375. http://doi.org/10.1089/jwh.2008.0898

Nguyen, D., & Bornheimer, L. A. (2014). Mental health service use types among Asian Americans with a psychiatric disorder: considerations of culture and need. *The Journal of Behavioral Health Services & Research*, *41*(4), 520–528. http://doi.org/10.1007/s11414-013-9383-6

Norcross, J. C., & Wampold, B. E. (2011). What works for whom: Tailoring psychotherapy to

the person. *Journal of Clinical Psychology*, *67*(2), 127–32. http://doi.org/10.1002/jclp.20764

Okazaki, S. (1997). Sources of ethnic differences between Asian American and white American college students on measures of depression and social anxiety. *Journal of Abnormal Psychology*, *106*(1), 52–60.

Okazaki, S. (2000). Asian American and White American Differences on Affective Distress Symptoms: Do Symptom Reports Differ Across Reporting Methods? *Journal of Cross-Cultural Psychology*, *31*(5), 603–625. http://doi.org/10.1177/0022022100031005004

Okazaki, S., & Kallivayalil, D. (2002). Cultural Norms and Subjective Disability as Predictors of Symptom Reports among Asian Americans and White Americans. *Journal of Cross-Cultural Psychology*, *33*(5), 482–491. http://doi.org/10.1177/0022022102033005004

Pang, K. Y. (1998). Symptoms of depression in elderly Korean immigrants: narration and the healing process. *Culture, Medicine and Psychiatry*, *22*(1), 93–122.

Park, K. B., Upshaw, H. S., & Koh, S. D. (1988). East Asians' Responses to Western Health Items. *Journal of Cross-Cultural Psychology*, *19*(1), 51–64. http://doi.org/10.1177/0022002188019001004

Park, S. Y., Cho, S., Park, Y., Bernstein, K. S., & Shin, J. K. (2013). Factors associated with mental health service utilization among Korean American immigrants. *Community Mental Health Journal*, *49*(6), 765–773. http://doi.org/10.1007/s10597-013-9604-8

Parker, G., Cheah, Y.-C., & Roy, K. (2001). Do the Chinese somatize depression? A cross-cultural study. *Social Psychiatry and Psychiatric Epidemiology*, *36*(6), 287–293. http://doi.org/10.1007/s001270170046

Parker, G., Gladstone, G., & Kuan, T. C. (2001). Depression in the planet's largest ethnic group: The Chinese. *The American Journal of Psychiatry*, *158*(6), 857–64.

Pescosolido, B. A., Gardner, C. B., & Lubell, K. M. (1998). How people get into mental health services: Stories of choice, coercion and "muddling through" from "first-timers." *Social Science & Medicine*, *46*(2), 275–286. http://doi.org/10.1016/S0277-9536(97)00160-3

Reeves, T. J., & Bennett, C. E. (2004). *We the people: Asians in the United States* (Census 2000 special reports No. CENSR-17). Washington, D.C.: U.S. Census Bureau.

Robbins, J., & Kirmayer, L. J. (1986). Illness Cognition, Symptom Reporting and Somatization in Family Medicine. In S. McHugh & T. M. Vallis (Eds.), *Illness Behavior* (pp. 283–302). Springer US.

Rosenhan, D. L. (1973). On Being Sane in Insane Places. *Science*, *179*(4070), 250–258.

Scott, K. M., Hwang, I., Chiu, W.-T., Kessler, R. C., Sampson, N. A., Angermeyer, M., … Nock, M. K. (2010). Chronic physical conditions and their association with first onset of suicidal

behavior in the world mental health surveys. *Psychosomatic Medicine*, *72*(7), 712–9. http://doi.org/10.1097/PSY.0b013e3181e3333d

Simon, G. E., VonKorff, M., Piccinelli, M., Fullerton, C., & Ormel, J. An International Study of the Relation between Somatic Symptoms and Depression, *341*(18), 1329–1335. http://doi.org/10.1056/NEJM199910283411801

Substance Abuse and Mental Health Services Administration. (2009). *Results from the 2008 National Survey on Drug Use and Health: National Findings*.

Substance Abuse and Mental Health Services Administration. (2012). Results from the 2010 National Survey on Drug Use and Health: Mental Health Findings. Rockville, MD: Substance Abuse and Mental Health Services Administration.

Sue, S., Yan Cheng, J. K., Saad, C. S., & Chu, J. P. (2012). Asian American Mental Health. *American Psychologist*, *67*(7), 532–544.

Suen, L. W., & Tusaie, K. (2004). Is somatization a significant depressive symptom in older Taiwanese Americans? *Geriatric Nursing*, *25*(3), 157–163. http://doi.org/10.1016/j.gerinurse.2004.04.005

Takeuchi, D. T., Chung, R. C., Lin, K.-M., Shen, H., Kurasaki, K. S., Chun, C., & Sue, S. (1998). Lifetime and twelve-month prevalence rates of major depressive episodes and dysthymia among Chinese Americans in Los Angeles. *The American Journal of Psychiatry*, *155*(10), 1407–1414.

Takeuchi, D. T., Hong, S., Gile, K., & Alegría, M. (2007). Developmental Contexts and Mental Disorders Among Asian Americans. *Research in Human Development*, *4*(1–2), 49–69.

Ting, J. Y., & Hwang, W.-C. (2009). Cultural influences on help-seeking attitudes in Asian American students. *American Journal of Orthopsychiatry*, *79*(1), 125–132. http://doi.org/10.1037/a0015394

Tseng, W.-S., & Hsu, J. (1970). Chinese culture, personality formation and mental illness. *International Journal of Social Psychiatry*, *16*(1), 5–14.

U.S. Department of Health and Human Services. (2001). *Mental Health: Culture, Race, and Ethnicity—A Supplement to Mental Health: A Report of the Surgeon General*. Rockville, MD.

Uba, L. (1994). *Asian Americans: personality patterns, identity, and mental health*. New York: Guilford Press.

Wampold, B. E. (2001). *The great psychotherapy debate: models, methods, and findings*. Mahwah, N.J.: L. Erlbaum Associates.

Wang, P. S., Lane, M., Olfson, M., Pincus, H. A., Wells, K. B., & Kessler, R. C. (2005). Twelve-month use of mental health services in the united states: Results from the national

comorbidity survey replication. *Archives of General Psychiatry*, *62*(6), 629–640. http://doi.org/10.1001/archpsyc.62.6.629

Whiteford, H. A., Degenhardt, L., Rehm, J., Baxter, A. J., Ferrari, A. J., Erskine, H. E., … Vos, T. (2013). Global burden of disease attributable to mental and substance use disorders: findings from the Global Burden of Disease Study 2010. *The Lancet*, *382*(9904), 1575–1586. http://doi.org/10.1016/S0140-6736(13)61611-6

World Health Organization. (1992). International Classification of Mental and Behavioural Disorders: ICD-10. *Geneva, Ill: WHO*.

Yeh, C. J. (2000). Depathologizing Asian American Perspectives of Health and Healing. *Asian American and Pacific Islander Journal of Health*, *8*(2), 138–149.

Young, K., & Pang, C. (2000). Symptom Expression and Somatization Among Elderly Korean Immigrants. *Journal of Clinical Geropsychology*, *6*(3), 199–212.

CHAPTER II

Incorporating Chronic Physical Symptoms to Examine Asian Americans' Depressive Experiences and Mental Health Service Use

Abstract

The historical salience of physical symptomatology in Asian populations' psychological distress suggests the importance of including such symptoms when evaluating impairing conditions like depression. Physical depressive symptomatology may also differentiate the mental health services accessed by Asian Americans. Knowing whether symptom experiences influence varied mental health service use can inform how services may be tailored for Asian Americans in the future. This study includes culturally-relevant physical symptoms in its analyses to capture broader lifetime depressive experiences that extend beyond standard DSM criteria. Data from 890 National Latino and Asian American Study participants were analyzed using both *person-centered* (latent class analysis) and *variable-centered* (exploratory factor analysis) statistics to examine Asian Americans' depressive experiences. Results from each approach were used in logistic regressions to examine what types of depressive experiences and underlying group of symptoms predict specific forms of mental health service use. Latent class analysis resulted in four classes of depressive experiences, including two classes characterized by pain endorsements. These two classes predicted lifetime use of alternative care/self-help and psychological counseling/therapy. Exploratory factor analyses resulted in five symptom factors: chronic physical, internal self-deprecation, abnormal sleep, suicidality, and apathetic retardation.

21

Feeling sadness did not load strongly on any symptom factor, and no symptom factor was related to mental health service use. Implications of findings and improving access to care for Asian Americans with physical depressive symptomatology are discussed.

Background

Depression is an important health problem that occurs with similar or greater prevalence in Asian Americans when compared with Caucasian Americans (Abe & Zane, 1990; Aldwin & Greenberger, 1987; Eisenberg, Hunt, & Speer, 2013; Kuo, 1984; C. B. Young, Fang, & Zisook, 2010). Major depression is also one of the most common diagnoses given to Asian Americans (Flaskerud & Hu, 1992); meta-analyses estimate that 30% of Asian Americans experience depression (H. J. Kim, Park, Storr, Tran, & Juon, 2015). For Asian Americans with immigration adjustment stress, employment difficulties, and lower SES, the severity of depression is found to be much worse (Kuo, 1984). However, despite the need for care, Asian Americans have sustained the lowest rates of mental health service utilization in comparison to the majority U.S. population and other ethnic minority groups (e.g., Eisenberg, Gollust, Golberstein, & Hefner, 2007; Matsuoka, Breaux, & Ryujin, 1997; Substance Abuse and Mental Health Services Administration, 2012). This comparatively lower utilization rate persists in the face of risk for depression related to minority group experiences, such as discrimination and acculturative stress (Hou, Kim, Wang, Shen, & Orozco-Lapray, 2015; Tummala-Narra, Alegría, & Chen, 2012).

One explanation for Asian Americans' low rate of mental health service use has been that physical symptoms are a cultural presentation of emotional distress (Cheung, 1985; Kleinman, 1988). This primary experience of physical symptoms may redirect the flow of patients to physical health or alternative physical health care settings rather than mental health settings (Lin, Inui, Kleinman, & Womack, 1982; Lin & Lin, 1978; Sue & McKinney, 1975). For example, in

Korean culture, *Hwabyung* is an indigenous depressive syndrome that consists of various chronic physical problems (gastrointestinal issues, poor appetite, pains in joints, heart palpitations, dizziness, difficulty breathing) that coexist with deep sadness or anger (Pang, 1990). Similarly, in Chinese culture, *Neurasthenia* is a physical illness related to depression and characterized by chronic fatigue, pain (especially headaches), tinnitus, irritability, hopelessness, sweating, worry, etc. (Kleinman, 1982). Though not highlighted, the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 2013) also acknowledges these types of experiences in the "glossary of cultural concepts of distress" section of the appendix. The major depressive disorder section also briefly notes that there are cultural variations in the expression of depressive disorders and that alternate presentations may be characterized by insomnia, loss of energy, and suicidality rather than depressed mood or loss of interest (Ballenger et al. 2001). While an effort to screen for such diverse depressive experiences is deemed imperative (Ballenger et al., 2001), diagnostic interviews performed for clinical use or research in many settings continue to first examine criteria of depressed mood or loss of interest rather than a culturally tailored examination of physical or somatic complaints.

Understanding patients' physical complaints is especially relevant for collectivistic Asian cultures that value emotional restraint and enduring suffering. Presenting a physical emphasis for distress can be less stigmatizing (Kleinman, 1986; Parker, Gladstone, & Kuan, 2001) while endorsing psychiatric symptoms may contribute to interpersonal disharmony (Kirmayer, 1989). This may be why cultural variants of depressive experiences for Asian populations have included physical symptoms. However, emphasizing such physical symptoms to a provider does not indicate an absence of or reduced awareness of psychological or emotional symptoms. Research has shown that Asian Americans address their psychological or emotional symptoms with time

(Cheung, 1985; Cheung & Lau, 1982), demonstrating that the physical emphasis may only be an initial preference of what is presented to others. Studies have corroborated this notion by confirming that physical symptoms among Asian Americans occur alongside emotional symptoms (e.g., Kim & López, 2014).

While it is important to not stereotype all persons of Asian descent as likely to somaticize or emphasize physical symptoms (Hwang, 2015), taking a broader perspective to include such symptoms is needed because they could be indicative of serious outcomes, as with pain predicting suicidality (Scott et al., 2010). More recently, the importance of considering physical symptoms, especially pain, in depression has been demonstrated (Hong et al., 2015; Novick, Montgomery, Kadziola, et al., 2013). When depressed Asian Americans were provided mental health treatment as usual, those with more pain had greater depressive severity, lower quality of life, and worse outcomes compared to those with less pain (Novick et al., 2015; Novick, Montgomery, Aguado, et al., 2013). Furthermore, such physical symptoms also likely impact decisions for mental health service use and determine where help is sought for the depressive distress.

A detailed examination of symptom-driven service use is necessary as it remains unclear which depressed Asian Americans are linked to what particular forms of mental health services. When examining mental health service in a general Asian American population, Bauer, Chen, and Alegría (2012) found that physical symptoms relate to a greater perceived need for mental health care and greater mental health service use for more acculturated Asian Americans. This is surprising and appears contrary to prior conclusions that physical symptoms divert the use of mental health services (e.g., Lin & Lin, 1978). However, further study is warranted since mental health service use was defined collectively as any care sought for emotional distress—including

service from physical health providers. This aggregated method of evaluation makes it difficult to pinpoint which providers contribute most to the greater use of mental health care services. Bauer et al.'s (2012) study also did not examine specific diagnostic groups needing mental health services. More research is needed to determine whether physical symptom endorsement in depressive distress predicts specific forms of help-seeking (e.g., from psychiatrists, other mental health providers, physical health providers, alternative care providers, or receiving psychological counseling/therapy from any provider).

Relevant Sociobehavioral Predictors of Mental Health Service Use

While the focus of interest in this study is at the symptom level, the decisions to seek mental health care cannot be understood without considering a person's broader sociobehavioral context as described by health service use models such as the Socio-Behavioral model (Andersen, 1995). The Socio-Behavioral model is a useful guide for understanding how multilevel recursive factors (environment, predisposing, enabling, need, health behavior) interact with one another to impact the use of health care. Environment factors include existing system-level variables that influence beliefs about health services and determine the accessibility of services. Predisposing factors include characteristics such as age, gender, education, and ethnicity, which influence health beliefs and the likelihood of needing care. Enabling factors include means and resources that increase the probability that services will be used. Need factors include symptoms, distress, and a perceived need that may prompt help-seeking behavior. Health behavior is also included in the Socio-Behavioral model since previous experiences with care influence a person's decision to seek help again in the future. To seek a better understanding of the relationships between symptom-experience and mental health service use, this study also considers relevant predisposing and enabling factors, anchored within the Socio-Behavioral

model (Figure II.1). In particular, acculturation, age, gender, and religiosity, are included as they may relate to mental health service use in Asian Americans.

Acculturation and age. One factor that influences beliefs and is known to impact mental health service attitudes and help-seeking behavior is acculturation. Acculturation is a "phenomen[on] which result[s] when groups of individuals having different cultures come into continuous first-hand contact with subsequent changes in the original culture patterns of either or both groups" (Redfield, Linton, & Herskovits, 1936). This can be a process that happens on a group level but also on an individual level (Graves, 1967). At present, most studies have augmented the original meaning of acculturation to indicate an acclimation towards mainstream U.S. culture, measured by proxy variables such as nativity, English proficiency, time in the U.S., and immigrant generation. In general, higher levels of acculturation in Asian Americans are related to more service use (e.g., Abe-Kim et al., 2007; Cho, Kim, & Velez-Ortiz, 2014; Ying & Miller, 1992) although the effect may disappear when controlling for age and presence of a DSM mental disorder (Abe-Kim et al., 2007). As such, this study includes both age and acculturation proxy variables to capture the variance in mental health service use that can be attributed to acculturation.

Gender. Gender can also influence individuals' adoption of socially-constructed norms which subsequently impact mental health help-seeking. Men may experience greater stigma towards help-seeking given the limitations of their socially prescribed role (Betz & Fitzgerald, 1993), which often suggests that men should not display as many emotions or seek help. For Asian American men, this gender group identity may also interact with how strongly they hold onto traditional male roles within Asian cultures. Asian American men may view themselves as the leader and provider of the family and avoid seeking help, as it may indicate an incapability to

lead (D. W. Sue, 1996). However, the research on gender and mental health service use in Asian Americans shows mixed results. Some research found that Asian American females seek more services and hold more positive attitudes (e.g., Chang & Chang, 2004; Komiya, Good, & Sherrod, 2000), while others found no difference between genders (e.g., Atkinson & Gim, 1989; Ying & Miller, 1992). An epidemiological study on Chinese Americans found that a gender difference is present only when examining specific forms of mental health service use. Women sought more informal support but there was no gender difference in seeking help from professionals (K. N. J. Young, 1998). To better understand mental health service use for depressive distress, this study also includes gender in its analyses.

     Religiosity. Religiosity, another factor that influences mental health beliefs (Chadda, Agarwal, Singh, & Raheja, 2001; Cinnirella & Loewenthal, 1999), has been sparsely researched in relation to Asian American mental health service use. It is plausible that religiosity would impact Asian Americans' illness conceptualization and choices for seeking help. For instance, if a person holds religious beliefs that value the endurance of suffering (Yamashiro & Matsuoka, 1997) they may be discouraged from using mental health services. The impact of such beliefs may be intensified if a person also holds a similar, commonly held Asian value of enduring hardships. Thus far, only one study examined religiosity in Filipinos' help-seeking. It found that religiosity is positively related to seeking religious clergy for emotional distress and does not reduce seeking help from mental health providers (Abe-Kim, Gong, & Takeuchi, 2004). It is yet unclear if religiosity is related to seeking help from specific types of mental health providers. Given its understudied role in Asian Americans' mental health service use, religiosity is also included as a covariate in the study.

Examining Asian American Mental Health Service Use by Provider/Service Type

As previously mentioned, studies of Asian American mental health service use typically combine all types of providers (e.g., psychiatry, other mental health providers, other medical doctors, alternative care providers) together to determine the prevalence of lifetime or past year mental health service use. While such studies have been helpful in uncovering generally predictive factors for Asian American mental health service use, it is not clear which types of providers are sought by which subpopulations. Thus far, two studies have examined specific types of service utilization among Asian Americans with any DSM psychiatric disorder (Meyer, Zane, Cho, & Takeuchi, 2009; Nguyen & Bornheimer, 2014). Meyer et al. (2009) differentiated help sought from specialty mental health services, primary care services, and alternative/indigenous services and found that those with greater English proficiency who sought alternative/indigenous services also had greater odds of using specialty mental health services. Nguyen and Bornheimer (2014) examined the help sought from mental health specialists or general medical doctors or both, and found that Asian American patients with greater perceived need and psychiatric severity sought help from both, while U.S. born and English proficient patients were more likely to seek mental health care from general medical doctors.[1] They also found ethnic group differences, with Vietnamese Americans seeking more help from medical providers than Chinese Americans; however, demographics which may account for the differences (e.g., age or SES) were not included in their model. Neither of these studies specified a particular type of mental distress, such as depression or anxiety. This is important since the type of distress experienced impacts service use behaviors differentially (Loebach Wetherell et al., 2007), in addition to the severity of the psychiatric distress itself (Bebbington et al., 2000).

---

[1] This study used the NLAAS data which asked respondents to identify if they sought for help from medical doctors for their emotions/nerves/mental health. Follow-up questions regarding the type of help provided during the visit was not asked or specified.

The Current Study

The relationship between broader depressive profiles incorporating culturally-relevant physical symptoms and specific forms of mental health service use, after accounting for other known sociobehavioral covariates, have yet to be examined in this population. Therefore, this study aims to address the gap by: (a) identifying distinct subtypes of Asian Americans with similar lifetime depressive experiences using a *person-centered* approach that helps identify groups of individuals with shared attributes; and (b) examining which related symptoms are most salient for Asian Americans in depressive distress using a *variable-centered* approach that focuses on describing the relationship between variables. Finally, this study examines whether a subtype of depressive experience or a particular group of related symptoms predicts specific categories of mental health service use, by using results from both approaches as predictors in logistic regression models. The chronic physical symptoms to be examined were chosen based on prior literature describing idioms of depressive distress and the depressive symptoms were selected from a portion of the depression module which had the greatest variety of symptoms.

Main Hypotheses

Subtypes of lifetime depressive experiences and mental health service use. H1: There will be two or more meaningful subtypes, with one subtype resembling a DSM depressive experience and another reflecting a depressive experience with more chronic physical symptoms. H1a: Subtypes with more chronic physical pain endorsement probability will also have greater suicidality endorsement probability. H2: The chronic physical symptom subtype will be associated with greater use of physical health providers for emotional distress rather than specialty mental health providers or psychological counseling/therapy.

Types of depressive symptoms and mental health service use. H3: Chronic physical symptoms will predict seeking help via physical health and alternative care providers, but not via psychological counseling/therapy. H4: Cognitive-affective symptoms will predict seeking help via specialty mental health providers or psychological counseling/therapy from any provider.

Method

Sample

The present study used data from the 2002-2003 National Latino and Asian American Study (NLAAS), a national complex sample survey collected via computer assisted personal interviewing. This was a part of the Collaborative Psychiatric Epidemiology Surveys—conducted to examine psychiatric epidemiology in ethnic minority groups and cultural factors relevant to mental health (Alegría et al., 2004). To date, this is the most comprehensive data available on Asian American mental health. The multi-stage area probability sampling method included a core sample designed to be nationally representative of all Latino/Asian-heritage groups regardless of geographic patterns as well as a supplement sample designed to oversample from areas with a greater population of Latino/Asian households (Heeringa et al., 2004). The sampling weights include the probability of being selected nationally and from oversampled areas. A modified version of the World Mental Health Composite International Diagnostic Interview (WMH-CIDI; Kessler & Üstün, 2004) was used to assess lifetime psychiatric disorders and more detailed diagnostic timeframes (DSM/ICD criteria) for each disorder. The total NLAAS survey sample includes 2554 Latino American adults and 2095 Asian American adults aged 18 or older. This study analyzes the responses of a subgroup of 890 Asian American adults who endorsed feeling, for most of the day, for several days or longer: (a) sad, empty, or

depressed; or (b) discouraged about how things were going in life; or (c) lost interest in most things usually enjoyed.

Measures

Need factors.

DSM depression symptoms. To allow for a broader conceptualization of depression, symptoms were selected from the worst lifetime episode section of the depression module. Respondents indicated 'yes' or 'no' to whether depression symptoms were present or not during their worst lifetime episode. For example, "Did you have a much smaller appetite than usual nearly every day during that period of (several days/two weeks)?" Symptoms included were: want isolation, less talkative, cried often, felt sad/depressed, felt discouraged, lost interest, no pleasure, nothing could cheer you up, hopelessness, low confidence, cannot cope with daily responsibilities, feel less than others, worthlessness, extreme guilt, thought of death, thought better if dead, thought of suicide, planned suicide, attempted suicide, more energy, restlessness, racing thoughts, slow thoughts, trouble concentrating, indecisiveness, irritability, nervous/anxious, fear/panic, smaller appetite, larger appetite, insomnia, hypersomnia, low energy, and talking/moving slower. Respondents also indicated the severity of their depression episode to the question "How often… was your emotional distress so severe that you could not carry out your daily activities? – often, sometimes, rarely, or never?" Variables were recoded as necessary following the skip logic of the survey, to reduce data missingness. After conducing exploratory factor analysis, an additional overall DSM affective threshold symptoms item was created by averaging the binary response screening questions asking about the presence of feeling "sad/depressed", "discouraged", and "losing interest" for most of the day, for several

31

days or longer. This last variable is referred to as "DSM affective threshold symptoms item" in the rest of the chapter.

Chronic physical symptoms. Respondents were asked to reply 'yes' or 'no' regarding whether they had experienced the following chronic physical symptoms in their lifetime in the chronic illness module: arthritis/rheumatism, back/neck problems, severe headaches, other chronic pain, and medically unexplained chronic pain, dizziness, fainting spells, lump in throat, numbness/tingling. Similarly, respondents answered 'yes' or 'no' to questions asking about lifetime impairment caused by specific types of physical symptoms: stomach pain, diarrhea/constipation, arm/joint/leg pain, gas/indigestion, chest pain, racing heart, short breath, and back pain.

Other culturally-relevant symptoms. In the screening module, respondents answered 'yes' or 'no' to whether they had experienced the following symptoms in their lifetime: attacks of anger that led to a loss of control, and irritability/grumpy/bad mood lasting several days or longer. In the neurasthenia module, respondents answered 'yes' or 'no' to lifetime neurasthenic fatigue (tired/weak/exhausted either while performing minor everyday physical or mental tasks) lasting several months or longer. In the suicidality module, respondents similarly answered 'yes' or 'no' to whether they had suicide ideation, suicide plan, or suicide attempt in their lifetime.

Global external impairment/ functional disability. 30-day functioning due to all physical and mental health problems was measured using the World Health Organization Disability Assessment Schedule (WHO-DAS 2.0; Rehm et al., 1999). A total of 36 items assess global functioning in six domains of cognition, mobility, self-care, getting along, life activities, and participation. Each item was rated on a 5-pt scale ranging from 1 (*none*) to 5 (*extreme or cannot do*). The subscale is converted to a summary score ranging from 0 (*no disability*) to 100 (*full*

disability). For this study, the subscale scores were averaged to create a total score ranging from 0-100. Also, this total score was considered representative of lifetime impairment/functional disability to match the lifetime timeframe of the other variables in the study.

Perceived need for mental health care. Respondents were categorized as having perceived need for mental health care if they answered 'yes' to the question "At any time in your life did you think that you should talk to a medical doctor or other health professional about problems with your emotions, nerves, mental health, or your use of alcohol or drugs?"

Enabling factors.

Poverty. The poverty index used in this study was calculated from self-reported household income and poverty threshold (Proctor & Dalaker, 2002) and higher scores indicate greater wealth.

English proficiency. Respondents self-reported their English proficiency by answering the item "How well do you speak English?" on a scale ranging from 1 (*poor*) to 4 (*excellent*).

Acculturative stress. Items included on the survey from the Acculturative Distress Scale (Vega et al, 1998) were averaged for this study. These items asked about immigration related stress such as discrimination, fear of deportation, limited contact with family, difficulties with the English language, finding work, and seeking health services. Responses to each item could be 0 (*no*) or 1 (*yes*).

Predisposing factors.

Demographic variables. Respondents self-reported their ethnicity, sex, age, income, education, marital status, region of residence, and age at immigration. For participants' confidentiality, NLAAS study developers merged variables that could be identifying prior to public release. As such, ethnicity was categorized as Chinese, Filipino, Vietnamese, and Other

Asian (Japanese, Korean, Asian Indian, and other groups). For this study's analytic purposes, marital status was categorized as married/cohabitating and not married/cohabitating (which merged widowed/divorced/separated, and never married).

Religiosity. Respondents noted the frequency of attending religious services by responding to the question "How often do you usually attend religious services –more than once a week, about once a week, one to three times a month, less than once a month, or never?"

Personal stigma. Personal stigma was defined by the response to the item "How comfortable would you feel talking about personal problems with a professional –very comfortable, somewhat, not very, or not at all comfortable?"

Public stigma. Public stigma was defined by the response to the item "How embarrassed would you be if your friends knew you were getting professional help for an emotional problem –not at all embarrassed, not very embarrassed, somewhat embarrassed, or very embarrassed?"

Environment factors.

Region. Respondents' region of residence was categorized as Northeast, Midwest/South, and West.

Health behaviors.

Forms of mental health service use. To determine which forms of services were accessed by the sample, five domains of service use were included in this study: psychological counseling/therapy, psychiatry, other mental health provider, physical health provider, and alternative care/self-help. First, to examine lifetime use of psychological counseling/therapy, the item "Did you ever in your life have a session of psychological counseling or therapy that lasted 30 minutes or longer with any type of professional?" was selected. Second, to examine different forms of lifetime mental health service, four binary 'yes' or 'no' variables were created from

34

respondents' endorsement about each type of provider: (1) psychiatrist, (2) any psychologist/social worker/counselor/other mental health professional, (3) any general medical provider/family doctor/medical doctor/nurse, (4) any religious advisor/other healer/self-help/internet/hotline. An example of the selected items is, "Did you ever in your lifetime go to see a psychiatrist for problems with your <u>emotions</u>, <u>nerves</u> or <u>mental health</u>?" Since respondents were asked about receiving services specifically for mental health, seeking help from a physical health provider in this context was considered a form of mental health service use in this study.

Analysis Strategy

Descriptive analyses were performed using the 'survey' package in R to account for the stratification, clustering, and unequal probability sampling in the complex survey design. Sampling weights were trimmed for those above the 99th percentile (Alexander, Dahl, & Weidman, 2003; Kish, 1992; Potter, 1990).

Latent Class Analysis (LCA). LCA was performed in R to determine whether there are distinct classes of lifetime depressive experiences determined by similar response patterns. LCA is useful when the goal is to understand heterogeneity within a larger group (Ten Have et al., 2016), as was the goal of this study on finding varied depressive experiences in Asian Americans. The 'poLCA' package was used, which uses the expectation-maximization (EM) algorithm, and constructs latent classes by maximizing the log-likelihood. The LCA model included covariates of age, sex, depression severity, and an acculturation proxy (age at immigration). Any cases missing on the covariates included in the model were dropped by the analysis as it requires complete cases for covariates. This resulted in a sample size of 309 for the LCA.[2] Models were fit in steps, starting with a one-class model until there was no further

---

[2] Demographics for this smaller sample were similar to the larger sample of 890 respondents.

35

improvement in the fit indices and insufficient parameters to test for additional classes. Various

fit statistics (BIC, AIC, ssaBIC), relative entropy scores, and interpretability were used to select

the solution with the optimal latent class model. To describe the latent class demographic

characteristics and relationship to clinical depression diagnoses, the Wald chi-square test for

independence was used for categorical variables (gender, age at immigration groups, diagnostic

groups) and the two-sample t-test was used for continuous variables (age, depression severity).

The final predicted class membership for each respondent was saved and merged into the

original dataset for multiple imputation and survey logistic regression analyses.

Exploratory Factor Analysis (EFA). Two EFAs were performed in R to understand

what types of symptoms underlie the experience of Asian Americans endorsing any lifetime

depressive characteristics. As EFA organizes the indicator variables by how well they are

correlated with one another in a sample, it was suitable for the second goal of exploring how

latent symptom factors predict forms of mental health service use. Tetrachoric correlation

matrices were analyzed with the 'fa' package, using maximum likelihood estimation and a

varimax rotation to obtain the factors.

The first EFA used valid responses to relevant chronic physical symptom items (N=886)

and the second EFA used valid responses to worst depressive episode items which afforded the

most variety of indicator variables for depression (N=254). The EFAs were completed separately

to maximize the use of available information in identifying factors. The skip-logic structure of

the depression module in the CIDI did not allow for participants with subthreshold depression to

report on the full range of depressive symptoms which reduced the sample size available for

EFA of the depression items. Therefore, a combined analysis of chronic physical and depressive

items resulted in greater missingness and lost data on physical symptoms for participants with

36

subthreshold depressive symptoms. Moreover, a combined analysis resulted in a less meaningful factor structure, with the factors merely reflecting that the chronic physical and depression items were from different segments of the CIDI survey.

The final number of factors for the EFAs was chosen based on multiple statistical criteria as suggested by Henson & Roberts (2006). The following were examined with functions from the 'psych' package in R: eigenvalues greater than 1 (Guttman-Kaiser criterion, (Yeomans & Golder, 1982)), scree plot, parallel analysis (Hayton, Allen, & Scarpello, 2004), Velicer's minimum average partial (MAP) criterion (Velicer, 1976) procedure and interpretability of factors. Bartlett factor scores from each of the EFAs were saved and merged into the original dataset for multiple imputation and further survey logistic regression analyses.

Multiple imputation and logistic regressions. To handle missingness in the data, the 'mice' package in R was used to perform 20 imputations as recommended for unbiased estimates with less decrease in power (Graham, Olchowski, & Gireath, 2007). Five sets of multiple imputations were performed for respondents with a valid answer for each mental health service use dependent variable (each with 20 imputations). To account for the complex sample survey design with each set of the 20 imputed datasets, the 'survey' package was used in tandem with the 'mitools' package to run logistic regressions predicting different types of service use and to create pooled estimates obtained from each imputed dataset. Each of the five mental health service use outcome variables were regressed onto the predictors (LCA symptom classes and EFA symptom factors) in the following blocks: symptom-level variables only (including physical and depressive symptom classes/factors), then with all relevant sociobehavioral factors, and lastly with mental health service use endorsements.

Results

Sample Characteristics

The study sample ($N_{weighted}$ = 3.26 million) comprised 53% women and the mean age was 39.38 (SD = 14.51). Table II.1 presents other sociodemographic characteristics for the weighted sample (e.g., ethnicity and education). Fifty-two percent sought care for emotional distress from non-psychiatry mental health providers ($N_{weighted}$ = 467,338), 40% sought help from a physical health provider ($N_{weighted}$ = 355,751), 29% of the sample sought help from a psychiatrist ($N_{weighted}$ = 262,373), while 15% of the sample sought mental health services from alternative care providers/self-help resources ($N_{weighted}$ = 383,968) in their lifetime. Nineteen percent of the sample endorsed receiving at least 30 minutes of psychological counseling/therapy in their lifetime ($N_{weighted}$ = 480,669).

[Insert Table II.1 here]

LCA and Logistic Regressions

The mean age of the LCA sample ($N_{weighted}$ = 1.15 million) was 38.82 (SD = 15.03), 53% were women, and 32% were born in the U.S. 40% were other Asian, 31% were Chinese, 18% were Filipino, and 11% were Vietnamese. 86% were categorized as having lifetime dysthymia, 38.7% with lifetime major depressive episode per the CIDI.

[Insert Table II.2 here]

The 4-class solution was considered the best fitting model for the included depressive, chronic physical, and other relevant symptoms (see Table II.2). While covariates of age, gender, depression severity, and age at immigration were included in the analysis, they were not significantly predictive of any of the four classes found. The indicator response patterns for each of the classes are shown in Figure II.2.

[Insert Figure II.2 here]

Class 1 (non-anhedonic DSM affective, 40%) consisted of people with a higher probability of endorsing sadness/depression, discouragement, trouble concentrating, smaller appetite, insomnia, low energy/tiredness, wanting isolation, being less talkative, and crying often during their worst depressive episode; as well as lifetime irritability. All other classes also had a high probability of endorsing these symptoms as well and the following class descriptions are in addition to these symptoms mentioned in Class 1.

Class 2 (comorbid pains and disability, 23%) consisted of people with the highest probabilities for various chronic pains (back/neck problem, back pain, headaches, arm/leg/joint pain, arthritis/rheumatism) and past month moderate-severe functional disability. This was the only class with a higher probability for endorsing arthritis/rheumatism. This class also had a high probability of having lost interest in things, not experiencing pleasure, nothing cheering them up, low self-confidence, slow thoughts, irritability, talk/move slow during their worst depressive episode.

Class 3 (hopelessness and worthlessness, 23%) consisted of people with a higher probability of: being unable to cope with daily responsibilities; feeling less than others, hopeless, worthless, indecisive, and nervous/anxious during their worst depressive episode; and having had anger attacks. This class had the highest probability for depressive symptoms reflecting anhedonia, low self-confidence, and psychomotor retardation.

Class 4 (chronic fatigue/GI, guilt, and suicidality, 14%) consisted of people with similar symptoms as Class 1 and 3, but also characterized by having the highest probabilities for crying often, extreme guilt, serious suicidal ideation, suicide planning, suicide attempt, fear/panic, chronic fatigue, insomnia, and other lifetime chronic physical arousal/stress symptoms

39

(diarrhea/constipation, chest pain, racing heart, short breath, dizziness, fainting spells, numbness/tingling). This was the only class with a higher probability of endorsing that stomach pain and gas/indigestion interfered with life.

Table II.3 displays class characteristics with the covariates included in the model and clinical depression diagnoses achieved by the CIDI. When examining the statistical comparisons of demographics and clinical diagnoses across the latent classes, Class 3 (hopelessness and worthlessness) had the oldest respondents, Class 2 (comorbid pains and disability) had the highest self-reported depression severity, and Class 1 (non-anhedonic DSM affective) had a significantly higher percentage of respondents with lifetime dysthymia/ major depressive episode diagnoses compared to those in Class 4 (chronic fatigue/GI, guilt, and suicidality). There was no significant relationship between the classes and gender, ethnicity, or age at immigration.

[Insert Table II.3 here]

Latent symptom classes and mental health service use. When examining the latent classes across forms of mental health service use, Classes 2 and 4 (both characterized by physical symptoms) have the highest percentage of psychiatrist, other mental health provider, and psychological counseling/therapy use, while Class 3 (characterized by psychomotor retardation, low self-worth, hopelessness, and older persons) has the highest percentage of physical health provider use. However, as logistic regressions results show (Table II.4), after accounting for other need (perceived need), enabling (poverty index, English fluency, acculturative stress), predisposing (gender, age, gender x age, education, marital status, religiosity, personal and public stigma), and environment factors (region of U.S.) related to mental health service use, only Classes 2 and 4 (characterized by physical symptoms) remained predictive of service use. Class 2 (comorbid pains and disability) respondents had greater odds of utilizing alternative care

40

providers/self-help resources and psychological counseling/therapy (*OR* = 2.50 and *OR* = 3.08, respectively) than Class 1 (non-anhedonic DSM affective) respondents. Class 4 (chronic fatigue/GI, guilt, and suicidality) respondents had greater odds of utilizing alternative care providers/self-help resources only (*OR* = 2.91) than Class 1 respondents.

[Insert Table II.4 here]

EFA and Logistic Regressions

[Insert Figure II.3 here]

Chronic physical symptom factor. The EFA of 16 chronic physical symptom items yielded one factor based on interpretability as well as various statistical criteria. The eigenvalues and scree plot suggested the retention of one factor (see Figure II.3), and the MAP criteria suggestion was equivalent. Parallel analysis, which provides a guide for retaining components by comparing the eigenvalues produced from a randomly generated dataset and the eigenvalues of the observed data (Hayton et al., 2004), suggested 3 factors. The eigenvalue for a second factor was 0.85, and this solution was rejected since one of the factors' internal consistency was questionable (α = .65). The eigenvalue for a third factor was 0.77, and this solution was rejected similarly since all of its factors' internal consistency was questionable (α = .62-.66). The final one factor solution accounted for 44% of the total variance and internal consistency was good (α = .80). The factor pattern coefficients for the items can be seen in Table II.5.

[Insert Table II.5 here]

Depressive episode symptom factors. The EFA of 34 depressive episode symptom items yielded four factors, also based on interpretability and various statistical criteria. The eigenvalues and scree plot suggested the retention of three to four factors (see Figure II.4). The MAP criteria suggested four factors while parallel analysis recommended six. The eigenvalue for

a fifth factor was 1.44, however internal consistency for the fifth factor for the five factor solution was poor (α = .56), thus rejected. The eigenvalue for a sixth factor was 1.14, however the sixth factor's item loadings were all below 0.40 and internal consistency was poor (α = .56), thus rejected. Lastly, the three factor solution was rejected due to one of its factors' internal consistency being poor (α = .56). The final four factor solution explained 48% of the total variance and internal consistency was good (α = .74-.82). The factor pattern coefficients for the items and correlations between factors can be seen in Table II.6.

[Insert Figure II.4 here]

Factor 1 (Internal Self-Deprecation) explained 13% of the variance and comprises five items: feel worthless, not as good as others, lost self-confidence, felt extreme guilt. Factor 2 (Abnormal Sleep) explained 8% of the variance and comprises two items: slept more than usual, trouble sleeping. Factor 3 (Suicidality) explained 13% of the variance and comprises five items: thought about suicide, made suicide plan, attempted suicide, would be better if dead, often thought of death in general. Factor 4 (Apathetic Retardation) explained 15% of the variance and comprises 11 items: lost interest in things, low energy/tired, nothing is fun, nothing could cheer up, less talkative, talk/move more slowly, felt hopeless, more energy than usual, slow/mixed thoughts, want to be alone. Five items did not load strongly onto any of the factors: felt sad/depressed, larger appetite, cried often, restless, jumping/racing thoughts. Lastly, small appetite had a very low item-total correlation and should likely be omitted in any future confirmatory factor analysis.

[Insert Table II.6 here]

Symptom factors and mental health service use. When examining factor scores individually across forms of mental health service use, those with a higher physical arousal/pains

score sought help from physical health providers and alternative care providers/self-help resources; higher scores on the internal self-deprecation factor was related to psychiatrist use; higher scores on the abnormal sleep factor was related to psychiatrist, physical health provider, and psychological counseling/therapy use; higher scores on the suicidality factor was related to less alternative care/self-help use (see Table II.7). Given that the hallmark depressive affective symptom of sadness was not represented in any of the factors, a DSM affective threshold symptoms item (lifetime sad/depressed, discouraged, lost interest) was added to the model.

[Insert Table II.7 here]

However, as Table II.8 shows, after accounting for other symptom-level need factors related to mental health service use in Model 2, the effects of all the factor scores become non-significant in the logistic regressions. Self-rated severity of depression also was not related to forms of mental health service use. However, greater endorsement on the DSM affective threshold symptoms item increased the odds of utilizing alternative care providers/self-help resources and psychological counseling/therapy ($OR = 3.14$ and $OR = 4.81$, respectively).

[Insert Table II.8 here]

When additional need, enabling, predisposing, and environment factors related to mental health service use are added to the logistic regressions, the influence of DSM affective threshold symptoms item remains only for psychological counseling/therapy ($OR = 5.78$). See Table II.9, Model 3.

[Insert Table II.9 here]

Other predictors of mental health service use. In addition to the DSM affective threshold symptoms item, being female and being older increased the odds of utilizing physical health providers only ($OR = 4.04$ and $OR = 1.06$, respectively). Not being married nor cohabiting

43

increased the odds of utilizing other mental health providers only ($OR = 3.18$), compared to those who were married or cohabitating. Greater frequency of religious attendance increased the odds of utilizing alternative care providers/self-help only ($OR = 1.39$). Greater experienced affective symptoms ($OR = 5.78$) and acculturative stress ($OR = 1.05$) increased the use of psychological counseling/therapy only. Better English fluency was related to more likely use of other mental health providers ($OR = 1.82$), and psychological counseling/therapy only ($OR = 2.13$). Endorsing a perceived need for care for emotional problems increased the odds of utilizing psychiatrists, alternative care/self-help, and psychological counseling/therapy only ($OR = 2.76$, $OR = 2.74$, $OR = 7.30$, respectively). Lastly, living in the Northeast compared to those in the West decreased the odds of seeking care from a psychiatrist while increasing the odds of seeking care from a physical health provider ($OR = 0.04$, $OR = 3.57$, respectively). No significant relationships were found for gender x age, education, personal/public stigma, poverty index.

Given that the forms of mental health service use are typically not mutually exclusive, Model 5 (Table II.9) assessed what predicts the types of service use when also including other health behavior factors of utilizing other services. Only those with lifetime psychological counseling/therapy use had significantly greater odds in predicting lifetime use of a non-psychiatry mental health provider ($OR = 16.88$). Religious attendance and perceived need remained as predictors for alternative care/self-help use ($OR = 1.42$, $OR = 3.07$, respectively), while psychiatrist use was found to decrease the odds of such help-seeking via alternative care/self-help ($OR = 0.32$). While the effect of acculturative stress became insignificant, DSM affective threshold symptoms item, English fluency and perceived need continued to predict psychological counseling/therapy use ($OR = 8.90$, $OR = 1.95$, $OR = 5.39$, respectively). Additionally, psychiatrist and other mental health provider use increase the odds of receiving

psychological counseling/therapy ($OR = 3.75$, $OR = 11.32$, respectively), while physical health provider use decreased the odds ($OR = 0.32$).

Discussion

This study used the most comprehensive psychiatric epidemiological data collected on Asian Americans to investigate the role of physical depressive symptomatology in predicting specific forms of mental health service use. A broader conceptualization of Asian American depressive experiences was taken to include presentations that may be missed with DSM depression criteria. The thorough inclusion of symptoms guided by the literature on known Asian idioms of distress allowed this study to explore whether such symptomatology is important to examine in Asian American depressive experiences and mental health service use behaviors. Person-centered statistics (LCA) was used to discover different classes of depressive experiences when incorporating chronic physical symptoms described in of idioms of distress. Variable-centered statistics (EFA) was used to understand what symptom factors best represent Asian Americans' lifetime depressive experiences. Guided by Andersen's Socio-Behavioral model for healthcare utilization (1995), additional predictors for mental health service use were incorporated in the analyses. Overall, it was expected that physical symptoms be would related to seeking help for emotional distress from physical health providers rather than from specialty mental health providers.

Significance of Chronic Physical Symptoms

As expected, more than two latent symptom classes of depressive experiences were found, with two of the four classes better characterized by DSM depressive features (Class 1: non-anhedonic affective, and Class 3: hopelessness and worthlessness). The other two classes, which comprised 41% of the population, were better defined by chronic physical symptoms in

addition to depressive symptoms (Class 2: comorbid pains and disability, and Class 4: chronic fatigue/GI, guilt, and suicidality). The symptoms and population percentage represented by the different classes demonstrated that depressed Asian Americans commonly endorse somatic symptoms such as decreased appetite, insomnia, and decreased energy; however, only a minority may endorse additional chronic physical symptoms. Interestingly, the non-anhedonic class with mild depressive severity had the highest percentage of people categorized as having DSM dysthymia or major depressive episode, while the class with greater depressive severity, chronic physical symptoms, and suicidality had the lowest percentage of such diagnoses. This points to the limitations of structured interviews which often place a heavier emphasis on DSM A1 (depressed mood) criterion for depression. Structured interviews such as the CIDI may not adequately describe Asian American persons with depression, especially those who focus more on their chronic physical symptoms. Chronic physical symptoms also indicated more distress (i.e., impairment and suicidality) and it is possible that Asian Americans with more distress did not endorse DSM-defined depressive symptoms during the structured interview. Supporting this, a recent study shows that non-White individuals with greater psychological distress are less likely to recognize depression in a vignette that features DSM criteria (J. E. Kim, Saw, & Zane, 2015).

The two classes with chronic pain were the most functionally disabled as measured by the WHO-DAS; however the presence of pain and difficulty in functioning did not necessarily indicate suicidality. Only Class 4 (chronic fatigue/GI, guilt, and suicidality) had the highest probability for all types of suicidality (intent, plan, attempt), and this class was distinguished by greater hopelessness, extreme guilt, anxiety, negative self-cognitions, anger attacks, and chronic fatigue. It was also uniquely defined by chronic GI symptoms such as stomach pain and

46

indigestion. This difference between the classes characterized by chronic pain supports the general literature that pain and suicidality may be mediated by psychological variables such as hopelessness (Tang & Crane, 2006), and suggests this may also apply to Asian Americans with depressive experiences. The higher probability of hopelessness experienced by persons in this class with suicidality may also be explained by the atypical presence of chronic physical symptomatology in comparison to what might be expected by persons of a younger age group. In fact, it was surprising to find that this class had the youngest group of respondents, given that it best captures the traditional cultural presentations such as *Neurasthenia* and *Hwabyung* most commonly found in less acculturated, older individuals.

Equally unexpected was that the class with the oldest group of respondents was not characterized by physical symptoms but by an anxious-depression with notable psychomotor retardation, hopelessness, and worthlessness. This somewhat paradoxical finding, of pains and greater disability being associated with younger individuals, may be related to the immigrant paradox effect found in cross-sectional and longitudinal studies (Marks, Ejesi, & García Coll, 2014) of health and mental health. The immigrant paradox effect finds that second or third generation individuals fare worse when compared to first generation immigrants. This effect has been explained by differences in personal/social resource variables such as acculturative stress and discrimination experiences when controlling for age or immigrant generation (Cook, Alegría, Lin, & Guo, 2009; John, de Castro, Martin, Duran, & Takeuchi, 2012). Thus, it is possible that the younger Asian American individuals belonging to the suicidality class had more stressful experiences that influenced their symptomatology. Another possibility is that older respondents in this sample did not endorse chronic physical symptoms as interfering with their life since they view such symptoms as a normative part of aging.

Analyses also revealed the importance of physical depressive symptomatology in Asian Americans' mental health service use. Only the classes with chronic physical symptoms were related to any mental health service use; however, the care received was not via physical health providers as hypothesized. Rather, both chronic physical symptom classes predicted the use of alternative care/self-help, and psychological counseling/therapy use was solely related to the class characterized by chronic pains without suicidality. The use of alternative care providers may reflect Asian Americans' preferring care from more traditional healing strategies targeting physical restoration such as acupuncture. It could also reflect a "greater accessibility" approach as described by Abe-Kim et al. (2004) in which Asian Americans seek help from religious clergy who are more familiar and accessible than mental health professionals. This approach would also apply to those using self-help strategies. Finally, though the increased odds of receiving psychological counseling/therapy may not seem as intuitive for a class defined by physical symptoms, it is possible that the functional impairment increases a perceived need, prompting the use of psychological counseling/therapy for emotional relief as well as physical alleviation. Alternately, since respondents were asked to report on psychological counseling/therapy provided by any provider, it is possible these persons received counseling from the same alternative care providers they sought help from.

What about Asian Americans who do not experience comorbid chronic physical symptoms? LCA results indicated that these persons would endorse functional impairment with less probability, despite feeling distress. These classes were also not related to any type of mental health service use. Given their ability to function despite distress, these persons may not feel justified to seek services, especially since such an endurance of suffering is highly regarded and considered a strength in various Asian cultures.

Affective Symptom Endorsement Matters

In comparison to the LCA approach which considered what types of Asian Americans seek which services, EFA provided a description of which symptoms group together as factors and predict the different types of service use. The chronic physical arousal and pain symptoms grouped together as one physical symptom factor, while the depressive symptoms were split into four factors (internal self-deprecation, abnormal sleep, suicidality, and apathetic psychomotor retardation). Interestingly, 'felt sad/depressed', a hallmark affective symptom for depression diagnoses, and 'cried often' did not load strongly onto any of the factors. This supports the notion that experiences of depression for ethnocultural groups may not parallel the symptoms outlined by the DSM (Ballenger et al., 2001)

Contrary to study hypothesis, no EFA-derived factor score predicted mental health service use in the regression models. No particular type of symptom in Asian Americans' lifetime depressive distress independently predicted mental health service use. However, to fully answer the question of whether any specific type of symptom is predictive of mental health service use, an additional averaged DSM affective threshold symptoms item was examined since the affective depressive symptom type was not represented in any of the aforementioned factors. This affective threshold variable was the strongest symptom-type predictor only for psychological counseling/therapy use, and partially supported the initial hypothesis that affective symptoms would relate to specialty mental health or psychological counseling/therapy. In sum, Asian Americans' mental health service use via psychological counseling/therapy may be driven by affective symptoms, when they are endorsed. Strongly experienced affective depressive symptoms may create distress as they are counter to the value of emotional control emphasized in many Asian cultures (Bond, 1991; Uba, 1994), leading to seeking help through psychological

49

counseling/therapy. It is also possible that various service providers more readily recognize affective depressive symptoms, and refer these persons to psychological counseling/therapy.

Implications for the Influence of Sociobehavioral Factors

Based on our understanding that humans are complex and our behaviors are impacted by the multi-level contexts we are situated in (e.g., Brofenbrenner, 1977), it is not surprising that other known factors such as perceived need, English fluency, and region of residence predicted mental health service use after accounting for the symptom experience.

Overall, the personal perceived need, enabling factors (e.g., ability to communicate well in English), and institutional/ community level barriers (e.g., few native language speaking providers, accessibility disparity by region) seemed to determine whether or not an individual received care, while previously studied factors such as affordability or stigma were not predictive of service use. It is possible that efforts like the mental health literacy movement have reduced Asian Americans' stigma towards mental health services, but it is also possible that other psychological and structural factors are more central in predicting mental health service use. For specialty mental health services including psychological counseling/therapy use, a greater perceived need and English fluency were important. For alternative care/self-help use, which included care from religious clergy/spiritual healers, a greater religiosity and perceived need had the most influence. This may indicate several areas of priority for improving mental health service utilization in Asian Americans with depressive distress. First, it is crucial to find ways increase public awareness and work with cultural values that may reduce perceived need, such as fatalism or endurance of hardships. Second, a continued effort to reduce system-level barriers is needed. For example, facilitating an increased availability of culturally-matched providers and developing easily accessible modalities of treatment (e.g., e-health or telehealth) may help

reduce some of the existing barriers. Third, as many factors predicted alternative care use, developing partnerships with community religious care providers may help with the first and second aims of increasing awareness and reducing barriers to care.

Remarkably, lifetime psychological counseling/therapy use was negatively related to receiving mental health care from a physical health provider. This disconnect between physical health providers and psychological counseling/therapy is a point of concern given that those in the present study seeking help from physical health providers are older and female—a group found to be more at risk for suicide in comparison to other groups (Cheng et al., 2010; National Center for Health Statistics (US), 2013; Shiang et al., 1997) in national estimates (Duldulao, Takeuchi, & Hong, 2009) and have the highest level of suicidality in geriatric primary care settings (Bartels et al., 2002). Moreover, those in the general population with suicidal behavior and mood disorders have low rates of mental health service use (Byers, Lai, Areán, Nelson, & Yaffe, 2016). Thus, it will be important to examine the quality of care provided when Asian Americans do seek mental health care from a physical health provider. Neither symptoms of suicidality nor depressive severity predicted mental health service use in this study; therefore it is crucial to have adequate screening or support for suicidality in non-mental health settings.

Implications for Future Research and Practice/Policy

While this study uses the most comprehensive and nationally representative data available to examine types of Asian American depressive experiences, and the influence of symptomatology on mental health service use, more studies are needed to capture the dynamic nature of illness experience and service use. In particular, tracking Asian Americans' depressive symptoms, attitudes, and service use over time will help clarify the order of processes involved in seeking mental health services. Considering the limitations of using skip-logic when asking

about symptomatology, future studies should consider querying about a wider range of symptoms for all respondents regardless of their answers. Also, brief open-response style questions may help bolster results as quantitative survey items may miss an important symptom experience or reason for using or not using mental health services. A broader inquiry approach may also be useful in clinical settings, as this study suggested that Asian Americans may not emphasize affective depressive symptoms as in the DSM. Continued research and clinical observations will help inform mental health policy changes to increase ethnocultural populations' access to care.

<div align="center">**Limitations**</div>

Although the NLAAS is the largest psychiatric epidemiological study for Asian Americans, subgroups known to utilize services for somatic symptoms (e.g., Southeast Asian groups: Akutsu & Chu, 2006) could not be examined separately, and the specific impact of physical symptoms in such groups with depressive symptomatology remains unstudied. Findings from this study should be understood with the caveat that combining all Asian Americans together may conceal ethnic group differences. Still, such collective group research is still valuable as there are common cultural values that distinguish Asian Americans from the general U.S. population (S. Sue, Sue, Sue, & Takeuchi, 1995). Moreover, when ethnicity is included in the current study's regression models it is not a significant predictor of any mental health service use; study findings remain unchanged. Also, due to the limited nature of the public use data and the CIDI structure, most of the chronic physical symptoms used in this study were pulled from the chronic illness module of the CIDI which likely resulted in our sample including respondents with other health conditions that contributed to the endorsement of physical symptoms. However, given the lifetime perspective of the study and the intertwined relationship between

physical health conditions and depression, findings remain relevant. Future studies should ask about such physical arousal/pain symptoms in relation to a depressive episode as well, for further clarity of the types of depressive experiences in Asian Americans. Also, the depression module from which the depressive symptom items were pulled were limited by a skip-logic interview structure that can result in response bias and false negatives (Liu, Meng, Chen, & Alegría, 2013) and resulted in abundant missingness. Thus, this study implemented multiple imputations for the predicted class memberships and factor scores derived from those with full responses to the depression module; however it is possible that the imputed factor score values were also reflecting such false negatives. Nevertheless, a comparison model using only minimally missing higher-level survey items demonstrates similar relationships with non-symptom level factors such as English fluency and perceived need having strong effects (see Appendix A, Table A.1), corroborating the present results.

Current study results cannot be extended to those who only somaticize or a wider range of persons with negative affect, as the sample was based on any endorsement of depressed mood, discouragement, or anhedonia. Future studies should explore whether symptom experiences and their relationship to mental health service use remain similar when including persons endorsing physical symptoms without any DSM depression A1 symptoms and by expanding the sample to include those endorsing behavior related to various cultural idioms of distress (e.g., attentional bias to negative valenced information (Gibb, Mcgeary, & Beevers, 2016; Paulus et al., 2017; Woody & Gibb, 2015) as suggested by the National Institute of Mental Health's Research Domain Criteria (Kozak & Cuthbert, 2016)).

It is also important to note that the NLAAS data was collected in 2003, and study findings are based on the sample obtained at that time. Recent survey of Asian Americans

indicates that the Asian American population has grown with newer immigrants being more educated (Pew Social & Demographic Trends, 2012). It is not known whether this shift has influenced the endorsement of depressive symptoms; however, recent SAMHSA NSDUH data demonstrates that there has been little change in the uptake of mental health service use (Substance Abuse and Mental Health Services Administration, 2015) and suggestions from this study likely remain pertinent. Future work should examine whether the influx of better-educated Asian immigrants changes the rates of specialty mental health service use, which was related to English proficiency in this study. Lastly, the cross-sectional study design of the NLAAS does not allow for identifying causality, and future longitudinal studies may help clarify whether specific types of depressive symptomatology precede specific forms of mental health service use.

Conclusions

Understanding the different types of depressive experiences and mental health service use in Asian Americans is imperative, considering that Asian Americans are the fastest growing immigrant group (Pew Social & Demographic Trends, 2012) whose unmet mental health needs may remain unresolved. Latent symptom classes are helpful in understanding the different types of depressive experiences in groups thought to have varied presentations, as well as predicting lifetime use of mental health services even after accounting for known predictive factors such as perceived need. While Asian Americans' depressive experiences are not always tied to traditional somatic or chronic physical symptoms, such symptoms may indicate more severity and distress and there may be a higher risk for suicide. Asian Americans with depressive experiences not characterized by chronic physical symptoms had less odds of utilizing mental health services of any kind. Accordingly, it may be helpful to increase efforts to provide public psychoeducation that is congruent with Asian American values such as family obligation

(Phinney, Ong, & Madden, 2000). For example, seeking mental health services could be reframed as taking care of oneself for the future of loved ones. Finally, older Asian American women who seek mental health care from physical health providers are most at risk for suicide in the literature (Baker, 1994; Yang & Wonpat-Boria, 2007), yet least likely to use psychological counseling/therapy. Thus more efforts are needed to implement and enhance integrative mental health services for Asian Americans in primary/physical care settings. Adopting such a collaborative care model has shown to reduce disparities (Bridges et al., 2014), improve longer-term engagement in mental health services for minority patients (Angstman et al., 2015), and would similarly benefit Asian Americans less familiar with mental health. It may also be useful to include alternative care providers in this effort since Asian Americans with higher perceived need and functional impairment sought alternative care. Collaborative care has been found to improve patients' depressive symptoms significantly more than usual care (Bauer et al., 2011), and it will be important to continue developing such care for ethnocultural groups who experience a mental health care disparity.

References

Abe-Kim, J., Gong, F., & Takeuchi, D. T. (2004). Religiosity, spirituality, and help-seeking among Filipino Americans: Religious clergy or mental health professionals? *Journal of Community Psychology*, *32*(6), 675–689. http://doi.org/10.1002/jcop.20026

Abe-Kim, J., Takeuchi, D. T., Hong, S., Zane, N. W. S., Sue, S., Spencer, M. S., … Alegría, M. (2007). Use of mental health-related services among immigrant and US-born Asian Americans: results from the National Latino and Asian American Study. *American Journal of Public Health*, *97*(1), 91–8. http://doi.org/10.2105/AJPH.2006.098541

Abe, J. S., & Zane, N. W. S. (1990). Psychological maladjustment among Asian and white American college students: Controlling for confounds. *Journal of Counseling Psychology*, *37*(4), 437–444. http://doi.org/10.1037/0022-0167.37.4.437

Akutsu, P. D., & Chu, J. P. (2006). Clinical Problems That Initiate Professional Help-Seeking Behaviors From Asian Americans. *Professional Psychology: Research and Practice*, *37*(4), 407–415. http://doi.org/10.1037/0735-7028.37.4.407

Aldwin, C., & Greenberger, E. (1987). Cultural differences in the predictors of depression. *American Journal of Community Psychology*, *15*(6), 789–813. http://doi.org/10.1007/BF00919803

Alegría, M., Takeuchi, D. T., Canino, G., Duan, N., Shrout, P., Meng, X.-L., … Gong, F. (2004). Considering context, place and culture: The National Latino and Asian American Study. *International Journal of Methods in Psychiatric Research*, *13*(4), 208–220. http://doi.org/10.1002/mpr.178

Alexander, C. H., Dahl, S., & Weidman, L. (2003). Making Estimates from the American Community Survey. In *Proceedings of the Social Statistics Section, American Statistics Association*.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders: DSM-5*. Arlington, VA: American Psychiatric Publishing.

Andersen, R. M. (1995). Revisiting the behavioral model and access to medical care: does it matter? *Journal of Health and Social Behaviour*, *36*(1), 1–10.

Angstman, K. B., Phelan, S., Myszkowski, M. R., Schak, K. M., DeJesus, R. S., Lineberry, T. W., & van Ryn, M. (2015). Minority primary care patients with depression: outcome disparities improve with collaborative care management. *Medical Care*, *53*(1), 32–37.

Atkinson, D. R., & Gim, R. H. (1989). Asian-American cultural identity and attitudes toward mental health services. *Journal of Counseling Psychology*, *36*(2), 209.

Baker, F. M. (1994). Suicide among ethnic minority elderly: A statistical and psychosocial perspective. *Journal of Geriatric Psychiatry*, *27*(2), 241–264.

Ballenger, J. C., Davidson, J. R. T., Lecrubier, Y., Nutt, D. J., Kirmayer, L. J., Lépine, J. P., … Ono, Y. (2001). Consensus statement on transcultural issues in depression and anxiety from the international consensus group on depression and anxiety. *Journal of Clinical Psychiatry*, *62*(SUPPL. 13), 47–55.

Bartels, S. J., Coakley, E., Oxman, T. E., Constantino, G., Oslin, D., Chen, H., … Sanchez, H. (2002). Suicidal and Death Ideation in Older Primary Care Patients With Depression, Anxiety, and At-Risk Alcohol Use. *The American Journal of Geriatric Psychiatry*, *10*(4), 417–427. http://doi.org/10.1097/00019442-200207000-00008

Bauer, A. M., Azzone, V., Goldman, H. H., Alexander, L., Unützer, J., Coleman-Beattie, B., & Frank, R. G. (2011). Implementation of collaborative depression management at community-based primary care clinics: an evaluation. *Psychiatric Services (Washington, D.C.)*, *62*(9), 1047–53. http://doi.org/10.1176/appi.ps.62.9.1047

Bauer, A. M., Chen, C.-N., & Alegría, M. (2012). Associations of physical symptoms with perceived need for and use of mental health services among Latino and Asian Americans. *Social Science & Medicine*, *75*(6), 1128–1133. http://doi.org/10.1016/j.socscimed.2012.05.004

Bebbington, P. E., Meltzer, H., Brugha, T. S., Farrell, M., Jenkins, R., Ceresa, C., & Lewis, G. (2000). Unequal access and unmet need: neurotic disorders and the use of primary care services. *Psychological Medicine*, *30*(6), 1359–1367. http://doi.org/null

Betz, N. E., & Fitzgerald, L. F. (1993). Individuality and diversity: theory and research in counseling psychology. *Annual Review of Psychology*, *44*, 343–381. http://doi.org/10.1146/annurev.psych.44.1.343

Bond, M. H. (1991). *Beyond the Chinese face: insights from psychology*. Hong Kong ; New York: Oxford University Press.

Bridges, A. J., Andrews, A. R., Villalobos, B. T., Pastrana, F. A., Cavell, T. A., & Gomez, D. (2014). Does Integrated Behavioral Health Care Reduce Mental Health Disparities for Latinos? Initial Findings. *Journal of Latina/o Psychology*, *2*(1), 37–53. http://doi.org/10.1037/lat0000009

Brofenbrenner, U. (1977). Toward an Experimental Ecology of Human Development. *American Psychologist*, *32*(7), 513–531. http://doi.org/10.1037/0003-066X.32.7.513

Byers, A. L., Lai, A. X., Areán, P., Nelson, J. C., & Yaffe, K. (2016). Mental health service use across the life course among adults with psychiatric disorders and prior suicidal behavior. *Psychiatric Services*, *67*(4), 452–455. http://doi.org/10.1176/appi.ps.201500019

Chadda, R. K., Agarwal, V., Singh, M. C., & Raheja, D. (2001). Help seeking behaviour of psychiatric patients before seeking care at a mental hospital. *The International Journal of Social Psychiatry*, *47*(4), 71–78. http://doi.org/10.1177/002076400104700406

Chang, T., & Chang, R. (2004). Counseling and the Internet: Asian American and Asian International College Students' Attitudes Toward Seeking Online Professional

Psychological Help. *Journal of College Counseling*, *7*(2), 140–149. http://doi.org/10.1002/j.2161-1882.2004.tb00245.x

Cheng, J. K. Y., Fancher, T. L., Ratanasen, M., Conner, K. R., Duberstein, P. R., Sue, S., & Takeuchi, D. T. (2010). Lifetime suicidal ideation and suicide attempts in Asian Americans. *Asian American Journal of Psychology*, *1*(1), 18–30. http://doi.org/10.1037/a0018799

Cheung, F. M. (1985). An overview of psychopathology in Hong Kong with special reference to somatic presentation, in Chinese culture and mental health. In W. S. Tseng & D. Wu (Eds.), *Chinese Culture and Mental Health* (pp. 287–304). Orlando, FL: Academic Press, Inc.

Cheung, F. M., & Lau, B. W. K. (1982). Situational variations of help-seeking behavior among Chinese patients. *Comprehensive Psychiatry*, *23*(3), 252–262. http://doi.org/10.1016/0010-440X(82)90073-6

Cho, H., Kim, I., & Velez-Ortiz, D. (2014). Factors Associated with Mental Health Service Use Among Latino and Asian Americans. *Community Mental Health Journal*, *50*(8), 960–967. http://doi.org/10.1007/s10597-014-9719-6

Chung Pang, K. Y. (1990). Hwabyung: The construction of a korean popular illness among korean elderly immigrant women in the United States. *Culture, Medicine and Psychiatry*, *14*(4), 495–512. http://doi.org/10.1007/BF00050823

Cinnirella, M., & Loewenthal, K. M. (1999). Religious and ethnic group influences on beliefs about mental illness: a qualitative interview study. *The British Journal of Medical Psychology*, *72*(4), 505–524. http://doi.org/10.1348/000711299160202

Cook, B., Alegría, M., Lin, J. Y., & Guo, J. (2009). Pathways and correlates connecting Latinos' mental health with exposure to the United States. *American Journal of Public Health*, *99*(12), 2247–2254. http://doi.org/10.2105/AJPH.2008.137091

Duldulao, A. A., Takeuchi, D. T., & Hong, S. (2009). Correlates of Suicidal Behaviors Among Asian Americans. *Archives of Suicide Research*, *13*(3), 277–290. http://doi.org/10.1080/13811110903044567

Eisenberg, D., Gollust, S. E., Golberstein, E., & Hefner, J. L. (2007). Prevalence and Correlates of Depression, Anxiety, and Suicidality Among University Students. *American Journal of Orthopsychiatry*, *77*(4), 534–542. http://doi.org/10.1037/0002-9432.77.4.534

Eisenberg, D., Hunt, J., & Speer, N. (2013). Mental health in American colleges and universities: variation across student subgroups and across campuses. *The Journal of Nervous and Mental Disease*, *201*(1), 60–7. http://doi.org/10.1097/NMD.0b013e31827ab077

Flaskerud, J. H., & Hu, L. (1992). Relationship of ethnicity to psychiatric diagnosis. *Journal of Nervous and Mental Disease*. http://doi.org/10.1097/00005053-199205000-00003

Gibb, B. E., Mcgeary, J. E., & Beevers, C. G. (2016). Attentional biases to emotional stimuli: Key components of the RDoC constructs of sustained threat and loss. *American Journal of Medical Genetics, Part B: Neuropsychiatric Genetics*, *171*(1), 65–80. http://doi.org/10.1002/ajmg.b.32383

Graham, J. W., Olchowski, A. E., & Gilreath, T. D. (2007). How many imputations are really needed? Some practical clarifications of multiple imputation theory. *Prevention Science*, *8*(3), 206–213. http://doi.org/10.1007/s11121-007-0070-9

Graves, T. D. (1967). Psychological Acculturation in a Tri-Ethnic Community. *Southwestern Journal of Anthropology*, *23*(4), 337–350.

Hayton, J. C., Allen, D. G., & Scarpello, V. (2004). Factor Retention Decisions in Exploratory Factor Analysis: a Tutorial on Parallel Analysis. *Organizational Research Methods*, *7*(2), 191–205. http://doi.org/10.1177/1094428104263675

Heeringa, S. G., Wagner, J., Torres, M., Duan, N., Adams, T., & Berglund, P. (2004). Sample designs and sampling methods for the Collaborative Psychiatric Epidemiology Studies (CPES). *International Journal of Methods in Psychiatric Research*, *13*(4), 221–40.

Henson, R. K., & Roberts, J. K. (2006). Use of Exploratory Factor Analysis in Published Research. *Educational and Psychological Measurement*, *66*(3), 11–14. http://doi.org/10.1177/0013164405282485

Hong, J., NovickBonomi, A., Ph, D., & Schoppe-sullivan, S. (2012). A Dyadic Examination of Intimate Partner Violence Using Bowen Family Systems Theory and Adult Romantic Attachment Theory DISSERTATION Presented in Partial Fulfillment of the Requirements for the Deg, D., Montgomery, W., Aguado, J., Duenas, H., Peng, X., & Haro, J. M. (2015). Should unexplained painful physical symptoms be considered within the spectrum of depressive symptoms? *Clinical Practice and Epidemiology in Mental Health*, *11*(1), 130–139. http://doi.org/10.2174/1745017901511010130

Hou, Y., Kim, S. Y., Wang, Y., Shen, Y., & Orozco-Lapray, D. (2015). Longitudinal Reciprocal Relationships Between Discrimination and Ethnic Affect or Depressive Symptoms Among Chinese American Adolescents. *Journal of Youth and Adolescence*, *44*(11), 2110–2121. http://doi.org/10.1007/s10964-015-0300-6

Hwang, W.-C. (2015). Treating depression in Asian American adults. In H. Grey & B. N. Hall-Clark (Eds.), *Cultural considerations in Asian and Pacific Islander American mental health* (pp. 13–28). New York: Oxford University Press.

John, D. A., de Castro, A. B., Martin, D. P., Duran, B., & Takeuchi, D. T. (2012). Does an immigrant health paradox exist among Asian Americans? Associations of nativity and occupational class with self-rated health and mental disorders. *Social Science and Medicine*, *75*(12), 2085–2098. http://doi.org/10.1016/j.socscimed.2012.01.035

Kessler, R. C., & Üstün, T. B. (2004). The World Mental Health (WMH) Survey Initiative version of the World Health Organization (WHO) Composite International Diagnostic Interview (CIDI). *International Journal of Methods in Psychiatric Research*, *13*(2), 93–121. http://doi.org/10.1002/mpr.168

Kim, H. J., Park, E., Storr, C. L., Tran, K., & Juon, H. S. (2015). Depression among Asian-American adults in the community: Systematic review and meta-analysis. *PLoS ONE*, *10*(6), 1–20. http://doi.org/10.1371/journal.pone.0127760

Kim, J. E., Saw, A., & Zane, N. W. S. (2015). The influence of psychological symptoms on mental health literacy of college students. *American Journal of Orthopsychiatry*, *85*(6), 620–630. http://doi.org/10.1037/ort0000074

Kim, J. M., & López, S. R. (2014). The expression of depression in Asian Americans and European Americans. *Journal of Abnormal Psychology*, *123*(4), 754–63. http://doi.org/10.1037/a0038114

Kirmayer, L. J. (1989). Cultural variations in the response to psychiatric disorders and emotional distress. *Social Science & Medicine*, *29*(3), 327–339. http://doi.org/10.1016/0277-9536(89)90281-5

Kish, L. (1992). Weighting for Unequal P. *Journal of Official Statistics*, *8*(2), 183–200.

Kleinman, A. M. (1982). Neurasthenia and depression: A study of somatization and culture in China. *Culture, Medicine and Psychiatry*, *6*(2), 117–190. http://doi.org/10.1007/BF00051427

Kleinman, A. M. (1986). Social origins of distress and disease: depression, neurasthenia, and pain in modern China. New Haven: Yale University Press.

Kleinman, A. M. (1988). *Rethinking psychiatry: from cultural category to personal experience*. New York : London: Free Press ; Collier Macmillan.

Komiya, N., Good, G. E., & Sherrod, N. B. (2000). Emotional openness as a predictor of college students' attitudes toward seeking psychological help. *Journal of Counseling Psychology*, *47*(1), 138–143. http://doi.org/10.1037/0022-0167.47.1.138

Kozak, M. J., & Cuthbert, B. N. (2016). The NIMH Research Domain Criteria Initiative: Background, Issues, and Pragmatics. *Psychophysiology*, *53*(3), 286–297. http://doi.org/10.1111/psyp.12518

Kuo, W. H. (1984). Prevalence of Depression among Asian-Americans. *Journal of Nervous & Mental Disease*, *172*(8), 449–457.

Lin, K.-M., Inui, T., Kleinman, A. M., & Womack, W. (1982). Sociocultural determinants of help-seeking behavior of patients with mental illness. *The Journal of Nervous and Mental Disease*, *170*(2), 78–85.

Lin, T.-Y., & Lin, M.-C. (1978). Service Delivery Issues in Asian-North American Communities. *American Journal of Psychiatry*, *135*(4), 454–456. http://doi.org/10.1080/19397030902947041

Liu, J., Meng, X.-L., Chen, C., & Alegría, M. (2013). Statistics can lie but can also correct for lies: Reducing response bias in NLAAS via Bayesian imputation. *Statistics and Its Interface*, *6*(3), 387–398. http://doi.org/10.4310/SII.2013.v6.n3.a9

Loebach Wetherell, J., Kim, D. S., Lindamer, L. A., Thorp, S. R., Hawthorne, W., Kim, K., … Jeste, D. V. (2007). Anxiety disorders in a public mental health system: Clinical characteristics and service use patterns. *Journal of Affective Disorders*, *104*(1–3), 179–183.

http://doi.org/10.1016/j.jad.2007.02.021

Marks, A. K., Ejesi, K., & Garcia Coll, C. (2014). Understanding the U.S. immigrant paradox in childhood and adolescence. *Child Development Perspectives*, *8*(2), 59–64. http://doi.org/10.1111/cdep.12071

Matsuoka, J. K., Breaux, C., & Ryujin, D. H. (1997). National Utilization of Mental Health Services by Asian Americans/Pacific Islanders. *Journal of Community Psychology*, *25*(2), 141–145. http://doi.org/10.1002/(SICI)1520-6629(199703)25:2<141::AID-JCOP3>3.0.CO;2-0

Meyer, O. L., Zane, N. W. S., Cho, Y. I., & Takeuchi, D. T. (2009). Use of specialty mental health services by Asian Americans with psychiatric disorders. *Journal of Consulting and Clinical Psychology*, *77*(5), 1000–1005. http://doi.org/10.1037/a0017065

National Center for Health Statistics (US). (2013). Health, United States, 2012.

Nguyen, D., & Bornheimer, L. A. (2014). Mental health service use types among Asian Americans with a psychiatric disorder: considerations of culture and need. *The Journal of Behavioral Health Services & Research*, *41*(4), 520–528. http://doi.org/10.1007/s11414-013-9383-6

Novick, D., Montgomery, W., Aguado, J., Kadziola, Z., Peng, X., Brugnoli, R., & Haro, J. M. (2013). Which somatic symptoms are associated with an unfavorable course in Asian patients with major depressive disorder? *Journal of Affective Disorders*, *149*(1–3), 182–8. http://doi.org/10.1016/j.jad.2013.01.020

Novick, D., Montgomery, W., Bertsch, J., Peng, X., Brugnoli, R., & Haro, J. M. (2015). Impact of painful physical symptoms on depression outcomes in elderly Asian patients. *International Psychogeriatrics*, *27*(2), 305–312. http://doi.org/10.1017/S1041610214002142

Novick, D., Montgomery, W., Kadziola, Z., Moneta, V., Peng, X., Brugnoli, R., & Haro, J. M. (2013). Do concomitant pain symptoms in patients with major depression affect quality of life even when taking into account baseline depression severity? *Patient Preference and Adherence*, *7*(May 2016), 463–70. http://doi.org/10.2147/PPA.S41703

Parker, G., Gladstone, G., & Kuan, T. C. (2001). Depression in the planet's largest ethnic group: The Chinese. *The American Journal of Psychiatry*, *158*(6), 857–64.

Paulus, M. P., Stein, M. B., Craske, M. G., Bookheimer, S., Taylor, C. T., Simmons, A. N., … Fan, B. (2017). Latent Variable Analysis Of Positive And Negative Valence Processing Focused On Symptom And Behavioral Units Of Analysis In Mood And Anxiety Disorders. *Journal of Affective Disorders*, (December 2016), 1–13. http://doi.org/10.1016/j.jad.2016.12.046

Pew Social & Demographic Trends. (2012). *The Rise of Asian Americans*. Washington, D.C.

Phinney, J. S., Ong, A. D., & Madden, T. (2000). Cultural values and intergenerational value discrepancies in immigrant and non-immigrant families. *Child Development*, *71*(2), 528–

539.

Potter, Frank, J. (1990). A Study of Procedures to Identify and Trim Extreme Sample Weights. In *Proceedings of the American Statistical Association, Section on Survey Research Methods*.

Proctor, B. D., & Dalaker, J. (2002). *Poverty in the United States: 2001. Current Population Reports.* Washington, D.C.

Redfield, R., Linton, R., & Herskovits, M. J. (1936). Memorandum for the Study of Acculturation. *American Anthropologist*, *38*(1), 149–152.

Rehm, J., Üstün, T. B., Saxena, S., Nelson, C. B., Chatterji, S., Ivis, F., & Adlaf, E. (1999). On the development and psychometric testing of the WHO screening instrument to assess disablement in the general population. *International Journal of Methods in Psychiatric Research*, *8*(2), 110–122. http://doi.org/10.1002/mpr.61

Scott, K. M., Hwang, I., Chiu, W.-T., Kessler, R. C., Sampson, N. A., Angermeyer, M., … Nock, M. K. (2010). Chronic physical conditions and their association with first onset of suicidal behavior in the world mental health surveys. *Psychosomatic Medicine*, *72*(7), 712–9. http://doi.org/10.1097/PSY.0b013e3181e3333d

Shiang, J., Blinn, R., Bongar, B., Stephens, B., Allison, D., & Schatzberg, A. F. (1997). Suicide in San Francisco, CA: a comparison of Caucasian and Asian groups, 1987-1994. *Suicide & Life-Threatening Behavior*, *27*(1), 80–91.

Substance Abuse and Mental Health Services Administration. (2012). Results from the 2010 National Survey on Drug Use and Health: Mental Health Findings. Rockville, MD: Substance Abuse and Mental Health Services Administration.

Substance Abuse and Mental Health Services Administration. (2015). *Racial/ Ethnic Differences in Mental Health Service Use among Adults. HHS Publication No. SMA-15-4906*. Rockville, MD.

Sue, D. W. (1996). Asian men in groups. In M. P. Andronico (Ed.), *Men in groups: insights, interventions, and psychoeducational work*. Washington, DC: American Psychological Association.

Sue, S., & McKinney, H. (1975). Asian Americans in the Community Mental Health Care System. *American Jouranl of Ortho-Psychiatry*, *45*(April 1974), 111–118.

Sue, S., Sue, D. W., Sue, L., & Takeuchi, D. T. (1995). Psychopathology among Asian Americans: a model minority? *Cultural Diversity and Mental Health*, *1*(1), 39–51. http://doi.org/10.1037/1099-9809.1.1.39

Tang, N. K. Y., & Crane, C. (2006). Suicidality in chronic pain: a review of the prevalence, risk factors and psychological links. *Psychological Medicine*, *36*(January), 575–586. http://doi.org/10.1017/S0033291705006859

Ten Have, M., Lamers, F., Wardenaar, K., Beekman, A., De Jonge, P., Van Dorsselaer, S., … De

Graaf, R. (2016). The identification of symptom-based subtypes of depression: A nationally representative cohort study. *Journal of Affective Disorders*, *190*, 395–406. http://doi.org/10.1016/j.jad.2015.10.040

Tummala-Narra, P., Alegría, M., & Chen, C.-N. (2012). Perceived discrimination, acculturative stress, and depression among South Asians: Mixed findings. *Asian American Journal of Psychology*, *3*(1), 3–16. http://doi.org/10.1037/a0024661

Uba, L. (1994). *Asian Americans: personality patterns, identity, and mental health*. New York: Guilford Press.

Velicer, W. F. (1976). Determining the number of components from the matrix of partial correlations. *Psychometrika*, *41*(3).

Woody, M. L., & Gibb, B. E. (2015). Integrating NIMH Research Domain Criteria (RDoC) into depression research. *Current Opinion in Psychology*, *4*, 6–12. http://doi.org/10.1016/j.copsyc.2015.01.004

Yamashiro, G., & Matsuoka, J. K. (1997). Help-seeking among Asian and Pacific Americans: A multiperspective analysis. *Social Work*, *42*(2), 176–186.

Yang, L. H., & Wonpat-Boria, A. J. (2007). Psychopathology among Asian-Americans. In F. T. L. Leong, A. G. Inman, A. Ebreo, L. H. Yang, L. M. Kinoshita, & M. Fu (Eds.), *Handbook of Asian American psychology* (2nd ed., pp. 379–405). Thousand Oaks: Sage.

Yeomans, K., & Golder, P. (1982). The Guttman-Kaiser criterion as a predictor of the number of common factors. *The Statistician*, *31*(3), 221–229. http://doi.org/10.2307/2987988

Ying, Y.-W., & Miller, L. S. (1992). Help-seeking behavior and attitude of Chinese Americans regarding psychological problems. *American Journal of Community Psychology*, *20*(4), 549–556.

Young, C. B., Fang, D. Z., & Zisook, S. (2010). Depression in Asian-American and Caucasian undergraduate students. *Journal of Affective Disorders*, *125*(1–3), 379–382. http://doi.org/10.1016/j.jad.2010.02.124

Young, K. N. J. (1998). *Helpseeking for emotional/psychological problems among Chinese-Americans in the Los Angeles area: An examination of the effects of acculturation* (Ph.D.). University of California, Los Angeles, United States -- California.

Table II.1 Weighted Sample Characteristics ($N = 890$)

Variables	Total Sample $Nw = 3,260,251$ % or M (SD)	Psychiatrist $Nw = 900,430$ % or M (SD)		Other Mental Health Provider $Nw = 900,430$ % or M (SD)		Physical Health Provider $Nw = 900,430$ % or M (SD)		Alternative Care Providers/ Self-Help $Nw = 2,527,004$ % or M (SD)		Psychological counseling/therapy $Nw = 2,527,004$ % or M (SD)	
		No 71%	Yes 29%	No 48%	Yes 52%	No 60%	Yes 40%	No 85%	Yes 15%	No 81%	Yes 19%
Age	39.38 (14.51)	41.33 (16.06)	45.28 (22.37)	46.32 (18.02)	37.44 (18.16)	**39.30** **(15.31)**	**47.23** **(21.40)**	38.79 (14.47)	42.20 (17.79)	39.68 (15.11)	35.92 (13.45)
Gender											
Women	53.0	**66.0**	**46.7**	56.6	63.8	58.0	63.9	52.6	57.3	**51.5**	**61.1**
Men	47.0	**34.0**	**53.3**	43.4	36.2	42.0	36.1	47.4	42.7	**48.5**	**38.9**
Ethnicity											
Vietnamese	11.8	5.9	10.3	10.4	4.2	5.6	9.6	13.2	6.2	13.5	6.1
Filipino	22.2	14.9	21.2	24.7	22.9	25.8	20.8	21.0	23.6	20.9	23.7
Chinese	30.6	32.4	21.1	26.6	31.5	29.7	28.2	31.7	26.8	31.1	30.3
Other Asian	35.4	36.8	47.5	38.3	41.4	38.9	41.4	34.1	43.3	34.4	40.0
Education											
0-11 years	10.6	7.7	10.4	10.4	6.7	7.0	10.7	11.6	7.6	11.5	8.6
12 years	17.2	13.3	17.6	15.1	14.0	15.9	12.5	18.6	10.1	18.3	13.1
13-15 years	28.0	33.0	37.7	29.3	39.1	30.2	40.9	27.4	27.6	25.8	34.3
≥ 16 years	44.3	46.0	34.3	45.2	40.2	46.9	35.9	42.4	54.7	44.3	43.9
Marital Status											
Married/ Cohabitating	59.4	51.4	57.2	**61.8**	**45.1**	51.0	56.3	59.4	58.2	**61.5**	**49.4**
Single/Widowed/ Separated/Divorced	40.6	48.6	42.8	**38.2**	**54.9**	49.0	43.7	40.6	41.8	**38.5**	**50.6**
Poverty Index	5.75 (4.79)	5.98 (4.90)	4.00 (4.43)	4.83 (5.09)	5.96 (4.34)	5.62 (4.96)	4.84 (4.62)	5.99 (4.93)	4.90 (4.05)	5.78 (4.84)	6.40 (4.82)
Religious Affiliation											
Christian	69.7	69.5	85.6	77.2	70.5	72.1	76.0	67.1	77.3	68.5	70.0
Atheist/No religion	30.3	30.5	14.4	22.8	29.5	27.9	24.0	32.9	22.7	31.5	30.0
Religious Attendance	2.80 (1.32)	**3.16** **(1.34)**	**2.66** **(1.45)**	**3.12** **(1.41)**	**2.79** **(1.37)**	3.17 (1.42)	2.75 (1.34)	**2.73** **(1.31)**	**3.36** **(1.35)**	2.81 (1.32)	2.80 (1.42)
English proficiency	2.78 (0.98)	2.84 (1.13)	2.94 (1.06)	**2.56** **(1.11)**	**3.35** **(0.91)**	2.79 (1.12)	2.99 (1.08)	**2.78** **(0.98)**	**2.80** **(1.13)**	**2.69** **(0.98)**	**3.45** **(0.81)**

64

Acculturative Stress	8.67 (6.15)	8.34 (5.28)	9.79 (6.46)	**7.54 (5.78)**	**10.78 (5.15)**	8.53 (5.18)	9.27 (6.42)	8.36 (6.13)	9.98 (5.22)	8.46 (6.16)	9.35 (5.07)
Personal Stigma	1.86 (0.87)	1.79 (0.90)	1.84 (1.03)	1.75 (0.98)	1.90 (0.90)	1.87 (0.99)	1.73 (0.88)	1.84 (0.87)	1.99 (0.92)	**1.90 (0.89)**	**1.60 (0.71)**
Public Stigma	2.17 (1.03)	2.14 (1.00)	1.84 (0.97)	2.15 (1.02)	1.85 (0.95)	**2.25 (1.00)**	**1.74 (0.92)**	2.17 (1.03)	2.25 (1.02)	2.21 (1.03)	1.95 (0.96)
Region											
Northeast	15.1	18.0	18.2	18.3	17.8	12.2	27.0	15.7	16.2	17.2	9.4
Midwest	7.4	2.7	11.0	3.6	6.5	4.8	5.5	6.7	11.0	7.2	8.3
South	8.7	10.9	11.5	12.8	9.4	13.9	6.8	9.4	12.7	9.4	12.3
West	68.9	68.5	59.3	65.3	66.2	69.1	60.7	68.2	60.1	66.2	70.1

Note. Nw = weighted sample size. Results shown account for complex survey design due to clustering, stratification, and unequal probability sampling.

Statistically significant differences (p <.05) are bolded: these are based on a Wald chi-square test for independence for categorical variables and 2-sample t-test for continuous variables.

Table II.2 Fit Parameters for Latent Class Analysis of Depressive and Chronic Physical Symptoms ($N = 309$)

No. of Classes	Log-Likelihood	BIC	ssaBIC	AIC	Relative Entropy	Proportion of individuals in each class (*SE*)			
						Class 1	Class 2	Class 3	Class 4
1	-8554.24	17446.75	17259.62	17226.48	-	1.00	-	-	-
2	-7833.31	16371.81	15981.71	15912.61	0.91	0.45 (0.03)	0.55 (0.03)	-	-
3	-7598.67	16133.24	15540.15	15435.10	0.92	0.49 (0.03)	0.27 (0.03)	0.25 (0.03)	-
4	**-7333.19**	**16085.27**	**15289.20**	**15148.21**	**0.93**	**0.39 (0.03)**	**0.27 (0.04)**	**0.20 (0.03)**	**0.14 (0.03)**

Note. BIC = Bayesian information criterion. ssaBIC = sample size adjusted BIC. AIC = Akaike information criterion.

Table II.3 Descriptives of the Four Latent Symptom Classes

Variables	Class 1: Non-anhedonic affective DSM Nw = 458,847 % or M (SD)	Class 2: Comorbid pains and disability Nw = 263,518 % or M (SD)	Class 3: Hopelessness and worthlessness Nw = 266,527 % or M (SD)	Class 4: Chronic fatigue/GI, guilt, and suicidality Nw = 159,246 % or M (SD)
Age	36.89 (13.76)	37.21 (15.03)	**45.49 (15.44)**	35.89 (15.10)
Gender				
Women	63.3	45.2	59.1	70.0
Men	36.7	54.8	40.9	30.0
Ethnicity				
Vietnamese	10.8	14.3	8.4	7.9
Filipino	16.4	19.8	20.3	18.0
Chinese	33.9	38.8	22.8	27.4
Other Asian	38.9	27.0	48.5	46.7
Age at immigration				
US Born	25.6	31.9	40.9	35.6
≤ 12 years	18.7	25.3	13.3	21.3
13-17 years	3.8	6.0	2.5	7.4
18-34 years	42.0	22.3	19.8	28.4
≥ 35 years	9.9	14.6	23.5	7.2
Depression severity	2.04 (0.97)	**3.09 (0.87)**	2.44 (1.00)	2.97 (0.89)
DSM-DYS lifetime[a]	**95.2**	86.3	90.3	52.8
DSM-MDE lifetime[a]	**61.4**	13.8	41.8	9.2
Lifetime service use				
Psychiatrist[a]	13.6	44.5	43.8	**55.8**
Other mental health provider[a]	55.3	54.5	56.5	71.3
Physical health provider[a]	20.9	36.0	**65.5**	48.9
Alternative care provider/ self-help[a]	17.0	14.7	29.9	28.1
Psychological counseling/therapy[a]	22.6	47.2	28.2	**55.0**

Note. Nw = weighted sample size. [a] Binary variable (no/yes) and reference category is no. Results shown account for complex survey design due to clustering, stratification, and unequal probability sampling. Variables with significant differences found (p <.05) and their highest mean/percentage are bolded: these are based on a Wald chi-square test for independence for categorical variables and 2-sample t-test for continuous variables.

Table II.4 Logistic Regression Results of Latent Symptom Classes Predicting Lifetime Mental Health Service Use

	Psychiatrist N=234	Other Mental Health Provider N=234	Physical Health Provider N=234	Alternative Care Provider/ Self-Help N=686	Psychological counseling/therapy N=686
	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
(Constant)	0.20 (0.02-1.73)	0.07 (0.00-1.24)	**0.06* (0.01-0.45)**	**0.01*** (0.00-0.04)**	**0.01** (0.00-0.13)**
Need Factors					
Symptom classes					
Class 2[b]: Comorbid pains and disability	3.48[§] (1.07-11.31)	1.20 (0.43-3.34)	1.70 (0.79-3.66)	**2.50* (1.19-5.24)**	**2.91* (1.09-7.74)**
Class 3[b]: Hopelessness and worthlessness	2.48 (0.97-6.34)	0.91 (0.30-2.77)	1.66 (0.52-5.27)	1.30 (0.59-2.88)	0.85 (0.43-1.69)
Class 4[b]: Chronic fatigue/GI, guilt, and suicidality	2.37[§] (1.02-5.47)	1.78 (0.64-4.98)	1.69 (0.63-4.50)	**3.08* (1.14-8.32)**	1.33 (0.58-3.07)
Perceived need for care[a]	**2.47* (1.33-4.60)**	**1.98* (1.11-3.55)**	1.64 (0.95-2.81)	**3.75*** (2.07-6.80)**	**7.84*** (3.62-17.0)**
Enabling/Disabling Factors					
Poverty index	0.98 (0.91-1.06)	1.05 (0.99-1.11)	0.97 (0.92-1.03)	1.02 (0.98-1.06)	1.03 (0.99-1.03)
English fluency	1.20 (0.78-1.86)	**1.71* (1.20-2.42)**	0.97 (0.68-1.37)	1.31[§] (0.97-1.76)	**1.99*** (1.42-2.79)**
Acculturative stress	1.04 (0.98-1.10)	0.99 (0.93-1.06)	0.97 (0.92-1.02)	1.01 (0.97-1.04)	1.05 (1.01-1.10)
Predisposing Factors					
Gender (ref. = Male)	0.51 (0.10-2.60)	2.46 (0.78-7.79)	**3.26* (1.26-8.41)**	0.60 (0.29-1.25)	0.56 (0.21-1.51)
Age	1.01 (0.97-1.05)	1.02 (0.99-1.06)	**1.06** (1.03-1.10)**	1.00 (0.98-1.02)	1.00 (0.96-1.03)
Gender x Age	1.01 (0.97-1.05)	0.97 (0.93-1.01)	0.97 (0.94-1.01)	**1.03* (1.01-1.06)**	1.04 (0.99-1.09)
Education	0.70 (0.48-1.02)	0.90 (0.64-1.27)	1.27 (0.87-1.85)	1.04 (0.83-1.31)	0.94 (0.66-1.34)
Not married[c]	1.09 (0.52-2.30)	**2.65** (1.66-4.24)**	0.79 (0.50-1.26)	0.91 (0.55-1.53)	1.50 (0.82-2.77)
Religious attendance	0.97 (0.74-1.27)	0.82 (0.65-1.04)	1.03 (0.77-1.39)	**1.39** (1.14-1.70)**	0.93 (0.77-1.14)
Personal stigma	0.83 (0.48-1.43)	1.36 (0.89-2.07)	1.17 (0.71-1.94)	1.10 (0.79-1.54)	0.90 (0.67-1.19)
Public stigma	1.14 (0.76-1.69)	0.75 (0.52-1.07)	0.88 (0.63-1.23)	0.92 (0.70-1.19)	**0.72* (0.54-0.96)**
Environment					
Region (ref. =West)					
Northeast	**0.05 (0.02-0.14)***	0.63 (0.22-1.78)	**2.70* (1.49-4.87)**	1.44 (0.89-2.35)	0.50 (0.08-3.11)
Midwest and South	1.96 (0.76-5.03)	0.66 (0.23-1.85)	0.40 (0.13-1.20)	1.12 (0.40-3.13)	1.34 (0.52-3.40)

Note. Variables are organized under socio-behavioral factors contributing to service use in Andersen's (1995) socio-behavioral model.

[a] Binary variable (no/yes) and reference category is no. [b] Reference category is Class 1 (non-anhedonic depressive). [c] Reference category is married or cohabitating. [§]$p < .10$; *$p < .05$; **$p < .01$; ***$p \le .001$.

Table II.5 Factor Analysis Statistics for Lifetime Chronic Physical Symptom Items ($N = 886$)

Item	Endorsement N (%)	Factor 1 $\alpha^{\ddagger} = 0.80$	h^2	r^2	M	SD
1. Chest pain	44 (4.9)	**0.80**	0.64	0.50	0.05	0.22
2. Shortness of breath	76 (8.5)	**0.76**	0.57	0.52	0.09	0.28
3. Dizziness	69 (7.7)	**0.75**	0.57	0.52	0.08	0.27
4. Fainting spells	19 (2.1)	**0.74**	0.54	0.38	0.02	0.14
5. Back pain	154 (17.2)	**0.74**	0.54	0.59	0.17	0.38
6. Numbness/tingling	93 (10.4)	**0.72**	0.52	0.51	0.10	0.31
7. Heart racing/ pounding	82 (9.2)	**0.70**	0.48	0.47	0.09	0.29
8. Arm/leg/joint pain	172 (19.3)	**0.68**	0.47	0.53	0.19	0.39
9. Nausea/gas/ indigestion	101 (11.3)	**0.66**	0.43	0.47	0.11	0.32
10. Back/neck problems	224 (25.1)	**0.62**	0.38	0.49	0.25	0.43
11. Diarrhea/ constipation	106 (11.9)	**0.60**	0.36	0.42	0.12	0.32
12. Chronic fatigue	153 (17.1)	**0.60**	0.36	0.41	0.17	0.38
13. Stomach pain	142 (15.9)	**0.58**	0.34	0.43	0.16	0.37
14. Other chronic pain	104 (11.6)	**0.56**	0.31	0.39	0.12	0.32
15. Headaches	194 (21.7)	**0.53**	0.28	0.35	0.22	0.41
16. Lump in throat	21 (2.4)	**0.53**	0.28	0.21	0.02	0.15

Note. Factor loadings > 0.40 are in bold. Factor 1 = Chronic physical arousal/pains. h^2 = item communalities at extraction; r^2 = item-total correlations. ‡Cronbach's alpha.

Table II.6 Factor Analysis Statistics for Depressive Symptom Items ($N = 254$)

Item	Endorsement N (%)	Factor 1 $\alpha^{\ddagger} = 0.74$	Factor 2 $\alpha^{\ddagger} = 0.80$	Factor 3 $\alpha^{\ddagger} = 0.82$	Factor 4 $\alpha^{\ddagger} = 0.79$	h^2	r^2	M	SD
1. Lost interest in things	185 (72.8)	0.12	-0.03	0.06	**0.74**	0.57	0.59	0.73	0.45
2. Low energy and tired	212 (83.5)	0.34	-0.03	-0.01	**0.68**	0.58	0.54	0.83	0.37
3. Nothing is fun	166 (65.4)	0.13	0.10	0.17	**0.67**	0.51	0.60	0.65	0.48
4. Nothing could cheer up	146 (57.5)	0.11	0.10	0.21	**0.67**	0.51	0.55	0.57	0.50
5. Less talkative	202 (79.5)	0.08	-0.04	0.05	**0.64**	0.41	0.47	0.80	0.40
6. Talk/move more slowly	128 (50.4)	0.14	0.07	0.17	**0.59**	0.40	0.56	0.50	0.50
7. Felt hopeless	132 (52.0)	0.51	-0.13	0.29	**0.51**	0.62	0.52	0.46	0.50
8. More energy than usual	7 (2.8)	-0.12	0.00	0.01	**-0.51**	0.28	0.24	0.18	0.16
9. Slow/ mixed thoughts	147 (57.9)	0.20	0.17	0.18	**0.48**	0.33	0.51	0.45	0.49
10. Unable to cope with daily responsibilities	114 (44.9)	0.43	0.04	0.32	**0.46**	0.50	0.53	0.48	0.50
11. Want to be alone	177 (69.7)	0.18	-0.42	0.23	**0.43**	0.45	0.35	0.30	0.46
12. Sudden fear/panic	82 (32.3)	0.36	0.20	0.17	0.39	0.35	0.40	0.36	0.47
13. Indecisiveness	138 (54.3)	0.20	0.20	0.19	0.33	0.23	0.40	0.35	0.50
14. Small appetite	177 (69.7)	-0.16	0.29	-0.04	0.31	0.21	0.20	0.18	0.46
15. Felt sad/depressed	237 (93.3)	0.13	0.02	0.17	0.22	0.10	-	-	-
16. Thought about suicide	69 (27.2)	0.27	-0.09	**0.93**	0.05	0.95	0.81	0.27	0.45
17. Made suicide plan	30 (11.8)	0.20	0.13	**0.85**	0.19	0.81	0.72	0.12	0.32
18. Attempted suicide	23 (0.09)	0.08	0.12	**0.84**	0.13	0.75	0.65	0.09	0.29
19. Would be better if dead	104 (40.9)	0.33	-0.04	**0.80**	0.26	0.82	0.71	0.41	0.49
20. Often thought of death	129 (50.8)	0.36	-0.07	**0.65**	0.19	0.60	0.55	0.51	0.50
21. Feel worthless	101 (39.8)	**0.89**	-0.02	0.30	0.34	1.00	0.76	0.40	0.49
22. Not as good as others	157 (61.8)	**0.84**	0.14	0.18	0.20	0.80	0.73	0.62	0.49
23. Lost self-confidence	189 (74.4)	**0.65**	-0.14	0.21	0.26	0.55	0.54	0.74	0.44
24. Felt extreme guilt	102 (40.2)	**0.53**	-0.10	0.33	0.10	0.41	0.48	0.40	0.49
25. Trouble concentrating	186 (73.2)	**0.44**	0.31	0.06	0.42	0.47	0.44	0.73	0.44
26. Felt nervous/anxious	147 (57.9)	0.39	0.31	0.16	0.11	0.29	0.42	0.58	0.49
27. Discouraged	215 (84.6)	0.34	-0.11	0.34	0.34	0.36	0.32	0.85	0.36
28. Irritable/grouchy/moody	158 (62.2)	0.31	0.19	0.19	0.29	0.25	0.41	0.62	0.49
29. Larger appetite	22 (0.087)	0.31	-0.30	0.23	-0.15	0.26	-	-	-
30. Cried often	155 (61.0)	0.20	0.00	0.08	0.08	0.05	-	-	-
31. Slept more than usual	27 (10.6)	0.15	**-0.97**	-0.17	-0.03	1.00	0.74	0.89	0.31
32. Trouble sleeping	200 (78.7)	0.01	**0.83**	0.04	0.21	0.74	0.74	0.79	0.41
33. Restless	28 (11.0)	0.18	0.27	-0.03	-0.02	0.11	-	-	-

34. Jumping/racing thoughts	31 (12.2)	0.20	0.27	-0.09	-0.25	0.18	-	-	-
Correlations between factors[a]		Factor 1	Factor 2	Factor 3	Factor 4				
	Factor 1	1.00	-	-	-				
	Factor 2	-0.02	1.00	-	-				
	Factor 3	0.02	0.05	1.00	-				
	Factor 4	0.03	0.06	0.12	1.00				

Note. Factor loadings > 0.40 are in bold. Factor 1 = Internal self-deprecation, Factor 2 = Abnormal sleep, Factor 3 = Suicidality, Factor 4 = Apathetic retardation. h^2 = item communalities at extraction; r^2 = item-total correlations. [‡]Cronbach's alpha. r^2, means and standard deviation displayed for items loading on each factor only. [a]Uses the weighted matrix from the specified model.

Table II.7 Forms of Lifetime Mental Health Service Use by Symptom-level Need Factors

	Psychiatrist Nw = 900,430 M (SD)		Other Mental Health Provider Nw = 900,430 M (SD)		Physical Health Provider Nw = 900,430 M (SD)		Alternative Care Providers/ Self-Help Nw = 2,527,004 M (SD)		Psychological counseling/therapy Nw = 2,527,004 M (SD)	
	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Need Factors										
Symptom Factors										
Physical arousal/ pains	0.27 (0.97)	0.38 (1.03)	0.44 (1.09)	0.23 (0.91)	**0.25 (0.84)**	**0.40 (1.16)**	**0.21 (0.87)**	**0.36 (0.98)**	0.30 (0.92)	0.17 (0.86)
Internal self-deprecation	**0.01 (0.78)**	**0.43 (0.69)**	0.30 (0.77)	0.08 (0.77)	0.12 (0.83)	0.24 (0.70)	-0.00 (0.81)	0.10 (0.77)	-0.02 (0.78)	0.09 (0.83)
Abnormal Sleep	**-0.03 (0.86)**	**0.31 (0.69)**	0.01 (0.74)	0.16 (0.86)	**-0.06 (0.84)**	**0.32 (0.73)**	-0.04 (0.84)	0.20 (0.82)	**-0.09 (0.81)**	**0.20 (0.86)**
Suicidality	-0.08 (1.26)	-0.32 (1.22)	0.09 (1.06)	-0.34 (1.34)	-0.15 (1.30)	-0.19 (1.17)	**0.08 (1.15)**	**-0.55 (1.29)**	-0.00 (1.14)	-0.19 (1.33)
Apathetic retardation	-0.04 (1.11)	-0.34 (1.05)	-0.20 (1.04)	-0.12 (1.14)	-0.06 (1.13)	-0.28 (1.03)	0.13 (1.05)	-0.25 (1.10)	0.15 (1.03)	-0.15 (1.13)
Affective depressive symptoms	0.88 (0.22)	0.78 (0.29)	0.83 (0.26)	0.85 (0.24)	0.83 (0.26)	0.86 (0.24)	**0.78 (0.26)**	**0.89 (0.24)**	**0.76 (0.28)**	**0.89 (0.22)**
Severity of depressive experience	2.75 (1.02)	2.94 (0.74)	2.89 (1.03)	2.78 (0.85)	2.78 (0.98)	2.89 (0.86)	**2.53 (0.98)**	**2.97 (0.87)**	**2.52 (1.00)**	**2.83 (0.89)**

Note. Nw = weighted sample size. Results shown account for complex survey design due to clustering, stratification, and unequal probability sampling.

Statistically significant differences ($p < .05$) are bolded: these are based on a Wald chi-square test for independence for categorical variables and 2-sample t-test for continuous variable.

Table II.8 Logistic Regression Results of Symptom-level Need Factors Predicting Lifetime Mental Health Service Use

	Psychiatrist $Nw = 900,430$ OR (95% CI)		Other Mental Health Provider $Nw = 900,430$ OR (95% CI)		Physical Health Provider $Nw = 900,430$ OR (95% CI)		Alternative Care Providers/ Self-Help $Nw = 2,527,004$ OR (95% CI)		Psychological counseling/therapy $Nw = 2,527,004$ OR (95% CI)	
	Model 1: physical symptom factor only	**Model 2:** all symptom experience variables	**Model 1:** physical symptom factor only	**Model 2:** all symptom experience variables	**Model 1:** physical symptom factor only	**Model 2:** all symptom experience variables	**Model 1:** physical symptom factor only	**Model 2:** all symptom experience variables	**Model 1:** physical symptom factor only	**Model 2:** all symptom experience variables
(Constant)	**0.39*** (0.25-0.63)**	0.23 (0.02-2.79)	1.28 (078-2.13)	0.89 (0.08-9.75)	**0.33*** (0.19-0.59)**	0.33 (0.03-4.17)	**0.10*** (0.07-0.15)**	**0.03** (0.00-0.20)**	**0.19*** (0.13-0.29)**	**0.08* (0.01-0.43)**
Need Factors										
Symptom Factors										
Physical arousal/ pains	1.00 (0.99-1.01)	1.00 (0.99-1.01)	0.99 (0.98-1.00)	0.99§ (0.98-1.00)	**1.01* (1.00-1.02)**	1.01§ (1.00-1.02)	**1.01** (1.00-1.01)**	1.00 (1.00-1.01)	1.00 (1.00-1.00)	1.00 (0.99-1.00)
Internal self-deprecation		1.01 (0.99-1.03)		1.00 (0.98-1.01)		1.01 (0.99-1.02)		1.00 (0.99-1.00)		1.00 (0.99-1.01)
Abnormal sleep		1.00 (0.98-1.01)		1.00 (0.99-1.02)		1.00 (0.99-1.01)		1.00 (1.00-1.01)		1.00 (0.99-1.00)
Suicidality		1.00 (0.99-1.02)		1.01 (1.00-1.03)		1.01 (0.99-1.02)		1.01 (1.00-1.01)		1.01 (1.00-1.01)
Apathetic retardation		1.00 (0.98-1.01)		1.00 (0.99-1.02)		1.00 (0.98-1.01)		1.00 (0.99-1.00)		1.00 (0.99-1.00)
Affective depressive symptoms		1.34 (0.26-6.93)		1.09 (0.30-4.00)		0.56 (0.17-1.89)		**3.14* (1.29-7.63)**		**4.81*** (2.31-10.04)**
Severity of depressive experience		0.99 (0.64-2.79)		0.89 (0.57-1.33)		1.04 (0.65-1.67)		1.28 (0.83-1.95)		1.14 (0.86-1.52)

Note. $^{§}p < .10$; $*p < .05$; $**p < .01$; $***p ≤ .001$.

Table II.9 Logistic Regression Results of All Sociobehavioral Factors Predicting Lifetime Mental Health Service Use

	Psychiatrist Nw = 900,430 OR (95% CI)		Other Mental Health Provider Nw = 900,430 OR (95% CI)		Physical Health Provider Nw = 900,430 OR (95% CI)		Alternative Care Providers/ Self-Help Nw = 2,527,004 OR (95% CI)		Psychological counseling/therapy Nw = 2,527,004 OR (95% CI)	
	Model 3: all socio-behavioral factors	Model 4: model 3 + health behavior	Model 3: all socio-behavioral factors	Model 4: model 3 + health behavior	Model 3: all socio-behavioral factors	Model 4: model 3 + health behavior	Model 3: all socio-behavioral factors	Model 4: model 3 + health behavior	Model 3: all socio-behavioral factors	Model 4: model 3 + health behavior
(Constant)	0.32 (0.01-9.55)	0.19 (0.01-5.03)	0.07 (0.00-5.03)	0.02 (0.00-2.29)	0.05 (0.00-1.10)	0.04 (0.00-1.59)	**0.00*** (0.00-0.04)**	**0.00** (0.00-0.05)**	**0.00** (0.00-0.19)**	**0.00* (0.00-0.09)**
Need Factors										
Symptom Factors										
Physical arousal/ pains	1.00 (0.98-1.01)	1.00 (0.98-1.01)	0.99§ (0.98-1.00)	0.99 (0.98-1.00)	1.01 (1.00-1.02)	1.00 (0.99-1.01)	1.00 (1.00-1.01)	1.00 (1.00-1.01)	1.00§ (0.99-1.00)	1.00 (0.99-1.00)
Internal self-deprecation	1.01 (0.99-1.03)	1.01 (0.99-1.03)	1.00 (0.98-1.01)	1.00 (0.98-1.02)	1.00 (0.99-1.02)	1.00 (0.99-1.02)	1.00 (0.99-1.00)	1.00 (0.99-1.01)	1.00 (0.99-1.01)	1.00 (0.99-1.01)
Abnormal sleep	1.00 (0.98-1.01)	1.00 (0.98-1.02)	1.01 (0.99-1.02)	1.01 (0.99-1.03)	1.00 (0.99-1.02)	1.00 (0.99-1.02)	1.00 (1.00-1.01)	1.00 (1.00-1.01)	1.00 (0.99-1.00)	1.00 (0.99-1.00)
Suicidality	1.00 (0.98-1.02)	1.01 (0.98-1.03)	1.01 (0.99-1.03)	1.01 (0.99-1.04)	1.01 (0.99-1.03)	1.02 (1.00-1.04)	1.01 (1.00-1.02)	1.01 (1.00-1.02)	1.00 (0.99-1.01)	1.00 (0.99-1.01)
Apathetic retardation	1.00 (0.98-1.02)	1.00 (0.97-1.02)	1.01 (0.99-1.02)	1.00 (0.98-1.03)	0.99 (0.98-1.01)	0.99 (0.97-1.01)	0.99 (0.99-1.00)	0.99 (0.99-1.00)	1.00 (0.99-1.01)	1.00 (0.99-1.01)
Affective depressive symptoms	2.82 (0.39-20.5)	2.22 (0.31-16.0)	0.73 (0.12-4.60)	0.66 (0.12-3.73)	0.59 (0.14-2.51)	0.75 (0.19-2.91)	2.95§ (1.11-7.83)	3.17§ (1.05-9.60)	**5.78** (2.03-16.4)**	**8.90* (2.06-38.5)**
Severity of depressive experience	0.95 (0.58-1.56)	0.89 (0.55-1.45)	0.77 (0.45-1.32)	0.79 (0.44-1.41)	0.92 (0.53-1.62)	0.89 (0.51-1.57)	1.25 (0.79-1.98)	1.23 (0.78-1.94)	1.09 (0.75-1.60)	1.09 (0.71-1.68)
Perceived need for care[a]	**2.76** (1.39-5.48)**	2.99§ (1.1-7.89)	**2.26§ (1.19-4.29)**	2.17 (0.95-4.96)	1.40 (0.79-2.46)	1.95 (0.90-4.21)	**2.74* (1.33-5.65)**	**3.07* (1.19-7.92)**	**7.30*** (3.21-16.6)**	**5.39* (2.05-14.2)**
Enabling/Disabling Factors										
Poverty index	0.97 (0.90-1.04)	0.98 (0.91-1.05)	1.05 (0.99-1.12)	1.04 (0.97-1.10)	0.97 (0.92-1.03)	0.99 (0.93-1.05)	1.03 (0.98-1.08)	1.02 (0.97-1.07)	1.03 (0.99-1.08)	1.02 (0.97-1.08)
English fluency	1.16 (0.76-1.76)	1.15 (0.73-1.79)	**1.82* (1.25-2.65)**	1.61 (1.06-2.44)	0.95 (0.65-1.40)	1.15 (0.78-1.71)	1.39§ (0.99-1.93)	1.34 (0.95-1.90)	**2.13** (1.44-3.15)**	**1.95* (1.28-2.97)**
Acculturative stress	1.04 (0.98-1.10)	1.03 (0.97-1.09)	0.98 (0.92-1.05)	0.97 (0.89-1.05)	0.97 (0.92-1.02)	0.98 (0.92-1.03)	1.01 (0.97-1.04)	1.00 (0.97-1.04)	**1.05* (1.01-1.10)**	1.06§ (1.01-1.11)
Predisposing Factors										

	Psychiatrist Nw = 900,430 OR (95% CI)		Other Mental Health Provider Nw = 900,430 OR (95% CI)		Physical Health Provider Nw = 900,430 OR (95% CI)		Alternative Care Providers/ Self-Help Nw = 2,527,004 OR (95% CI)		Psychological counseling/therapy Nw = 2,527,004 OR (95% CI)	
	Model 3: all socio-behavioral factors	**Model 4:** model 3 + health behavior	**Model 3:** all socio-behavioral factors	**Model 4:** model 3 + health behavior	**Model 3:** all socio-behavioral factors	**Model 4:** model 3 + health behavior	**Model 3:** all socio-behavioral factors	**Model 4:** model 3 + health behavior	**Model 3:** all socio-behavioral factors	**Model 4:** model 3 + health behavior
Gender (ref. = Male)	0.43 (0.08-2.22)	0.85 (0.14-5.22)	3.49§ (1.08-11.3)	8.31 (1.89-36.6)	**4.04*** **(1.48-11.0)**	3.74 (1.34-10.5)	0.74 (0.33-1.65)	0.77 (0.31-1.90)	0.59 (0.21-1.64)	0.46 (0.14-1.48)
Age	1.01 (0.96-1.05)	1.02 (0.97-1.08)	1.04 (0.99-1.09)	1.06 (1.00-1.11)	**1.06*** **(1.03-1.10)**	1.07 (1.03-1.11)	1.00 (0.98-1.03)	1.01 (0.98-1.04)	1.00 (0.97-1.04)	1.00 (0.96-1.04)
Gender x Age	1.01 (0.97-1.06)	1.00 (0.94-1.06)	0.97 (0.93-1.01)	0.94 (0.90-0.99)	0.97 (0.94-1.01)	0.98 (0.94-1.01)	1.03§ (1.00-1.05)	1.02 (0.99-1.05)	1.04 (0.99-1.09)	1.04 (0.98-1.10)
Education	0.72 (0.49-1.06)	0.72 (0.44-1.16)	0.91 (0.62-1.33)	0.80 (0.49-1.32)	1.36 (0.86-2.15)	1.45 (0.88-2.40)	1.00 (0.78-1.29)	1.00 (0.77-1.30)	0.89 (0.63-1.26)	0.90 (0.61-1.32)
Not married [c]	0.97 (0.45-2.13)	1.08 (0.53-2.20)	**3.18**** **(1.87-5.41)**	2.87§ (1.47-5.59)	0.65 (0.40-1.07)	0.81 (0.45-1.46)	0.86 (0.48-1.55)	0.83 (0.45-1.56)	1.60 (0.88-2.90)	1.36 (0.73-2.54)
Religious attendance	0.94 (0.72-1.23)	0.95 (0.69-1.31)	0.77§ (0.60-0.98)	0.86 (0.65-1.13)	1.06 (0.77-1.45)	1.04 (0.75-1.44)	**1.39*** **(1.13-1.71)**	**1.42*** **(1.13-1.79)**	0.91 (0.73-1.13)	0.93 (0.72-1.20)
Personal stigma	0.76 (0.44-1.32)	0.81 (0.46-1.42)	1.31 (0.79-2.17)	1.45 (0.92-2.28)	1.13 (0.68-1.88)	1.18 (0.75-1.87)	1.08 (0.77-1.51)	1.10 (0.76-1.59)	0.85 (0.62-1.15)	0.73 (0.47-1.11)
Public stigma	1.12 (0.71-1.75)	1.10 (0.66-1.82)	0.76 (0.50-1.13)	0.81 (0.52-1.27)	0.90 (0.61-1.32)	0.84 (0.56-1.27)	0.98 (0.74-1.29)	1.02 (0.73-1.41)	0.75§ (0.56-0.99)	0.82 (0.58-1.15)
Environment										
Region (ref. = West)										
Northeast	**0.04**** **(0.01-0.15)**	0.03§ (0.00-0.23)	0.56 (0.21-1.52)	0.83 (0.08-8.72)	**3.57*** **(1.60-7.98)**	2.66 (1.20-5.88)	1.46 (0.83-2.55)	1.46 (0.62-3.43)	0.42 (0.07-2.42)	0.60 (0.07-5.16)
Midwest and South	2.16 (0.86-5.40)	1.90 (0.75-4.77)	0.91 (0.36-2.31)	0.50 (0.16-1.54)	0.34§ (0.13-0.90)	0.48 (0.16-1.41)	1.23 (0.47-3.22)	1.22 (0.49-3.01)	1.39 (0.56-3.44)	1.40 (0.44-4.45)
Health Behavior										
Psychiatrist [a]		-	0.24 (0.09-0.62)		0.74 (0.26-2.10)		**0.32*** **(0.13-0.78)**		**3.75*** **(1.64-8.58)**	
Other Mental Health Provider [a]		0.18 (0.06-0.54)		-		0.50 (0.16-1.56)		0.56 (0.25-1.28)		**11.32**** **(4.50-28.4)**
Physical Health Provider [a]		0.81 (0.29-2.25)		0.48 (0.17-1.37)		-		0.42§ (0.18-0.98)		**0.32*** **(0.14-0.74)**
Alternative Care Providers/Self-Help [a]		0.37 (0.14-0.98)		0.79 (0.34-1.83)		0.36 (0.16-0.80)		-		2.02 (0.71-5.77)

	Psychiatrist *Nw* = 900,430		Other Mental Health Provider *Nw* = 900,430		Physical Health Provider *Nw* = 900,430		Alternative Care Providers/ Self-Help *Nw* = 2,527,004		Psychological counseling/therapy *Nw* = 2,527,004	
	OR (95% CI)		OR (95% CI)		OR (95% CI)		OR (95% CI)		OR (95% CI)	
	Model 3: all socio-behavioral factors	**Model 4:** model 3 + health behavior	**Model 3:** all socio-behavioral factors	**Model 4:** model 3 + health behavior	**Model 3:** all socio-behavioral factors	**Model 4:** model 3 + health behavior	**Model 3:** all socio-behavioral factors	**Model 4:** model 3 + health behavior	**Model 3:** all socio-behavioral factors	**Model 4:** model 3 + health behavior
Psychological counseling/therapy[a]		6.35[§] (2.26-17.8)		**16.88*** **(6.43-44.3)**		0.47 (0.19-1.18)		2.21 (0.88-5.54)		-

Note. [§]*p* < .10; **p* < .05; **p < .01; ***p ≤ .001. [a]Binary variable (no/yes) and reference category is no. [c]Reference category is married or cohabitating.

| Environment | → | Predisposing Characteristics | → | Enabling Resources | → | Need | → | Health Behavior |

Region

Sex, age, education, marital status, religiosity

Beliefs about MHSU
(+/-)
• stigma

↓ Poverty, English prof.*, Personal resources
(↓ Acculturative stress)

Symptoms (Distress/ Severity)

Perceived Need

Different types of mental health service use

• Psychiatrist
• Other Mental Health Provider
• Physical Health Provider
• Alternative care provider/self-help
• Psychotherapy
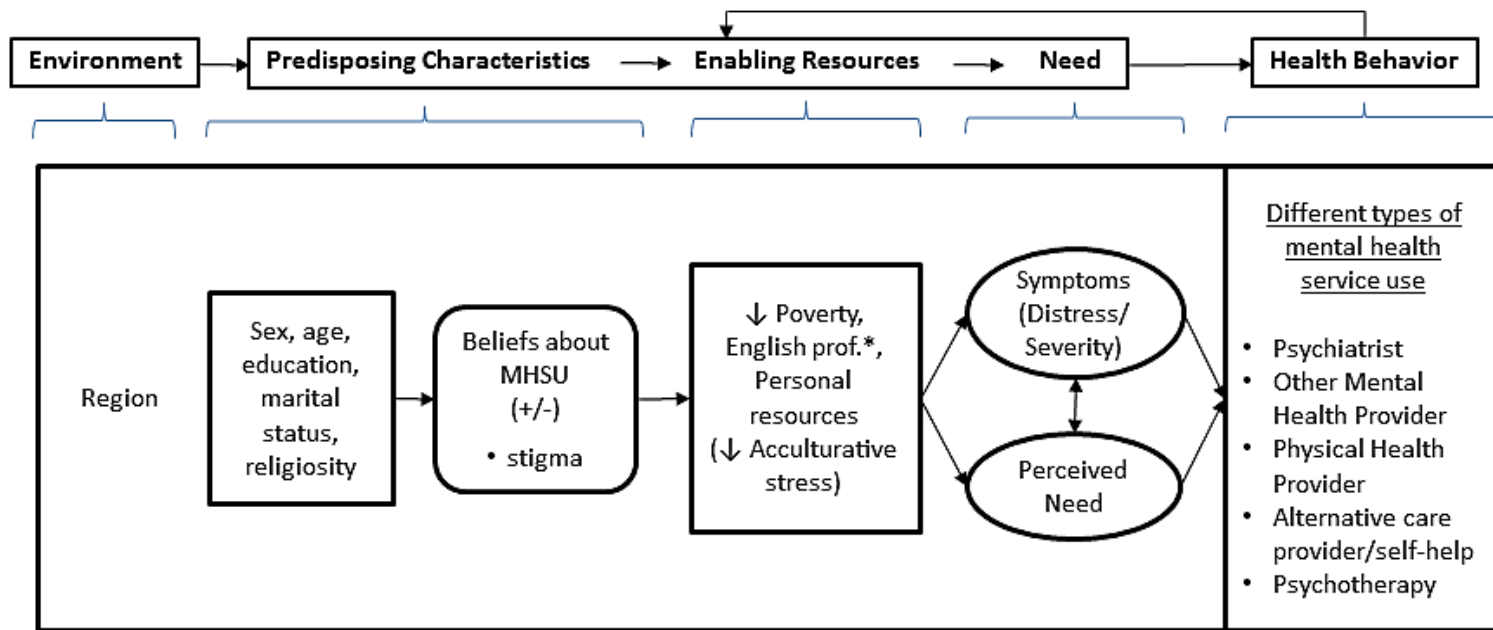
Figure II.1 Study Variables within the Socio-Behavioral Model for Mental Health Service Use (MHSU)
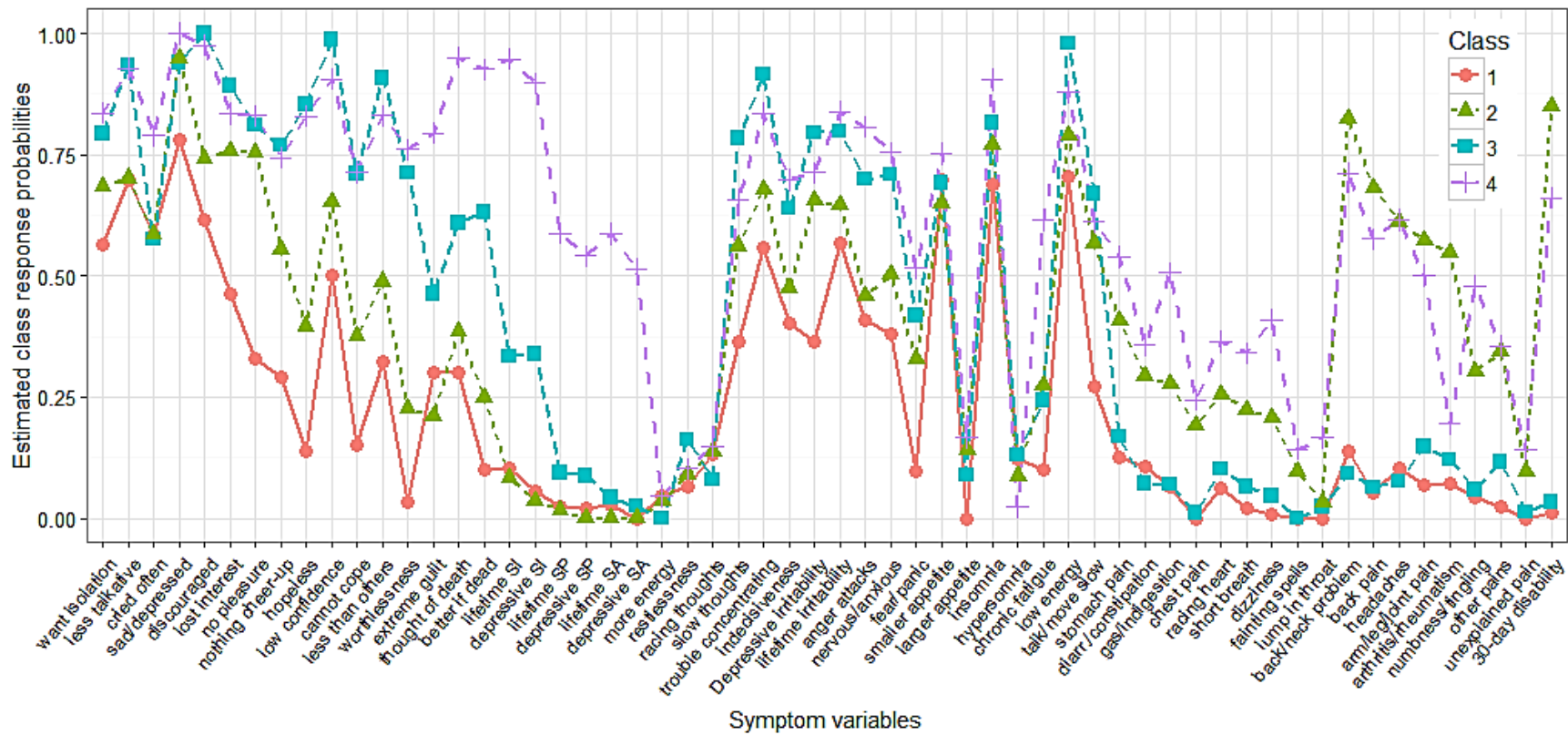
Figure II.2 Symptom Item Probabilities for Each Latent Class
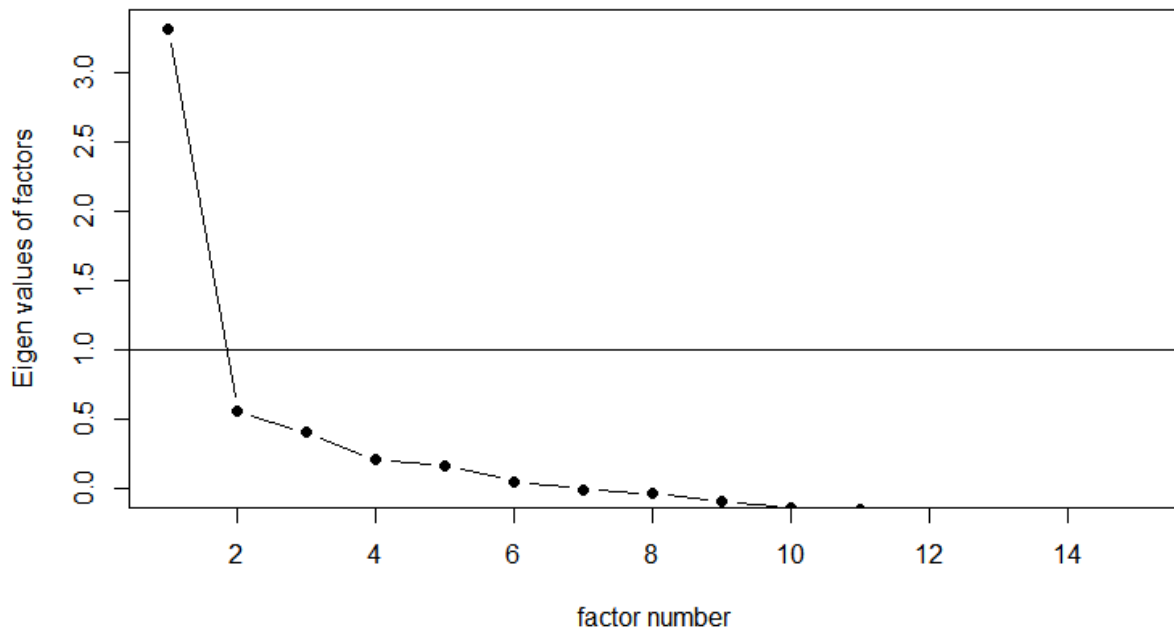
Figure II.3 Scree Plot for Chronic Physical Items
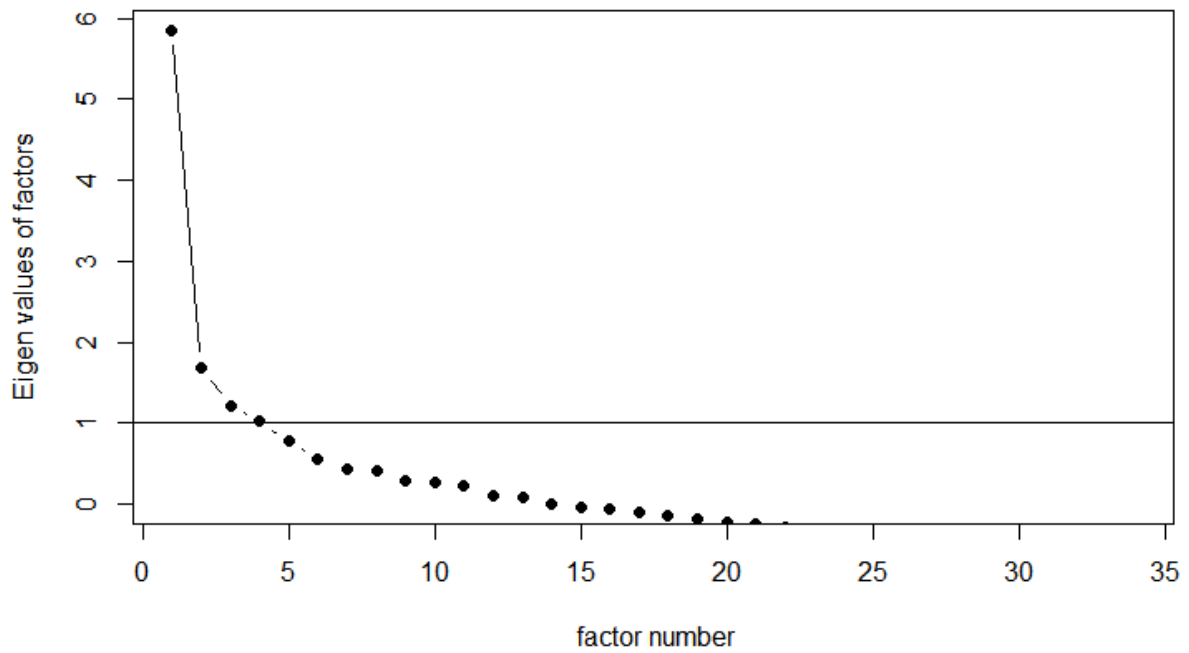
Figure II.4 Scree Plot for Depressive Episode Items

CHAPTER III

A Naturalistic Examination of Psychotherapy Disengagement and Dropout in Asian Americans with Depressive Symptoms

Abstract

Underutilization of mental health care remains a prevalent issue for Asian Americans, despite much research responding to the call for culturally competent practices. When mental health services are sought, depressive symptomatology and sociobehavioral factors influence the types of services used. This is especially the case with psychological counseling or therapy. Unfortunately, when Asian Americans access mental health treatment they are more likely to disengage and drop out early and naturalistic examinations of such circumstances are needed. A mixed-methods design for analyzing unobtrusive data was developed to examine disengagement and dropout in Asian American patients endorsing depressive symptomatology, and is described for future clinical service evaluation applications. Qualitative clinician notes and quantitative demographic/symptom data were analyzed concurrently. This study also explored whether patients' endorsement of physical symptoms related to earlier dropout. Results show that patients dropping from psychotherapy faced structural and administrative barriers. Compared to those who received some treatment, earlier dropouts who left before treatment had higher elevations (>70T) on intake PAI clinical scale scores of anxiety and stress-related distress. Themes that may relate to disengagement and dropout, such as delayed/unclear treatment planning and administrative sanctions, are discussed. A majority of clinicians' notes emphasized physical

symptoms as part of patients' presenting distress. Such documented physical symptoms were related to patient-provided dropout reasons of feeling better and not being the right time for psychotherapy. Yet, a physical emphasis was not related to an earlier dropout prior to psychotherapy. Additional implications for physical symptom expressions and suggestions for university-affiliated or training settings are described.

Background

Disengagement and dropout from psychotherapy continue to occur apart from contributions of evidence-based treatments effective in treating various psychiatric disorders (Fernandez, Salem, Swift, & Ramtahal, 2015). Swift and Greenberg's (2012) meta-analysis found that, if dropout is defined as when patients "fail to complete a treatment protocol, attended less than a given number of sessions, stopped attending, or [deemed as premature discontinuation by] therapist judgment", about 20% of patients drop out of psychotherapy. While this suggests an improvement from older findings that indicate about 50% drop out of psychotherapy (Wierzbicki & Pekarik, 1993), there remains room for remediation as one in five persons seeking help are not getting the help they need. Moreover, those who dropout are often higher in severity (Kazdin, 1990) and these incomplete treatment phases likely lead to unresolved recurring symptoms. Continued distress from such symptoms may result in a repetition of beginning and prematurely terminating treatment, ultimately creating a learned helplessness or hopelessness for patients. In addition, a partial course of psychotherapy may lead to inaccurate conclusions (e.g., that all effective options have been exhausted and nothing works), leading dropouts to fare worse outcomes compared to those who continued with treatment (Baekeland & Lundwall, 1975; Luborsky, Chandler, Auerbach, & Cohen, 1971).

In order to learn how to best prevent negative conclusions about psychotherapy or stagnant outcomes post-dropout, there is a pressing need to study specific samples with amplified dropout rates. One such sample demonstrating the highest rates of both pre-treatment and during-treatment dropout is depressed patients (Fernandez et al., 2015). While this may be partly due to the phenomenology of the depressive disorders, further exploration is warranted since untreated depression can reinforce feedback loops that have serious biopsychosocial consequences such working memory impairment, deterioration of physical health, internalization of worthlessness and guilt, isolation, functional disability, and economic hardship (Wittenborn, Rahmandad, Rick, & Hosseinichimeh, 2015). Secondly, ethnic minority populations are also known to have high rates of premature termination from psychotherapy (Barrett, Chua, Crits-Christoph, Gibbons, & Thompson, 2008; Reis & Brown, 1999; Wierzbicki & Pekarik, 1993), especially those with major depression (Cooper & Conklin, 2015). In particular, Asian Americans have been least likely to use mental health services compared to other ethnic groups throughout the past decade (Substance Abuse and Mental Health Services Administration, 2015) even when the level of perceived need is matched (Eisenberg, Gollust, Golberstein, & Hefner, 2007). Asian Americans who do access psychotherapy have shorter retention compared to those of other ethnic groups, dropping out after about two sessions (Sue, 1977). As with the depressed population, early treatment discontinuation in Asian Americans is concerning since symptoms have typically progressed to be severe when help is sought (Meyer, Zane, Cho, & Takeuchi, 2009; Sue & Sue, 1987). In sum, to maximize the examination of the disengagement and dropout phenomena, this study focuses on Asian Americans with depressive symptoms who are multiply at risk for leaving the psychotherapy process.

Which Asian Americans Leave Behind an Empty Chair?

Few studies have focused solely on Asian American psychotherapy dropout; however, characteristics of Asian Americans who drop out of psychotherapy may be gleaned from relevant multiethnic sample studies reporting aggregate sociodemographics. Those younger in age, identified as foreign-born, married, with less income, less education, and language/communication barriers (e.g., Abe-Kim et al., 2007; Kung, 2004; Sue, 1977) may be particularly likely to dropout during psychotherapy. When ethnic and language matching are provided, the risk is reduced (Flaskerud & Liu, 1991; Sue, Fujino, Hu, Takeuchi, & Zane, 1991) and service use is increased (McClellan, Wu, & Snowden, 2012; Snowden, Masland, Peng, Lou, & Wallace, 2011), supporting the premise that culturally responsive strategies would increase service use for ethnic minorities (Sue, 1977). Yet, the sparse literature on Asian Americans' pre-intake attrition demonstrates that about a third continue to be lost prior to any in-person intervention, even in a mental health care setting tailored for Asian Americans (Akutsu, Tsuru, & Chu, 2004). Asian Americans dropping out prior to any face-to-face interaction are similar to those of the general population: younger age, lower urgency/need, lower depression severity, more expressed family-marital problems, and longer scheduled wait times until their first appointment (Akutsu et al., 2004). More specifically, those with less ethnic/language match with intake staff (Akutsu et al., 2004; Fujino, Okazaki, & Young, 1994; Sue et al., 1991), dropped out earlier pre-intake. The type of clinical setting may also impact which patients drop prior to any face-to-face visit. Akutsu et al. (2004) found that, in a program focused on serving Asian-descent patients, those of East Asian descent and those stating English as their language of choice dropped out earlier pre-intake. While the authors did not provide an explanation for this finding, it is possible that those preferring English may have had other options for care compared to others who stayed to receive an Asian language-matched service from this particular clinic.

Impact of Physical Symptoms

Another important factor to consider, in the study of psychotherapy disengagement and dropout, is the somatization of psychological distress commonly thought as experienced by ethnocultural groups including Asian Americans (Sanchez & Gaw, 2007; Tseng et al., 1990; U.S. DHHS, 2001; Uba, 1994). Physical symptoms have not been extensively studied in the context of Asian American psychotherapy disengagement and dropout, although somatic complaints have been viewed as more culturally acceptable than verbal descriptions of emotional distress (Chen, 2005). Such beliefs, in turn, could lead some Asian Americans to specifically highlight concurrent somatic symptoms when seeking mental health providers. However, cases with predominant somatic symptoms are often given less priority for earlier intake appointments since other cases involving suicidality, violent behavior, psychotic symptoms, and abuse are deemed a higher risk. This is the case in an Asian-patient oriented clinic as well, where somatic complains resulted in less odds ($OR = 0.33$) of receiving an earlier intake (Akutsu, Tsuru, & Chu, 2006). Ying (2001) noted that somatic symptoms give rise to more emotional content later on in psychotherapy if patients are provided the flexibility to converse about such symptoms. A neglect of cases with somatic symptom emphasis could miss patients who would benefit from psychotherapy despite their original presentation. Given the dearth of research focusing on physical symptoms within the psychotherapy context, this study also explores the significance of coinciding physical symptoms experienced by the patient when examining Asian American psychotherapy disengagement and dropout.

The Current Study

Compared to the research on characteristics of disengagement and dropout, little research has investigated the actual contexts surrounding Asian Americans dropping from the

psychotherapy process, perhaps due to the difficulty reaching patients once they have ceased contact. To explore such dropout contexts and aid future clinical service improvements, the current study examines disengagement and dropout in depressed Asian Americans seeking psychotherapy from a university-affiliated outpatient clinic. The topic was examined primarily by using naturalistic clinicians' notes, a secondary source of information, and existing demographics/measures in the electronic patient chart system. When patients have left psychotherapy and are not reachable for query, clinician notes and intake measures are the only available "real time" clinic documentation that can provide a "snapshot" perspective into the disengagement and dropout process. Utilizing such available data may be helpful for multiple reasons. First, practitioner's perspectives are routinely recorded in most clinics and this archival data does not require additional effort to collect. Second, preexisting naturalistic data is not directly influenced by the goals of the evaluation and could be used to draw upon for a tailored improvement of services for patients. Lastly, clinicians' recorded information can provide insight into the culture of a particular clinic setting, and could be applied to training initiatives to raise awareness about the provided standard of care.

This study uses a mixed-method design that aggregates both quantitative and qualitative naturalistic data with a discovery-oriented approach to confirm existing patterns, indicators, and correlates of disengagement and dropout, or to find new ones. The mixed-method approach was adopted for this study using naturalistic data as it allows for more nuanced interpretations and expands the conclusions drawn from qualitative data (Johnson & Onwuegbuzie, 2004). More specifically, this study examined qualitatively coded archival clinician notes and quantitative data from measures of patient personality characteristics and level of distress at intake. While there are many ways of conducting mixed-method research, a concurrent nested mixed-method

85

design was selected to further enhance found disengagement and dropout related qualitative themes among multiple groups within the same study (Hanson, Creswell, Clark, Petska, & Creswell, 2005). This was preferred to the concurrent triangulation design given that the nature of the topic prevented the inclusion of a sample size required for more extensive quantitative analyses.

Additionally, this study aimed to maximize use of the unobtrusive data (Berg, 2001) that the patients provide prior to their departure. This approach can provide a glimpse into the experiences of those who are no longer reachable (Berg, 2001). To my knowledge, there has been no prior clinical service evaluation research using this methodology. Additionally, while the present study focuses on Asian Americans with depressive symptomatology, the described methods could be readily applied in any clinical treatment setting for understanding the characteristics of those who are not being retained in treatment or psychotherapy.

Research Questions

Based on clinicians' notes documentation, three research questions were investigated:

1) What are the notable described characteristics of Asian American adults with depressive symptoms who disengage and/or dropout from psychotherapy, and what qualitative themes relate to disengagement/dropping from treatment?

2) Are there characteristic differences between the descriptions of those patients who dropped out earlier in the process prior to therapy vs. those who stayed longer in some therapy or completed treatment? (e.g., physical symptom emphasis)

3) Are there any unique characteristics identified in clinician notes for patients who presented with prominent physical (somatic/pain) symptoms vs. those who did not?

There are no standardized definitions of psychotherapy disengagement or dropout and researchers have conceptualized it in multiple ways. Frankel and Levitt (2009) noted in their literature review that observable disengagement behaviors, which lessen the patients' involvement with the psychotherapy content or therapeutic alliance, could be summarized into four non-exclusive categories of client resistance, storytelling (verbalizing less relevant daily details (Hailparn & Hailparn, 1999; Rennie, 1994)), secrecy, and silences. Their qualitative work with patients further indicated that disengagement can occur through automatic responses (e.g., an aversion of sensitive topics and disconnection from emotions), as well as conscious choices like selective disclosure (Frankel & Levitt, 2009). Considering that this naturalistic data limits observations of such disengagement, this study focused on the type of disengagement that happens when there is reduced engagement (O'Brien, Fahmy, & Singh, 2009). The specific disengagement indicators included: not collaborating or being involved, not remaining reachable, not being open about struggles (Gunderson et al., 1989), not attending appointments, not accepting a need for help, not feeling satisfied with the help already received, and not working toward shared goals (O'Brien et al., 2009).

The determination of when a patient can be considered as having "dropped out", "prematurely terminated", or "prematurely discontinued" has also been inconsistent. The various criteria range among not returning after intake, not attending a specific recommended number of sessions, not returning for the last appointment, or the therapist's judgment. The latter two criteria were found to produce equivalent estimates of dropout rate (Hatchett & Park, 2003). A common quality across the varied criteria is a discontinuation of treatment without fully addressing the symptoms, problems, or goals for which the psychotherapy was initially sought, thus leaving the patient without having experienced the full benefits of the psychotherapy (Swift

87

& Greenberg, 2012). The present study incorporates this broader emphasis and also includes Fernandez et al.'s (2005) description of psychotherapy dropout as reflecting patients who discontinue psychotherapy prematurely against professional advice, i.e., a treatment termination was not previously agreed upon by both the patient and the clinician.

This study also divided the dropout cases by clinically meaningful time points of discontinuation, by types of services accessed prior to dropping out, to allow for a more descriptive qualitative exploration. This included a group that dropped out of contact with the clinic after an intake phone call and filling out measures, prior to any in-person evaluation. Though such drops prior to evaluation are often not included in psychotherapy dropout studies (as they are not seen as having begun a phase of treatment), this group also deserves further study (Roos & Werbart, 2013). Thus, they are included in the study and considered fitting within the definition of a termination not agreed upon by both the patient and the clinician.

Method

This study utilizes naturally existing electronically archived clinical data from a university-affiliated community outpatient clinic serving the general adult population. The initial dataset included 39 Asian American adults who contacted the clinic for psychotherapy for depressive symptoms, within a two-year period. Asian/Asian American cases were identified through clinicians' identification of patients' ethnoracial background through personal communication, patients' self-identification in measures and notes, and by documented last names of Asian heritage. After all possible cases within the two-year time frame were identified; patient and clinician information available via electronic chart, psychological measures, clinician notes were de-identified and aggregated for confidentiality purposes as approved by the study institution's IRB. Clinicians in this setting included a combination of psychology and social

work trainees and full-time psychologists and social workers. Available information about the clinicians was limited in nature and only the general racial group, age range, gender, and trainee/staff status could be gathered. Information on patients' gender, marital status, prior treatment, religion, history of suicidal ideation, etc., were pulled from the text of the clinicians' notes if available, and documented by recording 'yes' or 'no' indicating a presence (e.g., yes/no prior treatment history) or organized by nominal categories (e.g., Christian or Buddhist) into a spreadsheet. Other quantifiable information pulled from electronic chart review included: time delay until the first appointment, number of sessions attended, and extra charged incurred. Types of clinicians' notes included: the first telephone intake documentation prior to the first in-person appointment, evaluation notes after the first in-person visit, any revised evaluation summaries after the patient was seen in-person more than once, additional diagnostic evaluations, psychotherapy session notes prior to dropout, collateral contact notes, transfer notes, and discharge notes. Two of the patients in the sample were excluded from analyses because they were crisis cases that were immediately referred out. Another case was excluded as it was determined inappropriate for a training setting (high suicidality and self-harming behaviors) and was referred out. This resulted in a total sample of 36 Asian American cases (< 5% of the clinic's served population in the two-year span). The included cases were also categorized into four groups for use with mapping the qualitative theme codes: Pre-Evaluation Dropouts (PE) included those who dropped after a phone call or walk-in request (e.g., Orme & Boswell, 1991); Pre-Therapy Dropouts (PT) included those who attended the intake/evaluation session but dropped prior to any psychotherapy; Some-Therapy Dropouts (ST) included those who began psychotherapy but dropped without completing treatment; and the Completed/In Treatment

(CIT) group were those who completed treatment or were nearing completion with more than 13 sessions[1].

Quantitative Measures

   Psychopathology and personality. All patients completed the Personality Assessment Inventory (PAI) at intake. The PAI (Morey & Boggs, 1991) is a 344-item measure that allows for a broad evaluation of mental illness and personality characteristics relevant to treatment planning. It includes 22 brief scales, including four validity scales, 11 clinical scales (depression, anxiety, stress-related distress, somatic concerns, mania, paranoia, schizophrenia, drug use, alcohol use, borderline features, and antisocial tendencies), five treatment scales (aggression, suicidality, current stress, reactiveness to psychotherapy, and social support), and two interpersonal scales (dominance and warmth). For more subscale descriptions see Appendix C, Table C.1.

   Level of distress. The Outcome Questionnaire (OQ-45; Umphress, Lambert, Smart, Barlow, & Clouse, 1997) is a 45-item measure assessing the patient's overall level of distress and in three subdomains: symptom distress (SD), interpersonal relations (IR), and social roles (SR). Questions are presented on a 5-point scale ranging from 0 (*never*) to 4 (*almost always*) and a total score can be computed by summing the item scores (range: 0-180).

Quantitative Analysis

   Descriptive statistics on quantitative study variables (demographic data, PAI, and OQ-45 scores) were conducted using SPSS 22 to enrich qualitative results. Only valid PAI test results were included in the analyses. For a comparative analysis of the quantitative study variables, the

---

[1] Statistical differences between the completers (N=3) and those still in treatment (N=5) were not ascertained due to being underpowered. However, all patients still in treatment had 14 or more sessions of therapy and their mean (*M*=30.80, *SD*=23.50) was closer to those who had completed treatment (*M*=23.00, *SD*=0.00) than to those who dropped after 10 sessions (*M*=14.88, *SD*=4.42). Thus, those still in treatment and those who had completed treatment, at the time of data collection, were combined into one group.

four clinically meaningful groups used to map thematic codes were combined into two groups: earlier dropouts (PE, PI) vs. longer stays (ST, CIT).[2] T-tests were conducted on continuous demographic variables, while Fisher's chi-square or Fisher-Freeman-Halton exact tests were conducted on binomial/categorical variables only with near complete data. The same tests were performed to examine the difference between those emphasizing physical symptoms as found in clinicians' notes vs. those who did not.

The presence of each of the found qualitative themes was also added to the quantitative data as binary variables. Pearson correlations were run with these thematic variables to examine the relationship between themes. Additional correlations were run between the binary theme variables and demographic variables, and with PAI subscale T-scores, to enhance interpretation of the qualitative themes.

Qualitative Method Approach

Due to an absence of prior qualitative method application examples for an analysis based solely on written documentations from a secondary source within a naturalistic clinic setting, a hybrid methodology was developed to best fit the nature of the data collected. This method incorporates thematic analysis for structure (Braun & Clarke, 2006), template analysis techniques (King, Cassell, & Symon, 2004), and consensual qualitative research (CQR) principles (Hill, Thompson, & Williams, 1997). This selection of methods follows an eclectic approach which draws on the best methods available, as needed, for new knowledge production within the confines of a given research situation (Denzin & Lincoln, 2000; Kincheloe, 2001, 2005).

---

[2] Merging the groups in this manner was supported by Fisher's chi-square analysis of the number of sessions for the four groups. Post-hoc comparisons showed that the number of sessions for each paired group in the new categories were not significantly different from one another. However, the number of sessions for all paired combinations of groups between the two new categories was significantly different. This merged group strategy was also chosen due to the small sample size and reduced power in analyses.

Thematic analysis is a method that provides both structure and flexibility in the process of qualitative inquiry, not bound to one specific theory or epistemology (Braun & Clarke, 2006). Template analysis is a set of techniques for generating codes and themes (King et al., 2004), and can be embedded within the six phases of analysis outlined for thematic analysis. CQR is a systematic approach to qualitative analysis also not anchored to one specific paradigm, but thought as ranging between postpositivism and constructivism with an anchor in critical theory (Ponterotto, 2005). The details of integrating these approaches are presented in the 'Qualitative Analysis Procedure' section below.

Of note, there are a few differences from the original CQR methodology due to two considerations about this naturalistic archival data: (a) documentation about patients is by a secondary source, and (b) additional information about the patients themselves was not available. Since there was no direct contact with the patients themselves, this analysis does not represent reality through the eyes of the participants. Rather, a vestige of reality is constructed through a secondary source (clinicians) documenting the patients' experiences and with the interpretation of a tertiary party (researchers) aiming to be as objective as possible. Also, given that there has been prior research on disengagement and dropout analyses were not fully bracketed from theory as original CQR methodology suggests. Instead, this study used a combination of deductive and inductive analysis. Thus, the presented hybrid method may be best described as a Guided Template CQR-UA (for unobtrusive archival data).

Prior to analysis, this study followed CQR recommendations for validity and reliability, by building a consensus amongst a trained research assistant coding team of eight with rotating coding pairs. The self-noted identities of the coders were as follows: "Chinese female", "white female", "queer white male", "Korean American female", "Indian American heterosexual

woman", "Korean Canadian female", "white American woman", "Korean American female".

Prior to full immersion into the coding process and developing candidate themes, each coder and

primary auditor (author) documented their background, biases, and possible impact on analyzing

the data. Preexisting expectations or biases regarding psychotherapy dropout in an Asian

population were discussed as a group. Accountability was emphasized, cautioning against

drawing invalid or biased conclusions.

Author biases. The first author is a 1.5 generation Korean American female. Considering

psychotherapy can be thought a weakness and lack of self-resolve for less acculturated persons,

she expected 1st generation patients to be more prevalent in disengagement and dropout than later

generation patients, especially if less acculturated family members were aware and providing

pressure to quit psychotherapy. She also expected most of the physical symptom emphasis cases

to be early dropouts since psychotherapy typically does not focus on resolving such symptoms.

Qualitative Analysis Procedure

Clinician notes were imported as transcripts into NVivo 10 for analysis. The thematic

analysis approach (Braun & Clarke, 2006) was used for building a basic structured order for the

stepwise coding and theme development process. Several decisions were made prior to any

analyses, as suggested by Braun and Clarke (2006): that (a) the importance of themes would not

be determined by the number of mentions/counts, but by relevance to the phenomena of

disengagement or dropout for this group of Asian American patients, (b) a detailed description of

the data would be guided by research questions rather than seeking to provide a fully bottom-up

rich description of the entire dataset, (c) a sequential combination of top-down and bottom-up

analytic approach to analysis would be used with iteration as with the constant comparative

method, (d) data would be coded at the semantic level with the goal of defining more latent

themes towards the end of the process, and (e) that overall the project is situated with a primarily critical realist paradigm.

First, the coding team familiarized themselves with the content of clinicians' documentations and independently generated initial codes on a subset of data, to identify tentative themes relevant to the research questions. The team then jointly produced an initial coding template with hierarchy, organized by domains of interest and by the multiple perspectives represented in the clinicians' notes. A coding dictionary of candidate themes was compiled and eight trained coders separately coded the clinicians' note transcripts while referring back to both the template and dictionary. If important sections of the transcripts did not fit the predefined candidate themes, coders independently searched for additional themes or suggested revisions to existing themes. This resulted in guidelines for coding akin to directed content analysis (Hsieh & Shannon, 2005). This process of reviewing themes, and of identifying/confirming existing themes, was iterative alongside revisions of the template and coding dictionary to match the changes. Finally, in search of additional latent level themes, the study team re-reviewed the transcripts, codes, and themes then defined the most prominent themes through consensus.[3] Each transcript was coded and organized by at least two separate coders and the inter-rater reliability of coders was assessed via kappa concordance analyses. Lower concordance codes were discussed and revised independently until the final average Kappa score was .80 or higher, indicating excellent coder agreement (Landis & Koch, 1977). Lastly, the previously-described quantitative data spreadsheet was imported into NVivo as a classification sheet. Using NVivo's mixed method analysis functionality which creates coding

---

[3] Themes were developed or ruled out while considering the context of the clinic and patients being within this specific university setting. For example, being late due to taking the bus could be an indicator of lower SES in other contexts. However, in this context, buses are easily accessible, free, and typically on schedule every 5-15 minute interval and was not likely a clear structural barrier for attending treatment.

matrices, themes codes were mapped by the four clinically meaningful subgroups (PE, PT, ST, CIT). Theme codes were also organized by those who presented with physical symptom emphasis (somatic/pains) vs. those who did not as documented by clinicians.

   Indicators of disengagement (DIS). Guided by the literature, patient disengagement was coded by two types of indicators within clinician notes: "Expressed-verbal" and "Observed-behavioral". "Expressed-verbal" disengagement was coded when patients were noted as directly expressing their doubt about the psychotherapy/therapist or negativity about progress made (e.g., "[patient] expressed frustration that over the course of this therapy he did not experience more change in his behaviors/circumstances", "[patient] said 'nothing has been resolved'"). "Observed-behavioral" disengagement was coded when the patients were noted as: non-adherent to agreed-upon session or homework goals, uninvolved in the interaction by staying silent, or appeared hesitant in sharing information (e.g., "[patient] arrived late and did not fill out measures", "[For the 2nd and 3rd in-person visit], patient did not complete self-report measures", "appeared hesitant to fully disclose all information…asked this therapist if she needed to know information about his previous treatment").

Results

Sample

   Of the 36 patient records analyzed, 47% were female (M_{age} = 27.64, SD = 8.66). A majority were Chinese (33%) and Indian (22%), followed by those who did not specify ethnicity (11%), Japanese (8%), Korean (6%), Vietnamese (6%), Part-Japanese (3%), Bangladeshi (3%), Chinese-Thai (3%), Filipino (3%), and Taiwanese (3%). Forty-five percent of the sample's immigrant generation could not be ascertained due to a lack of documentation. Of the remaining patients, the majority was 1st generation (36%) followed by 2nd generation (11%) and 1.5

generation (8%).[4] Students (undergraduate and graduate) comprised 55% of the sample and 58%

had prior mental health care experience. Students seeking care in this sample belong to the 14%

of Asians attending the university. Seventy-eight percent of the entire sample dropped out of

psychotherapy with 19% having dropped out prior to an intake or evaluation, 59% dropped post-

intake, 36% dropped before any treatment, and 42% dropped during treatment. The average

experienced delay until the first evaluation appointment was 12.73 days ($SD = 12.76$) and the

average number of sessions was 10.29 ($SD = 13.82$). Eighty-six percent had insurance and 14%

paid extra missed session fees.

[Insert Table III.1 here]

Aggregated clinician demographics are shown in Table III.1. With respect to patient-

clinician matching, of the 29 cases that received an in-person evaluation, 39% gender-matched

their evaluation clinician, 0% race-matched their evaluation clinician, and 14% matched the age-

range of their evaluation clinician. Of the 23 cases that began face-to-face psychotherapy, 28%

gender-matched their therapist, 0% race-matched their therapist, and 17% matched the age-range

of their therapist. Patient descriptives by clinically meaningful groups are shown in Table III.2.

Bivariate correlations of key demographic variables and PAI subscales are presented in

Appendix B, Table B.1.

[Insert Table III.2 here]

Qualitative Themes

Most of the cases did not have specific drop reasons/contexts documented since patients

typically do not provide reasons for no shows or cancellations and are difficult to reach post-

---

[4] 1.5-generation persons are those who were born in another country then immigrated to the United States as a child or adolescent. Previously these persons were grouped into the 1st generation immigrant group, but should be differentiated since most of their developmental years were in their country of immigration (B. S. K. Kim, Brenner, Liang, & Asay, 2003).

dropout. However, some PT and ST patients' files did have explicitly documented drop reasons and these are elaborated upon below. Indicators of disengagement were found in both dropout cases and non-drop cases, indicating that while disengagement is often associated with dropout it does not necessarily mean that a patient will drop. The qualitative analysis also yielded 13 contributing factors relevant to disengagement and/or drops from treatment; they are further organized below as "Exo-treatment setting factors" and "Endo-treatment setting factors". Exo-treatment setting factors are influences that are patient-specific and external to the therapeutic context. Endo-treatment setting factors are influences within the clinic setting and psychotherapy context. It should be noted that while the contributing factors themes are described separately, they are not mutually exclusive and were overlapping for patients. Also, while these themes were primarily developed from commonalities observed in clinicians' notes across dropout cases, similar exo- and endo- factor descriptions could be found for the non-drop cases (about half and 25%, respectively) as can be seen in Table III.3. Additionally, though this study is not strictly CQR, the overall frequency of the findings following CQR guidelines (Hill et al., 2005) are displayed in Table III.3 to facilitate presentation of the theme categories and subcategories. No subcategories were considered general as they did not emerge for all cases nor for all but one case. The thematic results are presented in the following order below: explicitly documented dropout reasons, Exo-treatment setting factors, and Endo-treatment setting factors contributing to disengagement/dropout. For brevity, only one or two illustrative examples are provided per theme.

[Insert Table III.3 here]

Documented dropout reasons (DRO). For about a third of PT and ST patients whose drop contexts were documented, a majority appeared to have dropped after their clinician

announced leaving the clinic due to completing training or for personal reasons. For example, for one patient it was noted, "This clinician is leaving the clinic. Therefore, no further sessions are scheduled with the [patient] at this time. However, the [patient] will be assigned to a new clinician for transfer". (The patient did not return).Cases like this needed a seamless coordination-of-care, especially when patients demonstrated a hesitation to continue with a different clinician. This was illustrated with another patient who did not return: "[patient] and I both felt it was a premature time for termination; however, he felt very good about the gains made and wasn't sure he wanted to be transferred at this time to start with a new therapist."

The next most commonly documented drop context of needing to travel was found in a third of the ST cases. This reason was noted by the clinician when the patient reported being scheduled to travel or relocate to a different area. "Today [patient] informed me that he had been given a one way ticket to his home town, by a friend. He informed me that because he was unsure how long or how soon he would be able to return, our last session would be Thursday of this week". This mid-20s male patient had attended five sessions and was one of many others who provided similar reasons prior to dropout—he cancelled the mentioned final appointment.

One PT and three ST patients' files demonstrated that an inability to pay for sessions was also related to dropout. The notes for an early 20s female patient who left after one session stated, "[patient] cancelled her last appointment. After multiple attempts to contact her, this therapist was able to talk to the [patient] who reported that she would like to continue treatment but there was a problem with her insurance and she is waiting for the claim to come through". Another male patient in his mid-20s, who had insurance and attended 17 sessions, did not return to psychotherapy despite notes demonstrating continued difficulty in functioning and need for

treatment. His discharge note stated, "He did not respond to phone calls… Of note, [patient] owed over $300 in fees at termination".

Clinician documentation also indicated that one PT and three ST patients reported feeling better, as described in the rationale for discontinuing planned psychotherapy. For example, for an early 20s male patient it was noted, "[patient] expressed a belief that he has made significant progress towards his initial goals for tx at this time, and opted to discontinue tx until his finals completed."

For one PT and two ST patients, they had indicated to their clinicians that it was not the right time to pursue treatment although they had contacted the clinic requesting care or were engaged in psychotherapy. An early 30s male patient "terminated care at [clinic] before completion of a full evaluation or treatment plan. He stated over the phone that he had decided to seek care at a later time". For one PT and one ST patient, family disapproval of continuing psychotherapy was mentioned as reason for dropout. For an early 30s male patient, it was noted that "[he] expressed that he has been considering stopping therapy. He expressed that this is due to increasing conflict with his wife related to attending therapy. [patient] said that if there were not conflict with his wife, he would wish to continue."

Exo-treatment setting contributing factors (EXO). When considering the possible contexts of patients' dropout and noted disengagement indicators, eight factors external to the treatment process emerged as potentially being associated with premature termination.

Severity of disorder. For more than 70% of PE, PT, and ST patients, it appeared that the severity of the depressive disorder itself may relate to disengaging behaviors or dropout. For example, for a male patient in his early 20s the following was noted directly prior to his unexplained dropout after two sessions, "We began to explore how his thoughts… influences his

ability to reach out… The [patient] continues to report symptoms of depression, difficulties connecting with others and symptoms of anxiety." Similarly, a female patient in her early 20s who did not return for psychotherapy after evaluation described her depression as a "tearful sadness, feeling really down about 10 times a day, can't conc[entrate]/ [be] mot[ivated]." Given depression's key features of reduced motivation and lowered concentration, the nature and severity of the disorder itself may have contributed to unintended disengagement during psychotherapy for some patients in this sample.

External attribution for distress . For the majority of PE and ST dropouts, external attributions for distress such as unknown/uncontrollable circumstances were documented. For example, one male in his early 30s it was noted that, "He has thrown plates when angry at his wife, but not at her… Hasn't hurt anyone as an adult, other than slapping his wife [once]… Other than these incidents he does not act impulsively… He wonders whether some of his anger is a result of having done something negative in the past that he cannot recall". Subsequently, this patient's discharge note stated, "terminated care… before completion of a full evaluation or treatment plan.." Another example is of an early 20s male patient whose file noted, "The [patient] reported feeling that his mood [might] improve if he met the right girl." Given that much of psychotherapy is self-driven change, such a removed stance towards one's issues may impede psychotherapy engagement.

Baseline functioning: chronic history. Another factor that may relate to dropout was a chronic history of symptoms found in more than half of the PE and most ST patients. Patients with this type of baseline may have difficulty producing a reference point for when things were better or for how they could be better. For example, notes for an early 30s male patient reported that "mood is 4/10 (low end), and has 'never been happy', as long as he can remember". Per the

patient's request, he was tested and notified that, "his concentration difficulties may be better explained by anxiety and depressive symptoms and sleep deprivation, rather than ADHD or other cognitive/learning disorders". Shortly after he attended two group sessions "arriv[ing] late and [sitting] in seat near doorway" and remained "quiet," prior to dropping out. While it was not explicitly stated that the chronicity of the depression reduced a hope for the future or motivation to continue psychotherapy, the coding team hypothesized that this type of experience may provide such an impact.

  Physical emphasis. Several PE/PT and a majority of ST patients brought a physical emphasis to the treatment context as part of their expression of depressive distress. Clinician notes suggested that for some of these patients, that physical foci could be proxy for greater felt severity and urgency, prompting a search for service elsewhere if needs are not met quickly. This is, demonstrated by comments on an encounter note with a mid-20s female patient. "[Patient] reported that she has been struggling with pain due to fibromyalgia and persistent fatigue. She expressed feeling hopeless about being able to manage her pain and lack of energy. She had canceled a recent doctor appointment due to this hopelessness... Therapist provided [Patient] with the clinic's contact information, and the contact information for psychiatric emergency services." Then, in a later collateral note, it was stated that "[patient] returned call. She stated that she has already found another therapist and no longer wishes to be on the list to see a therapist at this clinic. Case will be considered terminated." For another late 30s female patient, a somatic focus of distress from binge eating contributed to dropping from treatment when her somatic symptoms improved. "Pt reports difficulty controlling her eating… Pt also reports feeling depressed... Her BDI score was in the moderate range (22), consistent with her report." In the following discharge summary, it was noted that the "Plan was for pt. to be transferred to

therapist for follow up, however did not return the therapist's calls initially. After three attempts, pt. was reached and notified therapist that she was no longer binge eating and was not interested in therapy for the time being." While this patient did not explicitly state whether her depression had lifted, this was unlikely given she was discharged only four days after her evaluation session when she was diagnosed with a MDE.

Discomfort with process. Half of the PT and two-thirds of the ST patients that dropped from treatment were noted as expressing a felt discomfort about the processes involved prior to or while in psychotherapy, especially in a training clinic setting or a personal experience. A mid-20s female patient who dropped before any psychotherapy "questioned the process of meeting with two different therapists, neither of which were going to be her long-term therapist… not wanting to do this three times." An early 20s female patient's file noted, "She said that she doesn't trust anyone because 'everyone I looked up to betrayed me'… 'Lots of people betrayed me'… In addition, she thinks it's pointless to talk to people about how she feels -- that it won't help".

Cultural norms. Spontaneous mentions of traditional cultural norms for mental health, emotions, communication style, and what is expected in patients' native country were found in most ST patients' clinician notes. A mid-20s male patient's file noted, "Eventually he might want a [ethnic matched] therapist and to address cultural issues… in his culture people ignore mental illness, consider it your personality and something you can overcome. People with mental illness are also seen as crazy, to be locked out from society and abused. People seldom seek therapy, which is viewed as something shameful. Pt saw it that way too until he moved… How he sees that attitude as uneducated". This patient dropped after five sessions. For another mid-30s male patient it was documented that, "though he reported being comfortable with treatment

he acknowledged that in [native country] (and similar to his wife's views), 'only psycho people see therapists'." Notes for a mid-40s female patient similarly mentioned, "In [native country]… people bury their problems. Not doing this would mean the person is not strong enough… Significant parts of her life (her family and the culture in which she was raised), discourage emotional expression." Interestingly, these mentions of cultural norms did not necessarily indicate patients' personally held beliefs or personal stigma. An earlier note on a mid-20s male patient, who dropped after wanting "to consider telephone sessions" reports, "that while his ethnic and religious community remain relatively under exposed to therapy, he has sought therapy for himself to help with his difficulties but also sees it as a way to help his cultural community better understand therapy and psychology."

Distanced/extrinsic motivation source. A distanced or extrinsic motivation for seeking psychotherapy appeared in clinicians' notes for a third or less of the PE, PT, and ST patients. In contrast to notes of CIT patients describing a vested interest (intrinsic, personalized) and motivation, some patients who dropped mentioned they were seeking help because of others, especially non-family friends' or health professionals' recommendations. For these patients it was noted, "[patient] stated he was not fully committed to therapy", "[MD] recently thinks she has severe depression… 'said I should get treatment'", "Pt's psychiatrist recommended our clinic for psychotherapy", "met someone who said I should get treatment". Additionally, for some patients, psychotherapy was primarily driven by a temporary stressful external situation (e.g., heavy exam period and relationship problems occurring at once in the same week). One exception was a CIT patient who was initially forced to begin psychotherapy by his father yet, with benefit from psychotherapy over time, developed an intrinsic motivation for continuing psychotherapy and remained in a second phase of treatment at the time of data collection.

103

Control goals. The type of goal the patients brought to the treatment setting also appeared related to dropout for three ST patients who dropped after 1-3 sessions. These patients expressed are noted as having expressed what appears to be an unrealistic desire to control, "fix", or resolve their distress; which may have contributed to a more difficult time remaining in psychotherapy. Some examples noted were: a patient wanting to "improve depression… anxiety… social functioning by 100%", another patient saying "his plan was to stop arguing, to keep quiet [uncharacteristically] when he disagrees with someone", and others with goals similar to "be able to stop worrying". The possibly unachievable goal of getting rid of the problem or behaving in a completely different manner could have contributed to feelings of disappointment attributed to the psychotherapy.

Endo-treatment setting factors (ENDO). Five factors inherent within the treatment process and dynamics also arose as possible influences on patients' disengagement and/or drop from psychotherapy.

Delayed/unclear treatment planning. Delayed/unclear treatment planning appeared mostly in ST patients' notes. This was especially the case for those who accrued three to four in-person visits without any clear description for treatment outlined. For one early 20s male patient in particular, such a pattern of encounters resulted in not responding to the clinic's effort to reach him. After the 1st and 2nd visit it was noted that the next step would be "To continue assessment and begin individual therapy", then after the 3rd visit it was noted again "To continue assessment and formulate a treatment plan." This patient's collateral documents indicate that he did not remain in touch: "[patient] did not arrive to scheduled appointment. Therapist called for rescheduling purposes and left a message." The reasons for such delays for treatment planning were not documented in the clinicians' notes and could not be determined from the qualitative

analysis. It is possible that some clinicians have a preference for very thorough evaluation, and patients coded in this theme had been seen by such clinicians.

Mismatched approach. For about half of the PT and ST patients, clinicians' notes indicated a mismatch in the patient's and clinician's conceptualizations of distress and/or goals for psychotherapy. For example, in a mid-30s male patients' file it was noted that "Education was provided at length, including possibility of anxiety/OCD sx exacerbating his experience of side effects/somatic concerns with meds, though he does not feel this is the case." Notes for another mid-20s female patient indicated that she expressed wanting to "explor[e] her own goals and values as she was not sure why she wanted the things she wanted" and "denied changes in her mood". In the note for the following session, the clinician only acknowledged "the potential benefit of beginning to explore the [patient]'s values and goals" and stated that "we agreed that the [patient] would work on awareness about mood fluctuation throughout the day. Next session was scheduled". This patient's hopes for exploring values were not addressed, rather the clinician began with an awareness of mood mismatching the patient's prior denial of changes in mood. This patient cancelled the scheduled appointment and dropped from treatment.

Felt uncertainty. Some ST drop patients' notes indicated feelings of uncertainty, about their values or about treatment effects, while engaged in psychotherapy. Several patients coded in this theme were reported as "feeling confused about her own values/goals" or "lack[ing] clarity on his personal values". One patient was described as feeling uncertainty with cognitive behavioral strategies and "several times expressed concern that it may be problematic or risky to give up his 'algorithms' for assessing the reality basis of his obsessions" and he also reported experiencing "more unpredictable anxiety… linked to the exposure homework". While this may have been a symptom of his disorder, the feelings of uncertainty may have contributed to the

105

disengagement as it was noted that "he continued to have difficulty engaging in actual ERP. There were frequent cancellations, no shows, and tardiness to sessions". While working through uncertainty is part of the work in psychotherapy, for some, unabated feelings of uncertainty may have signaled that psychotherapy was not helping or created additional distress.

Values-action discrepancies. Another related factor for disengagement and dropout may be a discrepancy between patients' previously stated values and presently acted-upon values, as found in six ST patients' files. For example, for one patient it was noted early on that he "reports wanting to slow the escalation of their arguments, to improve communication, resolve past hurts, and to learn how to cope with life stressors together as a stable family unit." Yet the patient took actions discordant with his stated values. It was documented that he "very much wants to stay with his wife, but the legal action and boundaries it set are somewhat reassuring and give him a sense of security, and he hopes soon he will have greater and unconditional trust for his wife". Following this discordant action there was a sudden shift noted by the clinician on the day of the last session. "[Patient] reported to the therapist that he had [wife] served with documentation regarding divorce and child custody. The couple withdrew from couples psychotherapy, the status of which had been an open discussion".

Administrative sanctions. Administrative interactions also seemed influential in treatment dropout for one PT and two ST patients. These patients incurred a late cancellation or missed session charge, which may have added to the demotivation incurred from discussions about being late to sessions. For example, the 2nd to last psychotherapy note for one patient stated, "[patient] arrived on time… increasingly arriving on time to session… Continue to work on adherence to timely sessions and enforce contract if/when necessary". This was followed by the final psychotherapy note, "[patient] stated he was late because the bus was late and he forgot

to turn off some equipment…arrived 15 minutes late. Discussed this being the third late arrival thus violating the contracting and resulting in him needing to be discharged… Recommended [patient] regularly attend treatment in the future." After being administratively discharged, "[patient] called and left message…apologized…wondering if you will give him another shot. He said he would make a more "concerted effort" and said you two have covered lots of ground together and it would be a shame to lose this progress." Then, it was noted, "Clinician thanked the [patient] for his honesty and shared with the [patient] that the contract was created to aid the [patient] in arriving on time to sessions allowing therapy to be used effectively in managing the [patient]'s symptoms. Clinician noted that it was additionally created because the clinic is very busy, and in holding the [patient]'s time slot, and him arriving late we were not using resources effectively resulting in the clinic not providing services to others in need." Subsequently, this patient was fully terminated by the clinic. In comparison, those who were still in treatment or completed treatment did not have documentation of such administrative actions.

Correlations among the Themes and Disengagement Indicators

In order to better understand the relationship between the described qualitative themes, correlations were run variables indicating a presence of each theme. Tables III.4a and III.4b show the correlations between the 19 qualitative subthemes and two coded disengagement indicators. The number of significant correlations exceeds what would occur from chance (11 of 210 correlations). All significant correlations had positive coefficients, indicating that the coded themes are related in a similar manner. The strongest correlations, $r > .375$ (Cohen's $d > 0.80$), are described below and provide a context for the themes.

[Insert Table III.4a here]

107

Dropout reasons (DRO). Both dropout reasons of Travel (DRO2) and Inability to pay (DRO3), as documented in patients' last discharge note, were associated with Observed behaviors of disengagement (DIS2) and Delayed/unclear treatment planning (END1). The dropout theme of Feeling better (DRO4) was only related to a Physical emphasis (EXO4) found in the notes.

Disengagement indicators (DIS). Both Expressed-Verbal (DIS1) and Observed-Behavioral (DIS2) indicators of disengagement related to one another as well as with a chronic history of lower baseline functioning (EXO3), experiencing a delayed/unclear planning of treatment (END1), and feeling uncertainty during the psychotherapy process (END3). A verbal expression of possible disengagement (DIS1) was also related to a noted severity of the disorder symptoms (EXO1), an external attribution for the distress (EXO2), a discomfort about the processes involved in receiving psychotherapy (EXO5), and a mismatched treatment approach for the patient (END2). Only behavioral disengagement (DIS2) was related to spontaneous mentions of cultural norms for mental health (EXO6).

Contributing factors. A greater severity of symptoms (EXO1) was related to an external attribution (EXO2), chronic lower baseline functioning (EXO3), physical emphasis (EXO4), and discomfort (EXO5). Delayed/unclear treatment planning (END1) was most related to a severity of symptoms (EXO1), chronic lower baseline functioning (EXO3), mismatched treatment approach (END2), and the patient's felt uncertainty during treatment (END3). A mismatched treatment approach (END2) was also associated with the patient's discomfort with the process of receiving mental health care (EXO5), and administrative sanctions (END5). Any noted values-action discrepancy (END4) was strongly related to a patient spontaneously mentioning cultural norms (EXO6).

[Insert Table III.4b here]

Cross-Method Correlations between Themes and Quantitative Variables

To better understand the context for the found qualitative themes, cross-method correlations were run. Other cross-method analyses were not possible due to the small sample size. Tables III.5a and III.5b show the correlations between the qualitative subthemes and quantitative variables in the study. The strongest correlations, $r > .375$ (Cohen's $d > 0.80$), are described below.

[Insert Table III.5a here]

Dropout reasons. The drop reason of one's clinician leaving (DRO1) was associated negatively to cautiousness (PAI PAR) and positively to the verbal endorsement of somatic symptoms in clinicians' notes. Travel (DRO2) was positively associated with paying extra fees throughout the treatment phase, and concern about physical functioning (PAI SOM).

Disengagement indicators. Observed-behavioral disengagement (DIS2) was related to being male, and negatively associated with stress-related distress (PAI ARD) and alcohol misuse (PAI ALC).

Exo-treatment setting factors. An external attribution for distress (EXO2) was negatively related to perceived unpredictability in one's environment (PAI STR). Having a chronically lower baseline of functioning (EXO3) was positively related to poor concentration/confusion while filling out the PAI (PAI ICN) and difficulties with one's social roles (OQ-45 SR). It was also negatively associated with restlessness or high energy (PAI MAN), egocentricity or being unsentimental (PAI ANT), and alcohol misuse (PAI ALC). Discomfort with processes in psychotherapy (EXO5) was positively related to symptom-related distress (OQ-45 SD) and negatively related to unpredictability in one's life (PAI STR). Patient's

mention of cultural norms (EXO6) was negatively associated with rigidity to changes or an absence of motivation for treatment (PAI RXR). A distanced/extrinsic motivation for seeking psychotherapy (EXO7) was positively associated with anxiety (PAI ANX), interpersonal sensitivity or emotional lability (PAI BOR), and difficulty with social roles (OQ-45 SR). Control goals (EXO8) was positively related to the initial before psychotherapy GAF score.

Endo-treatment setting factors. Delayed/unclear treatment planning (END1) was negatively related to alcohol misuse (PAI ALC). Noted patient's felt uncertainty during psychotherapy (END3) was associated with a later immigrant generation, and inversely related to restlessness (PAI MAN) and feeling alienated from others (PAI SCZ). Administrative sanctions described (END5) was positively associated with a delay until the first face-to-face appointment and difficulty with social roles (OQ-45 SR).

[Insert Table III.5b here]

Quantitative Comparisons

In addition to examining qualitative theme correlations and cross-method correlations, comparative quantitative analyses help further illuminate the characteristics of this sample of Asian Americans seeking psychotherapy.

Early drops vs. Longer stays. Table III.6 presents comparisons between those who dropped earlier on before any psychotherapy vs. those who stayed longer and began psychotherapy. Those who began psychotherapy were significantly more likely to have insurance accepted by the clinic, χ^2 (1, N =36) = 4.85, p = .047. Earlier dropouts had clinical elevations on their T-scores (> 70T) for the anxiety, specific distress, and depression PAI subscales. Both groups had OQ-45 total scores above the suggested clinical cut-off (> 63; Lambert et al., 1996) as well as the symptom distress and interpersonal relations subscale scores above the clinical cut-

off (> 36 and >15 respectively). Only the earlier drop group had an OQ-45 social role subscale score above the clinical cut-off (>12).

[Insert Table III.6 here]

Physical Symptoms (Somatic/Pain) vs. No Physical Symptoms. Table III.7 presents comparisons between those who were coded as endorsing physical symptoms in clinicians' notes vs. those who did not endorse any physical symptoms. There were no statistically significant differences found between these groups. Both groups had OQ-45 total scores, symptom distress subscale scores, and interpersonal relations subscale scores above the suggested clinical cut-off. Only the no physical symptoms group had an OQ-45 social role subscale score above the clinical cut-off.

[Insert Table III.7 here]

Varied Time points

Finally, as summarized by Figure III.1, dropout occurred for patients at various points in time, with exo- and endo- treatment factors influencing the process throughout. At times, the exo- and endo- treatment factors seemed to encourage seeking and engaging while at other times they seemed to contribute to a shift from engagement to disengagement and eventual dropout. While disengagement indicators were common for patients who dropped out, not all dropout cases had noted disengagement. For these cases without disengagement, patients determined to end psychotherapy early due to unexpected circumstances (e.g., clinician leaving, subjective feelings of improvement, or strong family disapproval).

[Insert Figure III.1 here]

Discussion

This study sought to explore psychotherapy disengagement and dropout contexts for Asian American patients with depressive symptoms at a university-affiliated community clinic. A pilot, primarily qualitative, mixed methods design was developed for conducting analyses with naturalistic archival data from a clinic setting. This study is unique in its use of mixed informant data: demographics and quantitative measure scores from the patient (primary source); and qualitative clinical notes from the clinician (a secondary source). Clinicians' notes were analyzed qualitatively, while quantitative sociodemographic variables were compared to identify characteristics of those who dropped their contact with the clinic at different time points. The presence of coded themes were quantified and correlated with the quantitative variables to add depth to the qualitative findings. An additional focus was to examine whether a somatic or physical symptom emphasis was tied to any disengagement or dropout trends, since Asian Americans are thought to present such descriptions when initially meeting with a provider (Chun, Enomoto, & Sue, 1996).

Comparison to Extant Dropout Rates

Overall, this sample experienced a 78% psychotherapy dropout rate which was greater than the drop rates reported in a recent psychotherapy meta-analysis on general psychotherapy patients (Swift & Greenberg, 2012). The pre-treatment drop rate was also higher compared to results from another meta-analysis on depressed patients (Fernandez et al., 2015). Finally, the post-intake drop rate was higher than studies on ethnic minority groups which suggest a typical loss of 50% post-intake (Horrell, 2008; Sue, 1977). One explanation for the higher rate is that a majority of the patients in this sample were seen by trainees whose availability was limited to their designated training duration. In fact, when cases are transferred due to such scenarios the

drop rate can be quite high and most patients do not stay for treatment (Tantam & Klerman, 1979; Wapner, Klein, Friedlander, & Andrasik, 1986). Otherwise, it is possible that these higher drop rates were affected by the fact that all patient-clinician dyads were cross-ethnic. Given that ethnic/language matching improves service use (McClellan et al., 2012; Snowden et al., 2011), likely through a cultural cognitive match (Ibaraki & Hall, 2014; Zane et al., 2005), it may be helpful to prioritize such availability at the training level by having at least one or more staff who can be culturally responsive to patients' preferences to prevent less satisfaction with treatment (Meyer & Zane, 2013). When such a match is not possible, clinicians should be trained to implement "dynamic sizing" (Sue, 1998) with cultural humility (Hook, Davis, Owen, Worthington, & Utsey, 2013) to understand the patient's background, values, and expectations.

In contrast, the pre-intake dropout rates were lower when compared to Akutsu, Tsuru, and Chu's (2004) finding that about 30% of Asian Americans drop pre-intake in an Asian patient oriented community clinic. This relatively lower rate may be partly due to a majority of the sample having prior encounters with mental health professionals and very few having directly endorsed personal stigma about their mental health or psychotherapy in clinicians' notes. Patients stated that they know others in their native community think of psychotherapy as "taboo"; however, they did not mention feeling personally impacted by this norm. Additionally, although most of the patients with any mention of immigrant status were 1st generation, English communication might not have been a primary barrier since most were younger in age (M_{age} = 30.92, SD = 10.10) and may have acquired some fluency in English prior to immigration.

Looking Behind Stated Reasons for Dropout

As documented by clinicians in their notes, some patients directly stated their reasons for dropping out. Although there is validity to the provided reasons as a clinician leaving or

traveling—especially since the clinic was a training setting in which clinicians left at the end of their term, and since most patients had academic break periods affiliated with the university schedule—, correlations revealed additional possibilities behind what was stated. On one hand, the involuntary break from psychotherapy may have created an opportunity for hesitation or decreased the motivation to continue for the depressed patients. On the other hand, citing traveling or an inability to pay could have been a face-saving way for an Asian American patient to terminate without creating a rupture in the existing relationship, after experiencing disengagement from visits without a clear treatment plan or after being charged extra fees for missed appointments. For some patients, there had been plans to continue with scheduled appointments when they suddenly cancelled or notified the clinician that they will be traveling and will not be available indefinitely. Given the emphasis of maintaining social harmony, an Asian American patient may have kept the actual reasons behind the termination veiled and left unsaid. Though it is important to trust what the patient provides as a reason for why they need a break from or end psychotherapy, it may also be a good time to check on the patient's view of the psychotherapy and the therapeutic alliance. Additionally, for patients who decide to end psychotherapy despite the clinicians' recommendations or patients who express a desire to return to treatment when possible, it may be beneficial to build on the existing alliance when wrapping up the current phase of treatment, recognizing the potential for a loss of motivation among patients with depressive disorders. To do so, clinicians could discuss and provide a positive letter reviewing goals achieved, discussing patient-described "flags" of knowing when to seek help again, and setting individual maintenance goals. Similarly, when transfers occur, a "warm handoff" process (personal introduction by previous clinician to the new clinician with shared case conceptualization) may ameliorate "transfer syndrome" (Keith, 1966) which can include

114

patients' reactions of grief, loss (Clark, Cole, & Robertson, 2014), or anger (Penn, 1990). Such efforts resulting in a successful transfer may create an attribution of high competency towards the new clinician (Clark et al., 2014), instilling confidence and reducing the hesitation a patient may feel in sharing the details of their distress with a subsequent clinician.

Though a rare theme, two patients' notes described experiencing psychological barriers to continuing psychotherapy due to family members' disapproval. Family opinions of mental health can impact Asian American patients' decision-making during the psychotherapy process once the patient has decided to seek help for psychotherapy, especially if the patient identifies with collectivist values that place a heavier emphasis on family/group needs above individual needs or desires. Also, individuals within the family are often thought to reflect the family as a whole to the community. Though undocumented in clinicians' notes, stigma may be greater for those with less acculturated Asian American family members who view mental illnesses as a sign of a 'weak mind' or less inner strength (Arkoff, Thaver, & Elkind, 1966). Psychotherapy can be viewed as an inappropriate way of dealing with life problems among many Asian American groups (Nguyen & Anderson, 2005), and Asian Americans who internalize this concept of managing mental illness independently have been found less likely to seek professional help (Han & Pong, 2015). Yet, the importance of family can also be a positive influence on mental health help-seeking behaviors when family opinions are less stigmatizing and encouraging (Kim & Park, 2009). Given the strong family emphasis for Asian Americans from a more interdependent background, it would be useful to periodically discuss family influences on attending psychotherapy. Family members may have different expectations for outcomes from or the duration of psychotherapy, and collaborative problem solving for potential impediments may aid treatment engagement.

Behavioral Disengagement prior to Dropout

A majority of the drop cases' notes (> 85% of cases) had verbal or behavioral indicators of disengagement recorded by the clinician. The observed-behaviors were related to patients providing reasons for discontinuing psychotherapy before dropping out, but verbal expressions of potential disengagement were not particularly related to drop cases or stated reasons for dropout. Correlations showed that these observed-behavioral disengagement indicators were associated with being male and with mentions of cultural norms in clinicians' notes. This may reflect possible differences in psychotherapy engagement where being male or having a greater awareness about traditional views of psychotherapy is less conducive to buy-in. In a culture where receiving care for mental health is not a norm (Kim & Ozimo, 2003), especially for males, seeking mental health services may be thought of as shameful to the family (Root, 1985). Such public communal shame is a major barrier for Asian Americans using mental health services (Han & Pong, 2015). Thus, patients in this sample stating knowledge of what others think may imply a perception of public stigma although it was not directly stated. As previous research with Asian Americans corroborates the link between perceiving a potential loss of face with more psychotherapy disengagement behaviors (Zane & Ku, 2014), patients in this sample may have held concern about loss of face[5], exhibited disengagement behaviors, and provided drop reasons more acceptable by others as with needing to travel or relocate.

Interrelated Contributing Factors

Thematically, several factors within and outside of the treatment setting were interrelated and associated with dropouts. Exo-treatment factors most related to dropouts (e.g., patient's felt

---

[5] Though the dropout groups had non-significantly higher PAI PIM (self-favorable response style) subscale T-scores (range of group means: 39.50 - 42.33) than those who completed or remained in treatment, it was below the clinically significant level of self-favoring presentation (>70T). This does not exclude a potential loss of face concern since the concept of presenting oneself in a more positive light may be different from caring about loss of face.

severity of symptoms and extrinsic motivation for seeking help) were related to endo-treatment factors (e.g., delayed treatment planning), which in turn was related to an exo-treatment factor (chronicity of impaired functioning), which related to endo-treatment factors (discomfort in the psychotherapy process and mismatched psychotherapy approach). As described, what patients bring into the therapeutic context may influence what occurs in the treatment setting, and vice versa. This raises several clinical considerations about within treatment setting interactions, as Sue (1977) suggested, that may contribute to dropouts. While a chronic, complex, high severity case may prompt more evaluation prior to psychotherapy, unexplained extensions of the evaluation phase may add discomfort about the psychotherapy process and affect the therapeutic alliance—an important ingredient for preventing dropouts (McEvoy, Burgess, & Nathan, 2014). Research has indicated that Asian Americans experience less working alliance in psychotherapy, with therapist understandability predicting alliance and therapist credibility (Wong, Beutler, & Zane, 2007). Unexplained continued evaluations may contribute to the decreased therapist understandability, credibility, and working alliance.

In addition to delayed treatment planning, clinician notes suggest that some patients further experienced a mismatch between their expressed goals and what was offered for psychotherapy. This corroborates meta-analyses that highlight the importance of matching patients' preferences in reducing disengagement (Swift, Callahan, & Vollmer, 2011) and increasing the likelihood of beginning treatment (Swift, Greenberg, Tompkins, & Parkin, 2017). Moreover, only those with a mismatched approach were related to administrative sanctions and greater time delay until the first evaluation appointment. Such compounded negative experiences may not only disengage patients from psychotherapy in the present but also in future times of need. Given that many Asian cultures expect more direct communication and "consultation"

from "expert" providers, which was how one patient in this study described their evaluation therapist, it may be helpful to consider problem solving approaches from the beginning of clinical contact as suggested by Kearney, Draper, and Barón (2005) rather than continuing an in-depth evaluation that involves processing thoughts and emotions. Faster treatment access with brief skills trainings during the first visit (e.g., relaxation) in conjunction with an iterative assessment-intervention process, that clearly communicates how what is being done addresses the patient's concerns, may better align with Asian cultural expectations and provide opportunity for buy-in. Also, while it is important to have policies to encourage patients to be mindful of clinic structure, it will be important to ask the difficult question of how to balance a social priority with administrative priorities in a way that upholds the clinic's needs while providing additional support to patients prone to dropout or with depressive symptoms that may oppose planned psychotherapy in structured clinical settings.

Lastly, another factor to consider in relation to dropout may be a distanced/extrinsic motivation for starting psychotherapy. For some Asian American patients in this study, psychotherapy initiated by others may have felt more of a social obligation. Asian values of interpersonal harmony may produce actions demonstrating good faith despite limited intrinsic motivation, resulting in patients taking steps to begin the psychotherapy process. This may be the case especially for healthcare/mental health providers with whom the patient feels a need to maintain an ongoing relationship. To help patients fully benefit from a completed phase of psychotherapy, referring providers might use motivational interviewing strategies to help patients move to the preparation/action stage (Prochaska et al., 1994) prior to referral, to increase the patient's self-drive for psychotherapy. Following this, referring providers may also

communicate with the clinic or therapist for coordination of care, as well as ask the patient how the psychotherapy is progressing for continuity.

Structural Barriers for Earlier Dropouts

Overall, contrasting the early drops and longer stay patients revealed one primary distinguishing structural barrier. A greater proportion of patients leaving earlier, prior to psychotherapy, did not have insurance that was accepted by the clinic. Those who stayed longer and began psychotherapy had insurance that was accepted by the clinic. This is not surprising as it is well-known that insurance coverage can delay mental health service utilization for ethnic minorities (Abe-Kim & Takeuchi, 1996), including Asian Americans. Thus, administrative facilitation for understanding insurance coverage early on, prior to the first evaluation encounter, may streamline the process for both the patients and clinicians. While sliding scale fees may be helpful, they may still be too expensive for some patients. As such, it may be useful to have a contact list of providers accepting other insurance to increase the likelihood for patients to connect with care than drop out entirely.

When surveying factors related to drop out, the clinic setting should also be considered since nonattendance variance can be explained by setting effects in addition to what can be attributed to therapist effects (Xiao, Hayes, Castonguay, McAleavey, & Locke, 2017). The clinic in this study was affiliated with a university, serving mostly students, and clinicians' documentation revealed that many of the university students and postdocs felt a burden and pressure on their schedule while seeking psychotherapy. In particular, for some the students and postdocs dropping after beginning psychotherapy, key events prior to dropout included being tardy to appointments, needing to reschedule/cancel, and receiving administrative sanctions in response to such actions that did not adhere to clinic policy. Though it is important to retain

structure in a clinic setting and healthy boundaries modeled for therapeutic goals, it may help to explore more flexible, less punitive, strategies for encouraging attendance for those in high-pressure university settings. This may be particularly important for Asian American students who come from a background that strongly values educational attainment, since the pressures to perform well may compete with concerns about losing ground in psychotherapy. Adopting behavioral psychology principles as part of the treatment, such as the clinician and patient co-creating an individualized intermittent reward plan for psychotherapy attendance may be needed in addition to treatment goals. Also, it may be necessary to develop strategies to create an encouraging, non-punitive atmosphere that contrasts with the highly competitive university setting.

Co-Occurring Physical Symptoms and Perceived Need for Psychotherapy

Finally, while Asian Americans do not purely somaticize their depression (e.g., Kim & López, 2014), physical symptoms may still be a significant part of the distress experience. More than half of the sample provided physical symptom descriptions but endorsing physical symptoms did not relate to earlier dropout. In fact, a majority of patients who emphasized physical issues stayed longer and received some psychotherapy or completed psychotherapy. Early mentions of somatic symptoms and pains may be indicative of a perceived need which contributes to pursuing treatment. Therefore, while it has been suggested that it may be more culturally responsive to treat such patients medically (Flaskerud & Hu, 1994), it may useful to validate and consider the role of physical ailment descriptions (Weisman et al., 2005) as part of a holistic care model for patients already seeking mental health providers. At the same time, improvement of physical symptoms may result in some patients thinking that they are feeling better as mentioned in the clinician notes from this study. Clinicians may need to monitor the

level of perceived need in patients emphasizing physical symptoms and initiate a conversation about any remaining perceived need for psychological or interpersonal distress.

Despite not feeling better fully, a reduction in physical distress may reduce the importance of remaining in psychotherapy—a healing modality dissonant with the cultural value of emotional self-control (Kim, Yang, Atkinson, Wolfe, & Hong, 2001) as it requires verbalizing one's difficulty with emotional experiences (Leong & Lau, 2001). Asian Americans who view emotional restraint or feeling suffering in silence as respected coping strategies may perceive the expected shared disclosure in psychotherapy as less valuable. In fact, a negative relationship has been found between Asian Americans who value emotional self-control and their attitudes towards receiving help for mental health (Kim & Omizo, 2003; Kim & Lee, 2014). Moreover, the act of verbalizing emotions has been found to create aversive physiological states and greater cognitive load for Asian Americans than for non-Hispanic Caucasian Americans, while thinking in silence does not (Kim, 2002, 2008). As such, future research may explore different formats for psychotherapy rather than the open discussion format related to higher rates of dropout for less acculturated patients (Atkinson & Gim, 1989).

Lastly, contrary to previous findings that Asian Americans may be more likely to express psychological or emotional symptoms only after an alliance is developed (Cheung, 1985; Cheung & Lau, 1982), patients in this sample were noted to mention affective and cognitive symptoms alongside physical symptoms in their phone call or walk-in requests, before any in-person visit. Most patients in the study sample had previously worked with mental health providers, which may explain the more readily provided emotional symptom descriptions. Another explanation may be that cognitive or affective symptom endorsement was elicited, as some intake staff routinely asked questions about such symptoms.

121

Limitations

There are features of the study's clinic, patient sample, and data that should be noted to contextualize the presented results. First, the secondary electronic archive study design was adopted for feasibility when both clinicians and patients may not be reachable. Thus, neither patients nor clinicians could be contacted for verification of the found themes. The themes found in this study were also dependent on details provided by the clinicians in their notes, and richness in descriptions about the patients and the interventions varied. As such, findings from this study and from this type of methodology should be approached with an eye toward future study and continued theory development. Second, the clinic is a training setting in which patients are seen by both trainees and more senior-level clinicians. The patients represented in this study were seen by a mix of clinicians with different backgrounds. However, a recent meta-analysis found that neither the training setting nor therapist seniority contributes significantly to drop-out (Fernandez et al., 2015), suggesting that study findings may apply to other clinical settings as well.

Results in this study may not generalize to Asian American patients in other regions of the U.S., especially those in more diverse areas and university settings. Also, while acculturation level information was not recorded for all patients, available data showed that this sample's immigrant status ranged between 1st-2nd generation, with the 1st generation immigrants representing a younger cohort that moved to the United States more recently. Those without immigrant generation information were also likely a younger cohort if they were 1st generation ($M_{age} = 26.35$, $SD = 7.57$). As such, study findings may not apply to older cohorts of 1st generation Asian Americans nor to later generations (3rd and beyond).

Symptom improvement could not be examined in this study since the naturalistic data

and records did not have such measures recorded consistently. Similarly, the nature of the initial

referrals from other providers could not be ascertained as only categories of referrals were

available (e.g., brochure, insurance company, healthcare professional). While research shows

that, after engaging in the psychotherapy process, interactions within the clinical setting are more

important than patients' experience prior to entering psychotherapy (e.g., referral source) (Elliott,

Westmacott, Hunsley, Rumstein-Mckean, & Best, 2015), it is possible that such differences

influenced patients' approach to this clinical setting. Also, with limited sample size and missing

data, the types of quantitative comparisons possible were limited due to low power. Therefore,

though raw proportions indicate that those who completed psychotherapy had the most patients

who were gender-matched with their clinician, compared to other groups (PE, PT, ST), the

statistical significance could not be determined. It is possible that with a bigger sample, gender

match would have led to more disclosure and retention as found by Zane and Ku (2014).

Similarly, due to setting limitations, ethnic match was not meaningful to examine since

all patient-clinician dyads were cross-ethnic. Age-match was not examined since only the

therapists' age-range was available. The themes found in this study may or may not hold if based

on ethnic-matched providers, who may differ in their reporting style and the type of information

the patient discloses. Also, no information was procedurally documented at this clinic indicating

patient requests a specific gender/ethnic/age match. This would be important to consider in

clinics or future studies that wish to examine the impact of such matching on psychotherapy

engagement. Lastly, while Chang and Smith (2015) found the PAI may result in elevated scores

on some subscales in a nonclinical sample, it is yet unknown how the PAI performs for clinical

Asian American samples. Overall, despite the stated limitations, this study exemplifies the

potential of using naturally-occurring, uncontaminated data that is routinely collected in clinical settings. This type of data is easily accessible and uniquely suited for addressing issues within each clinical setting as with psychotherapy dropout. Results from this study will be a useful foundation for future studies examining dropout. For instance, the themes presented above could be incorporated into semi-structure interviews, vignettes, or questionnaires, to further assess whether these findings replicate in other similar samples.

Conclusions

Improving mental health care provision for Asian Americans accessing psychotherapy is pivotal as ethnic minority populations benefit from psychotherapy when retention is successful (Huey, Tilley, Jones, & Smith, 2014). Many patients likely turned to such care after depleting their personal resources (Hwang, 2015) or when problems have worsened (Ting & Hwang, 2009). The current study suggests that auxiliary steps, beyond what has been recommended for reducing premature termination for the general population (Swift, Greenberg, Whipple, & Kominiak, 2012), are necessary to retain Asian American patients seeking help for depressive symptoms. It may be important to provide additional support from the first non-face-to-face encounter (e.g., help with information on insurance coverage) as well as implement measures to reduce the wait time to less than a week since the no-show rate can drastically improve (52% to 18%) when such changes are made (Williams, Latta, & Conversano, 2008). Another strategy to reduce disengagement and dropout could be to make reforms at the administrative and clinical-encounter level in tandem, targeting alliance throughout the entire process even before the psychotherapy begins. While an alliance with the therapist is key to symptom change and ruptures need to be circumvented (Castonguay, Boswell, Constantino, Goldfried, & Hill, 2010), it is plausible that "ruptures" may occur prior to even meeting a therapist when interacting with

124

administrative staff or intake clinicians. As such, it may be beneficial to provide trainings for

administrative staff and/or intake clinicians on principles of building an alliance with patients.

Furthermore, to reduce mismatched understandings for psychotherapy, a preparatory orientation

for patients during the wait period or during the evaluation process might be warranted (Sue,

2006) in addition to demonstrating flexibility in collaborative treatment planning. Ways to

reduce extensions of evaluations also need to be explored, as Asian American patients feeling

urgency to work on their distress may feel dismayed from a lack of clear planning or progress.

After patients begin psychotherapy, it is essential to maintain the established alliance considering

recent findings suggesting that encounters within the clinical context impact patients'

commitment to psychotherapy more than experiences prior to contacting the clinic (Elliott et al.,

2015). Thus, rather than leaning on penal measures when patients engaged in psychotherapy are

struggling with appointments, more assistive administrative procedures (e.g., reminder calls or

messages[6] which are effective in reducing missed appointments in physical health settings 23%

to 14% (McLean et al., 2014; Parikh et al., 2010)) and individually-tailored intermittent

reinforcement strategies may be useful. Finally, it may be worth considering increasing patients'

perceived agency by providing regular nonverbal mechanisms for feedback to the therapist using

clinical support tools (Whipple et al., 2003)—found to increase length of stay in psychotherapy

and produce better outcomes. Future research should continue to explore novel strategies that

lower Asian Americans' non-attendance rates such as a patient-directed flexible appointment

akin to primary care services (Carey, Tai, & Stiles, 2013) and how this can also help those

engaging in psychotherapy in university-affiliated settings.

---

[6] Though this is not found to be helpful for patients not yet engaged in psychotherapy (Delgadillo, Moreea, Murphy, Ali, & Swift, 2015)

<center>**References**</center>

Abe-Kim, J., & Takeuchi, D. T. (1996). Cultural competence and quality of care: Issues for mental health service delivery in managed care. *Clinical Psychology: Science and Practice*, *3*, 273–295.

Abe-Kim, J., Takeuchi, D. T., Hong, S., Zane, N. W. S., Sue, S., Spencer, M. S., … Alegría, M. (2007). Use of mental health-related services among immigrant and US-born Asian Americans: results from the National Latino and Asian American Study. *American Journal of Public Health*, *97*(1), 91–8. http://doi.org/10.2105/AJPH.2006.098541

Akutsu, P. D., Tsuru, G. K., & Chu, J. P. (2004). Predictors of nonattendance of intake appointments among five Asian American client groups. *Journal of Consulting and Clinical Psychology*, *72*(5), 891–896. http://doi.org/10.1037/0022-006X.72.5.891

Akutsu, P. D., Tsuru, G. K., & Chu, J. P. (2006). Prioritized assignment to intake appointments for Asian Americans at an ethnic-specific mental health program. *Journal of Consulting and Clinical Psychology*, *74*(6), 1108–1115. http://doi.org/10.1037/0022-006X.74.6.1108

Arkoff, A., Thaver, F., & Elkind, L. (1966). Mental health and counseling ideas of Asian and American students. *Journal of Counseling Psychology*, *13*(2), 219–223. http://doi.org/10.1037/h0023396

Atkinson, D. R., & Gim, R. H. (1989). Asian-American cultural identity and attitudes toward mental health services. *Journal of Counseling Psychology*, *36*(2), 209.

Baekeland, F., & Lundwall, L. (1975). Dropping out of treatment: a critical review. *Psychological Bulletin*, *82*(5), 738–783. http://doi.org/10.1037/h0077132

Barrett, M. S., Chua, W., Crits-Christoph, P., Gibbons, M. B., & Thompson, D. (2008). Early withdrawal from mental health treatment: Implications for psychotherapy practice. *Psychotherapy Theory, Research, Practice, Training*, *45*(2), 247–267. http://doi.org/10.1037/0033-3204.45.2.247

Berg, B. L. (2001). Unobtrusive Measures in Research. In B. L. Berg (Ed.), *Qualitative research methods for the social sciences* (4th ed., pp. 189–209). London: Allyn & Bacon. http://doi.org/10.1080/19397030902947041

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. http://doi.org/http://dx.doi.org.proxy.lib.umich.edu/10.1191/1478088706qp063oa

Carey, T. A., Tai, S. J., & Stiles, W. B. (2013). Effective and efficient: Using patient-led appointment scheduling in routine mental health practice in remote Australia. *Professional Psychology: Research & Practice*, *44*(6), 405–414. http://doi.org/10.1037/a0035038

Castonguay, L. G., Boswell, J. F., Constantino, M. J., Goldfried, M. R., & Hill, C. E. (2010). Training implications of harmful effects of psychological treatments. *The American*

<center>126</center>

Psychologist, *65*(1), 34–49. http://doi.org/10.1037/a0017330

Chang, J., & Smith, S. R. (2015). An exploration of how Asian Americans respond on the Personality Assessment Inventory. *Asian American Journal of Psychology*, *6*(1), 25–30. http://doi.org/10.1037/a0036173

Chen, H. J. (2005). Physical Diagnoses Among Asian American and Pacific Islander Users of Emergency Services, *2840*(April), 1061–1079. http://doi.org/10.1080/01612840500280729

Cheung, F. M. (1985). An overview of psychopathology in Hong Kong with special reference to somatic presentation, in Chinese culture and mental health. In W. S. Tseng & D. Wu (Eds.), *Chinese Culture and Mental Health* (pp. 287–304). Orlando, FL: Academic Press, Inc.

Cheung, F. M., & Lau, B. W. K. (1982). Situational variations of help-seeking behavior among Chinese patients. *Comprehensive Psychiatry*, *23*(3), 252–262. http://doi.org/10.1016/0010-440X(82)90073-6

Chun, C.-A., Enomoto, K., & Sue, S. (1996). Health Care Issues among Asian Americans Implications of Somatization. In P. M. Kato & T. Mann (Eds.), *Handbook of diversity issues in health psychology* (pp. 347–365). New York: Plenum Press.

Clark, P., Cole, C., & Robertson, J. M. (2014). Creating a safety net: Transferring to a new therapist in a training setting. *Contemporary Family Therapy*, *36*(1), 172–189.

Cooper, A. A., & Conklin, L. R. (2015). Dropout from individual psychotherapy for major depression: A meta-analysis of randomized clinical trials. *Clinical Psychology Review*, *40*, 57–65. http://doi.org/10.1016/j.cpr.2015.05.001

Delgadillo, J., Moreea, O., Murphy, E., Ali, S., & Swift, J. K. (2015). Can Low-Cost Strategies Improve Attendance Rates in Brief Psychological Therapy? Double-Blind Randomized Controlled Trial. *Journal of Clinical Psychology*, *71*(12), 1139–1152. http://doi.org/10.1002/jclp.22228

Denzin, N. K., & Lincoln, Y. S. (2000). Handbook of qualitative research. Thousand Oaks, Calif.: Sage Publications.

Eisenberg, D., Gollust, S. E., Golberstein, E., & Hefner, J. L. (2007). Prevalence and Correlates of Depression, Anxiety, and Suicidality Among University Students. *American Journal of Orthopsychiatry*, *77*(4), 534–542. http://doi.org/10.1037/0002-9432.77.4.534

Elliott, K. P., Westmacott, R., Hunsley, J., Rumstein-Mckean, O., & Best, M. (2015). The Process of Seeking Psychotherapy and Its Impact on Therapy Expectations and Experiences. *Clinical Psychology and Psychotherapy*, *22*(5), 399–408. http://doi.org/10.1002/cpp.1900

Fernandez, E., Salem, D., Swift, J. K., & Ramtahal, N. (2015). Meta-analysis of dropout from cognitive behavioral therapy. *Journal of Consulting and Clinical Psychology*, *83*(6), 1108–1122. http://doi.org/http://dx.doi.org/10.1037/ccp0000044

Flaskerud, J. H., & Hu, L. (1994). Participation in and outcome of treatment for major depression among low income Asian-Americans. *Psychiatry Res*, *53*(3), 289–300.

Flaskerud, J. H., & Liu, P. Y. (1991). Effects of an Asian client-therapist language, ethnicity and gender match on utilization and outcome of therapy. *Community Mental Health Journal*, *27*(1), 31–42. http://doi.org/10.1007/BF00752713

Frankel, Z., & Levitt, H. M. (2009). Clients' experiences of disengaged moments in psychotherapy: A grounded theory analysis. *Journal of Contemporary Psychotherapy*, *39*(3), 171–186. http://doi.org/10.1007/s10879-008-9087-z

Fujino, D. C., Okazaki, S., & Young, K. (1994). Asian-American Women in the Mental Health System : An Examination of Ethnic and Gender Match Between Therapist and Client, *22*(April), 164–176.

Gunderson, J. G., Frank, A. F., Ronningstam, E. F., Wachter, S., Lynch, V. J., & Wolf, P. J. (1989). Early discontinuance of borderline patients from psychotherapy. *The Journal of Nervous and Mental Disease*. http://doi.org/10.1097/00005053-198901000-00006

Hailparn, D. F., & Hailparn, M. (1999). Reporting as Resistance : Strategies for Overcoming Reporting. *Journal of Contemporary Psychotherapy*, *29*(2), 155–165.

Han, M., & Pong, H. (2015). Mental Health Help-Seeking Behaviors Among Asian American Community College Students: The Effect of Stigma, Cultural Barriers, and Acculturation. *Journal of College Student Development*, *56*(1), 1–14. http://doi.org/10.1353/csd.2015.0001

Hanson, W., Creswell, J. W., Clark, V., Petska, K., & Creswell, J. D. (2005). Mixed methods research designs in counseling psychology. *Journal of Counselling*, *52*(2), 224–235. http://doi.org/DOI: 10.1037/0022-0167.52.2.224

Hatchett, G. T., & Park, H. L. (2003). Comparison of Four Operational Definitions of Premature Termination. *Psychotherapy: Theory, Research, Practice, Training*, *40*(3), 226–231. http://doi.org/10.1037/0033-3204.40.3.226

Hill, C. E., Knox, S., Thompson, B. J., Williams, E. N., Hess, S. A., & Ladany, N. (2005). Consensual qualitative research: An update. *Journal of Counseling Psychology*, *52*(2), 196–205. http://doi.org/10.1037/0022-0167.52.2.196

Hill, C. E., Thompson, B. J., & Williams, E. N. (1997). A guide to conducting consensual qualitative research. *The Counselling Psychologist*, *25*(4), 517–572. http://doi.org/0803973233

Hook, J. N., Davis, D. E., Owen, J., Worthington, E. L., & Utsey, S. O. (2013). Cultural humility: measuring openness to culturally diverse clients. *Journal of Counseling Psychology*, *60*(3), 353–66. http://doi.org/10.1037/a0032595

Horrell, S. C. V. (2008). Effectiveness of cognitive-behavioral therapy with adult ethnic minority clients: A review. *Professional Psychology: Research and Practice*, *39*(2), 160–168.

http://doi.org/10.1037/0735-7028.39.2.160

Hsieh, H. F., & Shannon, S. E. (2005). Three Approaches to Qualitative Content Analysis. *Qualitative Health Research*, *15*(9), 1277–1288. http://doi.org/10.1177/1049732305276687

Huey, S. J., Tilley, J. L., Jones, E. O., & Smith, C. A. (2014). The Contribution of Cultural Competence to Evidence-Based Care for Ethnically Diverse Populations. *Annu. Rev. Clin. Psychol*, *10*, 305–38. http://doi.org/10.1146/annurev-clinpsy-032813-153729

Hwang, W.-C. (2015). Treating depression in Asian American adults. In H. Grey & B. N. Hall-Clark (Eds.), *Cultural considerations in Asian and Pacific Islander American mental health* (pp. 13–28). New York: Oxford University Press.

Ibaraki, A. Y., & Hall, G. C. N. (2014). The components of cultural match in psychotherapy. *Journal of Social and Clinical Psychology*, *33*(10), 936–953. http://doi.org/10.1521/jscp.2014.33.10.936

Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed Methods Research: A Research Paradigm Whose Time Has Come. *Educational Researcher*, *33*(14), 14–26. http://doi.org/10.3102/0013189X033007014

Kazdin, A. E. (1990). Premature Termination from Treatment among Children Referred for Antisocial Behavior. *Journal of Child Psychology and Psychiatry*, *31*(3), 415–425. http://doi.org/10.1111/j.1469-7610.1990.tb01578.x

Kearney, L. K., Draper, M., & Barón, A. (2005). Counseling Utilization by Ethnic Minority College Students. *Cultural Diversity and Ethnic Minority Psychology*, *11*(3), 272–285. http://doi.org/10.1037/1099-9809.11.3.272

Keith, C. (1966). Multiple transfers of psychotherapy patients. A report of problems and management. *Archives of General Psychiatry*, *14*(2), 185–189. http://doi.org/10.1001/archpsyc.1966.01730080073011

Kim, B. S. K., Brenner, B. R., Liang, C. T. H., & Asay, P. a. (2003). A qualitative study of adaptation experiences of 1.5-generation Asian Americans. *Cultural Diversity & Ethnic Minority Psychology*, *9*(2), 156–170. http://doi.org/10.1037/1099-9809.9.2.156

Kim, B. S. K., & Omizo, M. M. (2003). Asian Cultural Values, Attitudes toward Seeking Professional Psychological Help, and Willingness to See a Counselor. *The Counseling Psychologist*, *31*(3), 343–361. http://doi.org/10.1177/0011000003031003008

Kim, B. S. K., Yang, P. H., Atkinson, D. R., Wolfe, M. M., & Hong, S. (2001). Cultural value similarities and differences among Asian American ethnic groups. *Cultural Diversity & Ethnic Minority Psychology*, *7*(4), 343–361. http://doi.org/10.1037//1099-9809.7.4.343

Kim, H. S. (2002). We talk, therefore we think? A cultural analysis of the effect of talking on thinking. *Journal of Personality and Social Psychology*, *83*(4), 828–842. http://doi.org/10.1037/0022-3514.83.4.828

Kim, H. S. (2008). Culture and the cognitive and neuroendocrine responses to speech. *Journal of Personality and Social Psychology*, *94*(1), 32–47. http://doi.org/10.1037/0022-3514.94.1.32

Kim, J. M., & López, S. R. (2014). The expression of depression in Asian Americans and European Americans. *Journal of Abnormal Psychology*, *123*(4), 754–63. http://doi.org/10.1037/a0038114

Kim, P. Y., & Lee, D. (2014). Internalized model minority myth, Asian values, and help-seeking attitudes among Asian American students. *Cultural Diversity & Ethnic Minority Psychology*, *20*(1), 98–106. http://doi.org/10.1037/a0033351

Kim, P. Y., & Park, I. J. K. (2009). Testing a multiple mediation model of Asian American college students' willingness to see a counselor. *Cultural Diversity & Ethnic Minority Psychology*, *15*(3), 295–302. http://doi.org/10.1037/a0014396

Kincheloe, J. L. (2001). Describing the Bricolage: Conceptualizing a New Rigor in Qualitative Research. *Qualitative Inquiry*, *7*(6), 679–692. http://doi.org/10.1177/107780040100700601

Kincheloe, J. L. (2005). On to the Next Level: Continuing the Conceptualization of the Bricolage. *Qualitative Inquiry*, *11*(3), 323–350. http://doi.org/10.1177/1077800405275056

King, N., Cassell, C., & Symon, G. (2004). Using templates in the thematic analysis of texts. *Essential Guide to Qualitative Methods in Organizational Research*, 256–270.

Kung, W. W. (2004). Cultural and practical barriers to seeking mental health treatment for Chinese Americans. *Journal of Community Psychology*, *32*(1), 27–43. http://doi.org/10.1002/jcop.10077

Lambert, M. J., Hansen, N. B., Umphress, V. J., Lunnen, K., Okiishi, J., Burlingame, G. M., & Reisinger, C. W. (1996). Administration and scoring manual for the OQ-45.2. *Stevenson, MD: American Professional Credentialing Services*.

Landis, J. R., & Koch, G. G. (1977). The measurement of observer agreement for categorical data. *Biometrics*, *33*(1), 159–174. http://doi.org/10.2307/2529310

Leong, F. T. L., & Lau, A. S. (2001). Barriers to providing effective mental health services to Asian Americans. *Mental Health Services Research*, *3*(4), 201–214. http://doi.org/10.1023/A:1013177014788

Luborsky, L., Chandler, M., Auerbach, A. H., & Cohen, J. (1971). Factors influencing the outcome of psychotherapy: A review of quantitative research. *Psychological Bulletin*, *75*(3), 145–185. http://doi.org/10.1037/h0030480

McClellan, S. R., Wu, F. M., & Snowden, L. R. (2012). The impact of threshold language assistance programming on the accessibility of mental health services for persons with limited English proficiency in the Medi-Cal setting. *Medical Care*, *50*(6), 554–8. http://doi.org/10.1097/MLR.0b013e3182463432

McEvoy, P. M., Burgess, M. M., & Nathan, P. (2014). The relationship between interpersonal problems, therapeutic alliance, and outcomes following group and individual cognitive behaviour therapy. *Journal of Affective Disorders*, *157*, 25–32. http://doi.org/10.1016/j.jad.2013.12.038

McLean, S., Gee, M., Booth, A., Salway, S., Nancarrow, S., Cobb, M., & Bhanbhro, S. (2014). Targeting the Use of Reminders and Notifications for Uptake by Populations (TURNUP): a systematic review and evidence synthesis. *Health Serv Deliv Res*, *2*(34), 1–184. http://doi.org/10.3310/hsdr02340

Meyer, O. L., & Zane, N. W. S. (2013). the Influence of Race and Ethnicity in Clients' Experiences of Mental Health Treatment. *Journal of Community Psychology*, *41*(7), 884–901. http://doi.org/10.1002/jcop.21580

Meyer, O. L., Zane, N. W. S., Cho, Y. I., & Takeuchi, D. T. (2009). Use of specialty mental health services by Asian Americans with psychiatric disorders. *Journal of Consulting and Clinical Psychology*, *77*(5), 1000–1005. http://doi.org/10.1037/a0017065

Morey, L. C., & Boggs, C. (1991). *Personality assessment inventory (PAI)*. PAR.

Nguyen, Q. C. X., & Anderson, L. P. (2005). Vietnamese Americans' attitudes toward seeking mental health services: Relation to cultural variables. *Journal of Community Psychology*, *33*(2), 213–231. http://doi.org/10.1002/jcop.20039

O'Brien, A., Fahmy, R., & Singh, S. P. (2009). Disengagement from mental health services: A literature review. *Social Psychiatry and Psychiatric Epidemiology*, *44*(7), 558–568. http://doi.org/10.1007/s00127-008-0476-0

Orme, D. R., & Boswell, D. (1991). The pre-intake drop-out at a community mental health center. *Community Mental Health Journal*, *27*(5), 375–9.

Parikh, A., Gupta, K., Wilson, A. C., Fields, K., Cosgrove, N. M., & Kostis, J. B. (2010). The Effectiveness of Outpatient Appointment Reminder Systems in Reducing No-Show Rates. *American Journal of Medicine*, *123*(6), 542–548. http://doi.org/10.1016/j.amjmed.2009.11.022

Penn, L. S. (1990). When the therapist must leave: Forced termination of psychodynamic therapy. *Professional Psychology: Research and Practice*, *21*(5), 379.

Ponterotto, J. G. (2005). Qualitative research in counseling psychology: A primer on research paradigms and philosophy of science. *Journal of Counseling Psychology*, *52*(2), 126–136. http://doi.org/10.1037/0022-0167.52.2.126

Prochaska, J. O., Velicer, W. F., Rossi, J. S., Goldstein, M. G., Marcus, B. H., Rakowski, W., … Rossi, S. R. (1994). Stages of Change and Decisional Balance for 12 Problem Behaviors. *Health Psychology*, *13*(1), 39–46. http://doi.org/10.1037/0278-6133.13.1.39

Reis, B. F., & Brown, L. G. (1999). Reducing psychotherapy dropouts: Maximizing perspective

convergence in the psychotherapy dyad. *Psychotherapy*, *36*(2), 123–136. http://doi.org/10.1037/h0087822

Rennie, D. L. (1994). Storytelling in Psychotherapy : The Client's Subjective Experience. *Psychotherapy*, *31*(2), 234–243.

Roos, J., & Werbart, A. (2013). Therapist and relationship factors influencing dropout from individual psychotherapy: A literature review. *Psychotherapy Research : Journal of the Society for Psychotherapy Research*, *23*(4), 394–418. http://doi.org/10.1080/10503307.2013.775528

Root, M. P. P. (1985). Guidelines for facilitating therapy with Asian-American clients. *Psychotherapy: Theory, Research, Practice, Training*, *22*(2S), 349–356. http://doi.org/10.1037/h0085514

Sanchez, F., & Gaw, A. (2007). Mental Health Care of Filipino Americans. *Psychiatric Services*, *58*(6), 810–815. http://doi.org/10.1176/appi.ps.58.6.810

Snowden, L. R., Masland, M. C., Peng, C. J., Wei-Mien Lou, C., & Wallace, N. T. (2011). Limited English proficient Asian Americans: Threshold language policy and access to mental health treatment. *Social Science and Medicine*, *72*(2), 230–237. http://doi.org/10.1016/j.socscimed.2010.10.027

Substance Abuse and Mental Health Services Administration. (2015). *Racial/ Ethnic Differences in Mental Health Service Use among Adults. HHS Publication No. SMA-15-4906*. Rockville, MD.

Sue, D., & Sue, S. (1987). Cultural factors in the clinical assessment of Asian Americans. *Journal of Consulting and Clinical Psychology*, *55*(4), 479–487.

Sue, S. (1977). Community Mental Health Services to Minority Groups: Some Optimism, Some Pessimism. *American Psychologist*, *32*(8), 616–624. http://doi.org/10.1037//0003-066X.32.8.616

Sue, S. (1998). In search of cultural competence in psychotherapy and counseling. *The American Psychologist*, *53*(4), 440–448. http://doi.org/10.1037/0003-066X.53.4.440

Sue, S. (2006). Cultural competency: From philosophy to research and practice. *Journal of Community Psychology*, *34*(2), 237–245. http://doi.org/10.1002/jcop.20095

Sue, S., Fujino, D. C., Hu, L., Takeuchi, D. T., & Zane, N. W. S. (1991). Community mental health services for ethnic minority groups: a test of the cultural responsiveness hypothesis. *Journal of Consulting and Clinical Psychology*, *59*(4), 533–540. http://doi.org/10.1037/0022-006X.59.4.533

Swift, J. K., Callahan, J. L., & Vollmer, B. M. (2011). Preferences. *Journal of Clinical Psychology*, *67*(2), 155–165. http://doi.org/10.1002/jclp.20759

Swift, J. K., & Greenberg, R. P. (2012). Premature discontinuation in adult psychotherapy: A meta-analysis. *Journal of Consulting and Clinical Psychology*, *80*(4), 547–559. http://doi.org/10.1037/a0028226

Swift, J. K., Greenberg, R. P., Tompkins, K. A., & Parkin, S. R. (2017). Treatment Refusal and Premature Termination in Psychotherapy , Pharmacotherapy , and Their Combination : A Meta-Analysis of Head-to-Head Comparisons, *54*(1), 47–57. http://doi.org/10.1037/pst0000104

Swift, J. K., Greenberg, R. P., Whipple, J. L., & Kominiak, N. (2012). Practice Recommendations for Reducing Premature Termination in Therapy. *Professional Psychology: Research and Practice*, *43*(4), 379–387. http://doi.org/10.1037/a0028291

Tantam, D., & Klerman, G. (1979). Patient transfer from one clinician to another and dropping-out of out-patient treatment. *Social Psychiatry*, *14*(3), 107–113.

Ting, J. Y., & Hwang, W.-C. (2009). Cultural influences on help-seeking attitudes in Asian American students. *American Journal of Orthopsychiatry*, *79*(1), 125–132. http://doi.org/10.1037/a0015394

Tseng, W.-S., Asai, M., Jieqiu, L., Wibulswasdi, P., Suryani, L. K., Wen, J. K., … Heiby, E. (1990). Multi-Cultural Study of Minor Psychiatric Disorders in Asia: Symptom Manifestations. *International Journal of Social Psychiatry*, *36*(4), 252–264.

U.S. Department of Health and Human Services. (2001). *Mental Health: Culture, Race, and Ethnicity—A Supplement to Mental Health: A Report of the Surgeon General*. Rockville, MD.

Uba, L. (1994). *Asian Americans: personality patterns, identity, and mental health*. New York: Guilford Press.

Umphress, V. J., Lambert, M. J., Smart, D. W., Barlow, S. H., & Clouse, G. (1997). Concurrent and Construct Validity of the Outcome Questionnaire. *Journal of Psychoeducational Assessment*, *15*(1), 40–55. http://doi.org/10.1177/073428299701500104

Wapner, J. H., Klein, J. G., Friedlander, M. L., & Andrasik, F. J. (1986). Transferring psychotherapy clients: State of the art. *Professional Psychology: Research and Practice*, *17*(6), 492.

Weisman, A., Feldman, G., Gruman, C., Rosenberg, R., Chamorro, R., & Belozersky, I. (2005). Improving Mental Health Services for Latino and Asian Immigrant Elders. *Prof Psychol Res Pr*, *36*(6), 642–648. http://doi.org/10.1037/0735-7028.36.6.642

Whipple, J. L., Lambert, M. J., Vermeersch, D. A., Smart, D. W., Nielsen, S. L., & Hawkins, E. J. (2003). Improving the effects of psychotherapy: The use of early identification of treatment and problem-solving strategies in routine practice. *Journal of Counseling Psychology*, *50*(1), 59–68. http://doi.org/10.1037/0022-0167.50.1.59

Wierzbicki, M., & Pekarik, G. (1993). A meta-analysis of psychotherapy dropout. *Professional Psychology: Research and Practice*, *24*(2), 190–195.

Williams, M. E., Latta, J., & Conversano, P. (2008). Eliminating the wait for mental health services. *Journal of Behavioral Health Services and Research*, *35*(1), 107–114. http://doi.org/10.1007/s11414-007-9091-1

Wittenborn, A. K., Rahmandad, H., Rick, J., & Hosseinichimeh, N. (2015). Depression as a systemic syndrome: mapping the feedback loops of major depressive disorder. *Psychological Medicine*, *46*(3), 1–12. http://doi.org/10.1017/S0033291715002044

Wong, E. C., Beutler, L. E., & Zane, N. W. S. (2007). Using mediators and moderators to test assumptions underlying culturally sensitive therapies: an exploratory example. *Cultural Diversity and Ethnic Minority Psychology*, *13*(2), 169–177. http://doi.org/10.1037/1099-9809.13.2.169

Xiao, H., Hayes, J. A., Castonguay, L. G., McAleavey, A. A., & Locke, B. D. (2017). Therapist effects and the impacts of therapy nonattendance. *Psychotherapy*, *54*(1), 58–65. http://doi.org/10.1037/pst0000103

Ying, Y. (2001). Psychotherapy with traumatized Southeast Asian refugees. *Clinical Social Work Journal*, *29*(1), 65–78. http://doi.org/10.1023/A:1005210628134

Zane, N. W. S., & Ku, H. (2014). Effects of ethnic match, gender match, acculturation, cultural identity, and face concern on self-disclosure in counseling for Asian Americans. *Asian American Journal of Psychology*, *5*(1), 66–74. http://doi.org/10.1037/a0036078

Zane, N. W. S., Sue, S., Chang, J., Huang, L., Huang, J., Lowe, S., … Lee, E. (2005). Beyond ethnic match: Effects of client-therapist cognitive match in problem perception, coping orientation, and therapy goals on treatment outcomes. *Journal of Community Psychology*, *33*(5), 569–585. http://doi.org/10.1002/jcop.20067

Table III.1 Clinician Demographics by In-Person Case Type

Variable	Evaluation $n = 29$	Therapy $n = 23$
Race		
Caucasian	25 (86%)	20 (87%)
Latino	2 (7%)	2 (9%)
Black	2 (7%)	1 (4%)
Asian	0 (0%)	0 (0%)
Gender		
Female	25 (86%)	20 (87%)
Male	4 (14%)	3 (13%)
Age Range		
20s	12 (41%)	5 (22%)
30s	9 (31%)	8 (35%)
40s	8 (28%)	10 (44%)
Skill Level		
Trainee	24 (83%)	15 (65%)
Staff	5 (17%)	8 (35%)

Table III.2 Patient Characteristics by Clinically Meaningful Groups ($N = 36$)

Variables	Pre-Evaluation (PE) Dropout Group $n=7$	Pre-Therapy (PT) Dropout Group $n=6$	Some Therapy (ST) Dropout Group $n=15$	Completed/ In-Treatment (CIT) Group $n=8$
	n(%) or M(SD)	n(%) or M(SD)	n(%) or M(SD)	n(%) or M(SD)
Age	24.14 (5.46)	28.00 (10.90)	26.93 (6.96)	30.88 (11.97)
Gender				
Female	5 (71%)	3 (50%)	3 (19%)	5 (63%)
Male	2 (29%)	3 (50%)	13 (81%)	3 (37%)
Ethnicity [a]				
Chinese	1 (14%)	1 (17%)	8 (50%)	1 (13%)
Indian	2 (29%)	2 (33%)	3 (19%)	1 (13%)
Not specified	4 (57%)	-	-	-
Japanese	-	-	1 (6%)	2 (25%)
Korean	-	2 (33%)	1 (6%)	-
Vietnamese	-	1 (17%)	1 (6%)	-
Part-Japanese	-	-	-	1 (13%)
Bangladeshi	-	-	1 (6%)	-
Chinese-Thai	-	-	-	1 (13%)
Filipino	-	-	-	1 (13%)
Taiwanese	-	-	1 (6%)	-
Immigrant Generation [a]				
Not specified	7 (86%)	3 (50%)	4 (25%)	5 (63%)
1st	1 (14%)	4 (67%)	5 (31%)	3 (38%)
1.5	-	-	3 (19%)	-
2nd	-	-	4 (25%)	-
Married [a]	1 (14%)	2 (33%)	5 (33%)	1 (13%)
Career/Employment Type [a]				
Undergraduate Student	4 (57%)	2 (33%)	6 (38%)	
Graduate Student	-	-	5 (33%)	3 (38%)
Post Doc	-	2 (33%)	1 (7%)	1 (13%)
Part-Time Career	-	-	-	1 (13%)
Full-time Career	-	-	4 (25%)	3 (38%)
Religion [a]				
Not specified	7 (100%)	3 (50%)	8 (50%)	6 (75%)
Christian	-	1 (17%)	3 (19%)	1 (13%)
Hindu	-	2 (33%)	1 (6%)	-

Variables	Pre-Evaluation (PE) Dropout Group n=7 n(%) or M(SD)	Pre-Therapy (PT) Dropout Group n=6 n(%) or M(SD)	Some Therapy (ST) Dropout Group n=15 n(%) or M(SD)	Completed/ In-Treatment (CIT) Group n=8 n(%) or M(SD)
Catholic	-	-	1 (6%)	1 (13%)
Buddhism	-	-	1 (6%)	-
Sikh	-	-	1 (6%)	-
None	-	-	1 (6%)	-
Time Delay to 1st Appointment (days)	9.83 (8.89)	9.33 (6.77)	14.07 (15.20)	16.13 (14.22)
Had Insurance [c]	6 (86%)	3 (50%)	14 (93%)	8 (100%)
Prior use of mental health services[a]	4 (80%)	4 (67%)	9 (60%)	5 (63%)
Intake Reason Type [a]				
Academic/Professional	1 (17%)	3 (50%)	5 (33%)	3 (38%)
Interpersonal/Social	5 (83%)	2 (33%)	9 (60%)	5 (63%)
Health/Symptoms	0 (0%)	1 (17%)	1 (7%)	0 (0%)
Evaluation Clinician-Patient Gender Match	-	3 (50%)	5 (33%)	6 (75%)
Evaluation Clinician-Patient Age Match	-	1 (17%)	1 (7%)	2 (25%)
Therapist-Patient Gender Match	-	2 (33%)	4 (27%)	6 (75%)
Therapist-Patient Age Match	-	2 (33%)	5 (33%)	2 (25%)
Treatment Type [c]				
CBT	-	2 (33%)	3 (20%)	2 (25%)
3rd wave	-	-	3 (20%)	3 (38%)
IPT	-	-	1 (7%)	1 (13%)
Psychodynamic/Eclectic	-	-	4 (27%)	2 (25%)
Number of Sessions	0.00 (0.00)	0.17 (0.41)	10.60 (5.95)	28.57 (19.56)
Paid extra fees [c]	0 (0%)	3 (50%)	5 (33%)	0 (0%)
PAI Subscale T-Scores [b]				
ICN	50 (12.1)	53.5 (7.77)	56.07 (8.7)	53.5 (7.35)
INF	50.83 (9.41)	59 (9.12)	58.57 (9.28)	53.38 (10.51)
NIM	64.67 (14.05)	62.17 (7.31)	58.57 (9.84)	54.13 (12.39)
PIM	42.33 (6.98)	40.17 (9.5)	39.5 (12.92)	38.25 (10.61)
SOM	54.83 (9.6)	61.67 (10.41)	60 (11.05)	53.63 (10.27)
ANX	68.83 (13.11)	**75 (10.18)**	64.36 (14.22)	63.25 (12.92)
ARD	**73.5 (17.33)**	70 (7.04)	59.93 (11.72)	64 (12.24)
DEP	68 (15.66)	**73.83 (14.73)**	66.93 (15.13)	**70.38 (14.38)**

Variables	Pre-Evaluation (PE) Dropout Group n=7 n(%) or M(SD)	Pre-Therapy (PT) Dropout Group n=6 n(%) or M(SD)	Some Therapy (ST) Dropout Group n=15 n(%) or M(SD)	Completed/ In-Treatment (CIT) Group n=8 n(%) or M(SD)
MAN	53.67 (9.35)	61.83 (13.76)	50.57 (9.93)	50 (13.22)
PAR	60.5 (11.19)	58.17 (6.11)	52.57 (10.21)	57.13 (9.11)
SCZ	67.67 (11.08)	69.67 (11.36)	57.43 (11.69)	58.13 (10.87)
BOR	66.33 (13.4)	67.17 (10.5)	61.79 (10.49)	64.75 (10.71)
ANT	54.83 (7.65)	57.5 (8.76)	49.86 (8.82)	50.88 (11.13)
ALC	49.33 (7.97)	45.5 (4.18)	45 (5.62)	47.88 (5.54)
DRG	51 (14.68)	47 (6.03)	48.29 (7.27)	49 (5.45)
AGG	47.5 (8.46)	55.5 (11.04)	50.29 (8.32)	48.75 (7.52)
SUI	59.5 (28.4)	**71.33 (17.2)**	52.71 (8.02)	61.5 (13.77)
STR	60.67 (9.56)	57.17 (8.18)	54.29 (11.23)	59.25 (10.08)
NON	68.17 (11.51)	57.17 (13.35)	62.79 (12.24)	59.13 (12.86)
RXR	36.33 (6.35)	36.33 (9.16)	34.21 (7.4)	36.25 (7.91)
DOM	43 (7.38)	52.5 (8.46)	45.5 (12.77)	43.5 (12.81)
WRM	44.83 (9.66)	48.5 (15.44)	46.29 (11.31)	42.38 (16.31)
OQ-45 Scores [c]	2 (28.6%)	5 (83%)	7 (47%)	7 (88%)
Total	55.5. (19.09)	**82.20 (21.88)**	**67.71 (30.05)**	**77.00 (13.19)**
SD	28.50 (10.61)	**40.80 (20.90)**	**37.57 (18.55)**	**45.71 (8.22)**
IR	**17.00 (9.90)**	**15.20 (6.46)**	**17.00 (9.56)**	**17.71 (5.38)**
SR	9.50 (0.71)	**13.20 (6.46)**	11.71 (3.35)	10.86 (3.93)
Initial GAF score [c]	-	47.50 (10.61)	62.77 (9.81)	28.57 (19.56)
Any physical symptoms emphasized [a]	2 (29%)	3 (50%)	10 (67%)	5 (63%)
Somatic symptoms emphasized	2 (29%)	3 (50%)	10 (67%)	4 (50%)
Pains emphasized	1 (14%)	1 (17%)	5 (33%)	3 (38%)

Note. [a] = Summary of those who specified only, otherwise not mentioned. [b] = Summary of valid test results only, otherwise invalid. [c] = Summary of available information only, otherwise missing. Measure scores above the clinical cut-off (>70t for PAI, >63 for OQ-45 Total, >36 for OQ-45 SD, >15 for OQ-45 IR, >12 for OQ-45 SR) are bolded.

Table III.3 Summary of Qualitative Themes ($N = 36$)

Domain/Category/Subcategories	PE ($n = 7$)	PT ($n = 6$)	ST ($n = 15$)	CIT ($n = 8$)	Overall Frequency[+]	Physical symptoms ($n = 23$)	No physical symptoms ($n = 13$)
Dropout Reasons (DRO)							
DRO1. Clinician Leaving	NA	2 (33%)	4 (27%)	NA	Variant	5 (22%)	1 (8%)
DRO2. Travel/Relocating	NA	0 (0%)	5 (33%)	NA	Variant	4 (17%)	1 (8%)
DRO3. *Inability to Pay*	NA	1 (17%)	3 (20%)	NA	Variant	4 (17%)	*0 (0%)*
DRO4. *Feeling Better*	NA	1 (17%)	3(20%)	NA	Variant	3 (13%)	*0 (0%)*
DRO5. Not Right Time	NA	1 (17%)	2 (13%)	NA	Rare	1 (4%)	2 (15%)
DRO6. Family Disapproval	NA	1 (17%)	1 (7%)	NA	Rare	0 (0%)	2 (15%)
Disengagement Indicators (DIS)							
DIS1. Expressed-Verbal	1 (14%)	4 (24%)	13 (87%)	5 (63%)	Typical	18 (78%)	7 (54%)
DIS2. **Observed-Behavioral**	NA	**5 (83%)**	**13 (87%)**	2 (25%)	Typical	15 (65%)	5 (38%)
Potential Contributing Factors							
Exo-Treatment Setting (EXO)							
EXO1. **Severity of Disorder**	**5 (71%)**	**5 (83%)**	**14 (93%)**	5 (63%)	Typical	21 (91%)	8 (62%)
EXO2. External Attribution for Distress	6 (86%)	4 (24%)	12 (80%)	5 (63%)	Typical	21 (91%)	9 (69%)
EXO3. Baseline Functioning: Chronic History	4 (57%)	4 (24%)	13 (87%)	5 (63%)	Typical	19 (83%)	7 (54%)
EXO4. *Physical Emphasis*	3 (43%)	2 (33%)	11 (73%)	3 (38%)	Typical	19 (83%)	*0 (0%)*
EXO5. Discomfort with Process	1 (14%)	3 (50%)	10 (67%)	3 (38%)	Variant	12 (52%)	5 (38%)
EXO6. Cultural Norms	0 (0%)	1 (17%)	9 (60%)	2 (25%)	Variant	-	3 (23%)
EXO7. **Distanced/Extrinsic Motivation Source**	**2 (29%)**	**4 (24%)**	**5 (33%)**	**0 (0%)**	Variant	9 (39%)	2 (15%)
EXO8. *Control Goals*	0 (0%)	0 (0%)	3 (20%)	0 (0%)	Rare	3 (13%)	*0 (0%)*
Endo-Treatment Setting (END)							
END1. Delayed/Unclear Treatment Planning	NA	4 (24%)	11 (73%)	2 (25%)	Variant	12 (52%)	5 (38%)
END2. **Mismatched Approach**	NA	**3 (50%)**	**6 (40%)**	1 (13%)	Variant	6 (26%)	4 (31%)
END3. Felt Uncertainty	NA	0 (0%)	6 (40%)	2 (25%)	Variant	5 (22%)	2 (15%)
END4. Values-Action Discrepancies	NA	0 (0%)	6 (40%)	1 (13%)	Variant	4 (17%)	3 (23%)
END5. **Administrative Sanctions**	NA	**1 (17%)**	**2 (13%)**	**0 (0%)**	Rare	2 (9%)	1 (8%)

Note. Counts are of number of cases coded per theme category. Themes only applicable to cases endorsing physical symptoms are italicized. Themes only applicable to drop cases

Domain/Category/Subcategories	PE (*n* = 7)	PT (*n* = 6)	ST (*n* = 15)	CIT (*n* = 8)	Overall Frequency[+]	Physical symptoms (*n* = 23)	No physical symptoms (*n* = 13)

are bolded and underlined. Themes most applicable to drop cases (i.e., all drop groups have a greater percentage than CIT) are bolded. [+]Categories based on prevalence of themes: typical (> 50% of cases), variant (4 cases – 50%), rare (2-3 cases)

Table III.4a Correlations among Themes ($N = 36$)

	Dropout Reasons						Disengagement Indicators	
Variable	DRO1	DRO2	DRO3	DRO4	DRO5	DRO6	DIS1	DIS2
Dropout Reasons								
DRO1. Clinician Leave	-							
DRO2. Travel	-.197	-						
DRO3. Inability to Pay	-.197	.303	-					
DRO4. Feel Better	.209	-.161	-.161	-				
DRO5. Not Right Time	**.360***	-.121	-.121	-.121	-			
DRO6. Family Disapproval	-.119	-.097	-.097	.253	-.073	-		
Disengagement Indicators								
DIS1. Expressed-Verbal	-.012	.176	.176	.014	.051	-.041	-	
DIS2. Observed-Behavioral	.043	**.380***	**.380***	.058	-.117	.229	**.442****	-
Exo-Treatment Setting Factors								
EXO1. Severity of Disorder	.220	.180	.180	.180	.135	.108	**.529****	.323
EXO2. External Attribution	.064	.197	.197	.197	.148	-.187	**.439****	.238
EXO3. Chronic Baseline	-.215	.302	.302	-.033	.017	-.070	**.655****	**.447****
EXO4. Physical Emphasis	.184	.058	.058	**.380***	-.117	-.013	.103	.220
EXO5. Discomfort	.098	.264	.264	.103	.117	.013	**.461****	.226
EXO6. Cultural Norms	.284	.082	.082	.082	.018	.102	.316	**.386***
EXO7. Distanced/ Extrinsic Motivation	.284	-.092	-.092	.082	.018	-.161	.194	.023
EXO8. Control Goals	.273	.114	.114	-.142	.213	-.086	.120	.157
Endo-Treatment Setting Factors								
END1. Delayed Planning	-.043	**.425****	**.425****	-.058	.117	.256	**.574****	**.672****
END2. Mismatch	.322	.110	.289	-.070	.262	.120	**.524****	**.338***
END3. Felt Uncertainty	-.122	.325	.139	.139	.058	.140	**.488****	**.418***
END4. Values-Action Discrepancy	-.064	.209	.209	-.197	.106	-.119	.273	.184
END5. Administrative Sanctions	.360*	.170	.170	-.121	.273	-.073	.255	.285

*$p < .05$, ** $p < .10$

141

Table III.4b Correlations among Themes Cont'd ($N = 36$)

Variable	Exo-Treatment Setting Factors								Endo-Treatment Setting Factors				
	EXO1	EXO2	EXO3	EXO4	EXO5	EXO6	EXO7	EXO8	END1	END2	END3	END4	END5
Exo-Treatment													
EXO1. Severity of Disorder	-												
EXO2. External Attribution	.534**	-											
EXO3. Chronic Baseline	.595**	.507**	-										
EXO4. Physical Emphasis	.473**	.238	.216	-									
EXO5. Discomfort	.423*	.324	.364*	.226	-								
EXO6. Cultural Norms	.297	.174	.248	.265	.218	-							
EXO7. Distanced/ Extrinsic Motivation	.297	.021	-.003	.265	.097	.084	-						
EXO8. Control Goals	.158	.174	.082	.157	.020	.149	.149	-					
Endo-Treatment													
END1. Delayed Planning	.423*	.184	.595**	.115	.331*	.339*	.097	.197	-				
END2. Mismatch	.277	.148	.337*	-.159	.407*	.262	.127	.175	.531**	-			
END3. Felt Uncertainty	.258	.284	.434**	.032	.225	.313	-.244	.000	.482**	.215	-		
END4. Values-Action Discrepancy	.220	.241	.223	.043	.238	.741**	-.174	.050	.238	.009	.322	-	
END5. Administrative Sanctions	.135	-.106	.227	-.117	.319	.018	.018	.213	.319	.486**	.262	-.148	-

*$p < .05$, ** $p < .10$

Table III.5a Correlations among Dropout Reasons, Disengagement Indicators, and Quantitative Variables ($N = 36$)

Variable	Dropout Reasons						Disengagement Indicators	
	DRO1	DRO2	DRO3	DRO4	DRO5	DRO6	DIS1	DIS2
Age	-.037	.073	-.199	.224	.142	.195	-.009	.025
Gender	-.043	.103	.103	-.058	-.285	-.229	-.103	**-.331**[*]
Immig.Gen.	-.176	.280	.280	-.031	.061	.413	.371	.312
Married	.098	-.114	-.284	-.053	.281	.120	-.159	.013
Delay to appt.	-.152	.332	.271	-.118	-.227	.088	.106	.104
Insurance	-.006	-.071	.161	-.071	.121	-.253	.312	-.058
Prior MH use	.142	-.265	.095	.120	.120	.095	.069	.013
No. Sessions	-.110	.081	-.015	.099	-.066	-.105	-.041	-.065
Extra Fees	-.249	**.597**[**]	.108	-.217	-.146	-.101	.376	.125
PAI subscales								
ICN	-.190	-.122	.108	.171	.038	-.160	.249	.252
INF	.042	-.098	-.107	.036	.096	.053	-.082	.147
NIM	.036	-.192	.029	.000	-.092	-.004	-.163	-.191
PIM	-.005	.039	-.152	.268	-.025	.170	-.129	.069
SOM	.006	**.396**[*]	.212	-.171	-.136	-.015	.065	.329
ANX	.110	-.063	.078	-.245	-.161	-.050	.031	-.107
ARD	.112	-.262	-.028	-.231	.055	-.028	-.146	**-.448**[**]
DEP	.020	.164	.100	-.099	-.264	-.026	.042	.055
MAN	.159	-.215	-.129	-.094	**.361**[*]	-.075	-.220	**-.360**[*]
PAR	**-.484**[**]	-.097	.095	-.126	-.328	.091	-.155	-.295
SCZ	.172	**-.362**[*]	.064	-.048	-.067	-.052	-.222	-.198
BOR	-.086	-.243	-.056	-.094	-.143	-.118	.030	-.328
ANT	-.304	-.214	-.087	-.093	-.068	.146	-.277	-.256
ALC	-.211	-.153	-.254	-.224	-.047	-.167	-.317	**-.455**[**]
DRG	-.243	-.119	-.119	.081	-.259	-.145	-.090	-.195
AGG	-.301	.002	.138	-.079	.217	.217	-.084	-.023
SUI	.116	-.027	.145	-.039	.077	-.056	.235	-.060
STR	-.304	**-.354**[*]	-.162	-.040	-.159	.243	-.185	-.258
NON	-.274	-.057	.112	-.041	-.276	.073	-.096	.130
RXR	-.151	-.082	.032	.028	-.005	.157	-.064	.009
DOM	.125	.088	.021	.185	.218	.049	.003	.127
WRM	.160	-.036	-.236	.153	.120	-.202	.220	-.132
OQ-45 Total	-.085	.087	.158	.180	-.335	-.103	.126	.000
SD	.034	.145	.257	.161	-.388	-.120	.289	-.093

Variable	Dropout Reasons						Disengagement Indicators	
	DRO1	DRO2	DRO3	DRO4	DRO5	DRO6	DIS1	DIS2
IR	-.144	-.061	-.092	.259	-.179	.071	-.043	-.112
SR	-.097	.350	.376	.228	.073	-.140	.262	.076
Initial GAF	.229	.235	-.039	.057	.148	.263	.013	.030
Somatic symptoms	**.465**[**]	.058	-.103	.058	.084	-.013	-.009	.108
Pain	.165	.110	-.070	.289	-.187	-.150	.021	.090

*p < .05, ** p < .10

Variables	Exo-Treatment Setting Factors								Endo-Treatment Setting Factors				
	EXO1	EXO2	EXO3	EXO4	EXO5	EXO6	EXO7	EXO8	END1	END2	END3	END4	END5
Age	.199	.012	.070	.143	.034	.106	-.120	-.006	.014	-.206	.024	.152	-.117
Gender	-.025	-.238	.016	.003	.108	-.023	.097	**-.334**[*]	-.115	-.090	-.032	.098	-.084
Immig.Gen.	.287	.287	.312	-.076	.312	.186	-.371	.280	.431	.330	**.773**[**]	.231	.235
Married	-.020	-.178	-.097	-.051	-.219	.158	.159	.178	.065	-.083	-.135	.159	-.192
Delay to appt.	.059	.001	.106	-.165	.000	-.017	-.059	**.370**[*]	.272	.097	**.348**[*]	-.001	**.400**[*]
Insurance	.036	.006	.200	-.058	.058	.266	.092	.142	.058	.249	.232	.197	.121
Prior MH use	-.142	-.142	-.225	-.352	.225	.163	.183	.120	-.013	.225	.204	.120	.095
No. Sessions	**-.352**[*]	-.278	-.158	-.153	-.075	-.046	**-.353**[*]	-.054	-.146	-.115	.198	.041	-.021
Extra Fees	.146	.217	.086	.000	.203	-.250	-.041	.271	.203	.089	.199	-.140	.293
PAI subscales													
ICN	.024	.190	**.407**[*]	.143	-.014	-.011	-.133	.108	.299	-.042	.236	-.013	.074
INF	**-.344**[*]	.011	-.210	-.283	-.148	-.031	-.109	.122	-.129	.080	-.047	-.102	.096
NIM	-.174	-.189	-.294	.027	-.063	.093	.291	-.150	-.139	.048	-.267	.022	-.054
PIM	-.037	.138	.050	-.191	**-.359**[*]	-.032	-.187	.286	-.091	-.226	-.064	-.096	-.034
SOM	.076	-.132	.107	.249	.090	.187	.231	-.022	**.368**[*]	.206	.033	.132	.233
ANX	.074	-.126	-.079	.126	.048	.086	**.427**[*]	-.007	.098	**.364**[*]	-.219	-.024	-.026
ARD	-.022	-.283	-.257	-.028	-.194	-.109	.288	-.109	-.221	.253	-.296	-.156	.023
DEP	.059	-.076	.033	.191	.260	-.043	.257	-.265	.118	.115	-.112	-.082	.011
MAN	-.309	-.235	**-.443**[**]	-.151	-.044	-.250	.335	.072	-.161	.245	**-.468**[**]	**-.371**[*]	.073
PAR	**-.356**[*]	-.213	-.220	-.213	-.177	-.267	-.015	-.270	-.040	-.100	-.045	-.078	-.263
SCZ	-.114	-.184	-.233	.180	.053	.002	**.348**[*]	-.155	-.153	.050	**-.521**[**]	-.171	-.102
BOR	-.120	**-.379**[*]	-.256	.088	.186	-.051	**.387**[*]	-.248	-.104	.049	-.136	-.052	-.007
ANT	-.312	-.260	**-.415**[*]	-.125	-.070	**-.375**[*]	.236	-.142	-.297	-.108	-.307	**-.351**[*]	-.158
ALC	**-.372**[*]	-.281	**-.411**[*]	-.173	-.174	-.250	.046	.046	**-.414**[*]	-.124	-.231	-.198	-.083
DRG	-.055	.008	-.051	.058	-.107	-.217	-.029	-.168	-.229	-.202	-.204	-.171	-.156
AGG	-.179	-.225	-.215	.021	.150	-.094	.155	-.036	.202	-.056	-.039	.064	-.146
SUI	.158	.026	.245	-.066	.328	-.038	.337	-.150	.157	.254	-.152	-.114	.115
STR	-.267	**-.434**[*]	-.315	.021	**-.431**[*]	-.220	.070	-.205	-.198	-.126	-.221	-.209	**-.347**[*]
NON	-.162	-.035	.007	.058	-.170	-.184	-.127	-.220	-.020	-.239	.073	-.114	-.065
RXR	-.332	.011	-.069	-.319	-.281	**-.420**[*]	-.309	.203	.000	-.091	.138	-.320	.123
DOM	.006	-.223	-.077	-.089	-.034	-.209	-.057	-.223	.078	.230	.009	-.206	.283
WRM	.099	.166	.080	-.284	-.050	.072	.083	-.153	-.033	.306	.011	-.032	.095
OQ-45 Total	-.028	.110	.087	.095	.277	-.086	.142	-.430	.172	.283	.109	-.027	.[c]
SD	.198	.110	.194	.119	**.438**[*]	.024	.161	-.399	.204	.360	.145	.103	.[c]
IR	-.048	-.096	.043	.206	-.046	-.039	-.144	-.252	.149	-.017	.241	-.059	.[c]

Variables	Exo-Treatment Setting Factors								Endo-Treatment Setting Factors				
	EXO1	EXO2	EXO3	EXO4	EXO5	EXO6	EXO7	EXO8	END1	END2	END3	END4	END5
SR	.378	.241	**.458***	.273	.419	.099	**.524***	-.140	.419	.358	.051	.118	.^{c}
Initial GAF	.166	.166	-.096	.179	.256	.199	-.086	**.692****	.028	.120	.223	.052	**.414***
Somatic symptoms	.174	-.043	-.132	.220	.003	.265	.023	-.020	.115	-.159	.032	.184	.084
Pain	.111	.148	-.050	**.338***	-.090	.127	.262	-.022	.035	-.246	.215	.009	-.187

$^*p < .05$, $^{**} p < .10$. ^{c} Cannot be computed because at least one of the variables is constant.

Table III.6 Patient Characteristics by Earlier Dropouts vs. Longer Stays ($N = 36$)

Variable	Earlier drops, before therapy $n = 13$ M (*SD*) or n (%)	Longer stays, began therapy $n = 23$ M (*SD*) or n (%)	Mean difference (95% CI) or $\chi2$	p
Age	25.92 (8.27)	28.61 (8.9)	-2.69 (-8.81,3.44)	.379
Gender			1.67	.196
Female	8 (61%)	9 (39%)		
Male	5 (39%)	14 (61%)		
Immigrant Generation [a]				
1st	5 (100%)	8 (53%)		
1.5	0 (0%)	3 (20%)		
2nd	0 (0%)	4 (27%)		
Married [a]				
No	1 (33%)	17 (74%)		
Yes	2 (67%)	6 (26%)		
Time Delay to 1st Appointment (days)	9.58 (7.54)	14.52 (14.83)	-4.94 (-14.34,4.46)	.292
Had Insurance [c]			**4.85**	**.047[†]**
No	**4 (31%)**	**1 (4%)**		
Yes	**9 (69%)**	**22 (96%)**		
Prior use of mental health services[a]				
No	1 (11%)	1 (7%)		
Yes	8 (89%)	13 (93%)		
Intake Reason Type [a]			0.60	1.00[†]
Academic/ Professional	4 (33%)	8 (35%)		
Interpersonal/Social	7 (58%)	14 (61%)		
Health/Symptoms	1 (9%)	1 (4%)		
Evaluation Clinician-Patient Gender Match [d]				
No	3 (50%)	12 (52%)		
Yes	3 (50%)	11 (48%)		
Evaluation Clinician-Patient Age Match [d]				
No	4 (67%)	20 (87%)		
Yes	2 (33%)	3 (13%)		

Variable	Earlier drops, before therapy $n = 13$ M (SD) or n (%)	Longer stays, began therapy $n = 23$ M (SD) or n (%)	Mean difference (95% CI) or χ2	p
Therapist-Patient Gender Match				
No	-	13 (56%)		
Yes	-	10 (44%)		
Therapist-Patient Age Match				
No	-	16 (70%)		
Yes	-	7 (30%)		
Treatment Type [c]				
CBT/3rd wave	2 (100%)	11 (58%)		
IPT/Psychodynamic/ Eclectic	0 (0%)	8 (42%)		
Paid extra fees [c]				
0 times	10 (100%)	9 (64%)		
1 time	-	2 (14%)		
2 times	-	3 (22%)		
PAI Subscale T-Scores [b]				
ICN	51.75 (9.86)	55.14 (8.15)	-3.39 (-9.8,3.03)	
INF	54.92 (9.81)	56.68 (9.83)	-1.77 (-8.95,5.42)	
NIM	63.42 (10.76)	56.95 (10.76)	6.46 (-1.4,14.33)	
PIM	41.25 (8.02)	39.05 (11.89)	2.21 (-5.63,10.04)	
SOM	58.25 (10.19)	57.68 (10.98)	0.57 (-7.27,8.4)	
ANX	**71.92 (11.64)**	63.95 (13.45)	7.96 (-1.44,17.36)	
ARD	**71.75 (12.74)**	61.41 (11.79)	10.34 (1.48,19.21)	
DEP	**70.92 (14.81)**	68.18 (14.61)	2.74 (-8,13.47)	
MAN	57.75 (12)	50.36 (10.93)	7.39 (-0.88,15.65)	
PAR	59.33 (8.68)	54.23 (9.86)	5.11 (-1.82,12.03)	
SCZ	68.67 (10.75)	57.68 (11.14)	10.99 (2.94,19.03)	
BOR	66.75 (11.48)	62.86 (10.42)	3.89 (-4.01,11.78)	
ANT	56.17 (7.96)	50.23 (9.47)	5.94 (-0.63,12.51)	
ALC	47.42 (6.39)	46.05 (5.64)	1.37 (-2.95,5.69)	
DRG	49 (10.91)	48.55 (6.54)	0.46 (-5.61,6.52)	
AGG	51.5 (10.27)	49.73 (7.89)	1.77 (-4.65,8.19)	
SUI	65.42 (23.22)	55.91 (11.04)	9.51 (-5.75,24.77)	
STR	58.92 (8.68)	56.09 (10.86)	2.83 (-4.6,10.25)	
NON	62.67 (13.2)	61.45 (12.29)	1.21 (-8.01,10.43)	
RXR	36.33 (7.51)	34.95 (7.47)	1.38 (-4.09,6.85)	
DOM	47.75 (9.05)	44.77 (12.51)	2.98 (-5.39,11.34)	

Variable	Earlier drops, before therapy $n = 13$ M (SD) or n (%)	Longer stays, began therapy $n = 23$ M (SD) or n (%)	Mean difference (95% CI) or $\chi 2$	p
WRM	46.67 (12.43)	44.86 (13.1)	1.8 (-7.61,11.21)	
OQ-45 Scores [c]				
Total	**74.57 (23.44)**	**72.36 (22.81)**	2.21 (-20.08,24.51)	
SD	**37.29 (18.6)**	**41.64 (14.42)**	-4.36 (-19.72,11.01)	
IR	**15.71 (6.7)**	**17.36 (7.46)**	-1.64 (-8.65,5.36)	
SR	**12.14 (5.58)**	11.29 (3.54)	0.86 (-3.3,5.01)	
Initial GAF score	47.5 (10.61)	59.95 (8.61)	-12.45 (-25.87,0.96)	
Somatic symptoms emphasized			1.67	.196
No	8 (62%)	9 (39%)		
Yes	5 (38%)	14 (61%)		
Pains emphasized			1.56	.270[†]
No	11 (85%)	15 (65%)		
Yes	2 (15%)	8 (35%)		

Note. [a] = Summary of those who specified only, otherwise not mentioned. [b] = Summary of valid PAI test results only ($n = 12$ vs. $n = 22$). [c] = Summary of available information only, otherwise missing. [d] = Some patients dropped before meeting any clinician, therefore excluded in count. [†]=Fisher's or Fisher-Freeman-Halton exact test 2-sided significance. Significant group differences found by omnibus tests and measure scores above the clinical cut-off (>70t for PAI, >63 for OQ-45 Total, >36 for OQ-45 SD, >15 for OQ-45 IR, >12 for OQ-45 SR) are bolded.

Table III.7 Patient Characteristics by Physical vs. No Physical Symptoms ($N = 36$)

Variable	Physical Symptoms $n = 20$ M (SD) or n (%)	No Physical Symptoms $n = 16$ M (SD) or n (%)	Mean difference (95% CI) or $\chi2$	p
Age	28.5 (7.98)	26.56 (9.58)	1.94 (-4.01,7.89)	.512
Gender			.139	.749
Female	10 (50%)	7 (43%)		
Male	10 (50%)	9 (56%)		
Immigrant Generation [a]				
1st	8 (73%)	5 (56%)		
1.5	2 (18%)	1 (11%)		
2nd	1 (9%)	3 (33%)		
Married [a]				
No	10 (63%)	8 (80%)		
Yes	6 (37%)	2 (20%)		
Time Delay to 1st Appointment (days)	11.95 (9.96)	13.79 (16.17)	-1.84 (-11.13,7.45)	.689
Had Insurance [c]			.016	1.00
No	3 (15%)	2 (12%)		
Yes	17 (85%)	14 (88%)		
Prior use of mental health services [a]				
No	2 (18%)	0 (0%)		
Yes	9 (82%)	12 (100%)		
Intake Reason Type [a]			1.35	.729
Academic/ Professional	8 (42%)	4 (25%)		
Interpersonal/Social	10 (53%)	11 (69%)		
Health/Symptoms	1 (5%)	1 (6%)		
Evaluation Clinician-Patient Gender Match [d]				
No	8 (44%)	7 (64%)		
Yes	10 (56%)	4 (36%)		
Evaluation Clinician-Patient Age Match [d]				
No	15 (83%)	9 (82%)		
Yes	3 (17%)	2 (18%)		

Variable	Physical Symptoms $n = 20$	No Physical Symptoms $n = 16$	Mean difference (95% CI) or $\chi2$	p
	M (SD) or n (%)	M (SD) or n (%)		
Therapist-Patient Gender Match				
No	8 (53%)	5 (63%)		
Yes	7 (47%)	3 (37%)		
Therapist-Patient Age Match				
No	9 (45%)	7 (88%)		
Yes	6 (30%)	1 (12%)		
Treatment Type [c]				
CBT/3rd wave	7 (54%)	6 (75%)		
IPT/Psychodynamic/ Eclectic	6 (46%)	2 (25%)		
Number of Sessions	9.95 (8.97)	10.69 (18.33)	-0.74 (-10.42,8.94)	.877
Paid extra fees [c]				
0 times				
1 time				
2 times				
PAI Subscale T-Scores [b]				
ICN	52.9 (7.42)	55.43 (10.58)	-2.53 (-8.8,3.75)	
INF	55.65 (9.37)	56.64 (10.52)	-0.99 (-7.99,6)	
NIM	55.9 (7.2)	64 (13.88)	-8.1 (-15.51,-0.69)	
PIM	40.25 (10.03)	39.21 (11.75)	1.04 (-6.6,8.67)	
SOM	56.45 (10.48)	59.93 (10.71)	-3.48 (-10.98,4.03)	
ANX	64.85 (12.49)	69.5 (14.26)	-4.65 (-14.05,4.75)	
ARD	61.95 (12.27)	69.5 (13.03)	-7.55 (-16.48,1.38)	
DEP	68.7 (14.79)	69.79 (14.65)	-1.09 (-11.54,9.37)	
MAN	49.45 (9.81)	58 (12.67)	-8.55 (-16.4,-0.7)	
PAR	52.05 (8.85)	61.71 (7.93)	-9.66 (-15.69,-3.64)	
SCZ	60.1 (10.65)	63.64 (14.02)	-3.54 (-12.15,5.07)	
BOR	62.25 (10.31)	67.07 (11.21)	-4.82 (-12.41,2.76)	
ANT	48.45 (8.43)	57.86 (7.74)	-9.41 (-15.19,-3.62)	
ALC	44.15 (4.69)	49.93 (5.8)	-5.78 (-9.45,-2.11)	
DRG	46.7 (5.92)	51.57 (10.17)	-4.87 (-10.5,0.76)	
AGG	48.45 (7.94)	53.07 (9.27)	-4.62 (-10.66,1.42)	
SUI	57.85 (14.1)	61.29 (20.22)	-3.44 (-16.43,9.55)	
STR	55.1 (9.24)	59.93 (10.93)	-4.83 (-11.9,2.24)	
NON	60.75 (10.44)	63.5 (15.1)	-2.75 (-12.43,6.93)	
RXR	34.2 (5.61)	37.21 (9.34)	-3.01 (-8.85,2.82)	
DOM	45.4 (11.95)	46.43 (10.87)	-1.03 (-9.21,7.15)	

Variable	Physical Symptoms $n = 20$	No Physical Symptoms $n = 16$	Mean difference (95% CI) or $\chi 2$	p
	M (SD) or n (%)	M (SD) or n (%)		
WRM	45.6 (12.1)	45.36 (13.99)	0.24 (-8.91,9.4)	
OQ-45 Scores [c]				
Total	**66.83 (24.73)**	**81.44 (16.82)**	-14.61 (-34.69,5.46)	
SD	**38.67 (17.14)**	**42.22 (14)**	-3.56 (-18.23,11.11)	
IR	**15.5 (7)**	**18.56 (7.23)**	-3.06 (-9.61,3.5)	
SR	10.83 (3.64)	**12.56 (4.9)**	-1.72 (-5.61,2.17)	
Initial GAF score	57.77 (6.55)	60.3 (12.15)	-2.53 (-10.72,5.66)	

Note. [a] = Summary of those who specified only, otherwise not mentioned. [b] = Summary of valid PAI test results only ($n = 12$ vs. $n = 22$). [c] = Summary of available information only, otherwise missing. [d] = Some patients dropped before meeting any clinician, therefore excluded in count. [†]=Fisher's or Fisher-Freeman-Halton exact test 2-sided significance. Significant group differences found by omnibus tests and measure scores above the clinical cut-off (>70t for PAI, >63 for OQ-45 Total, >36 for OQ-45 SD, >15 for OQ-45 IR, >12 for OQ-45 SR) are bolded.
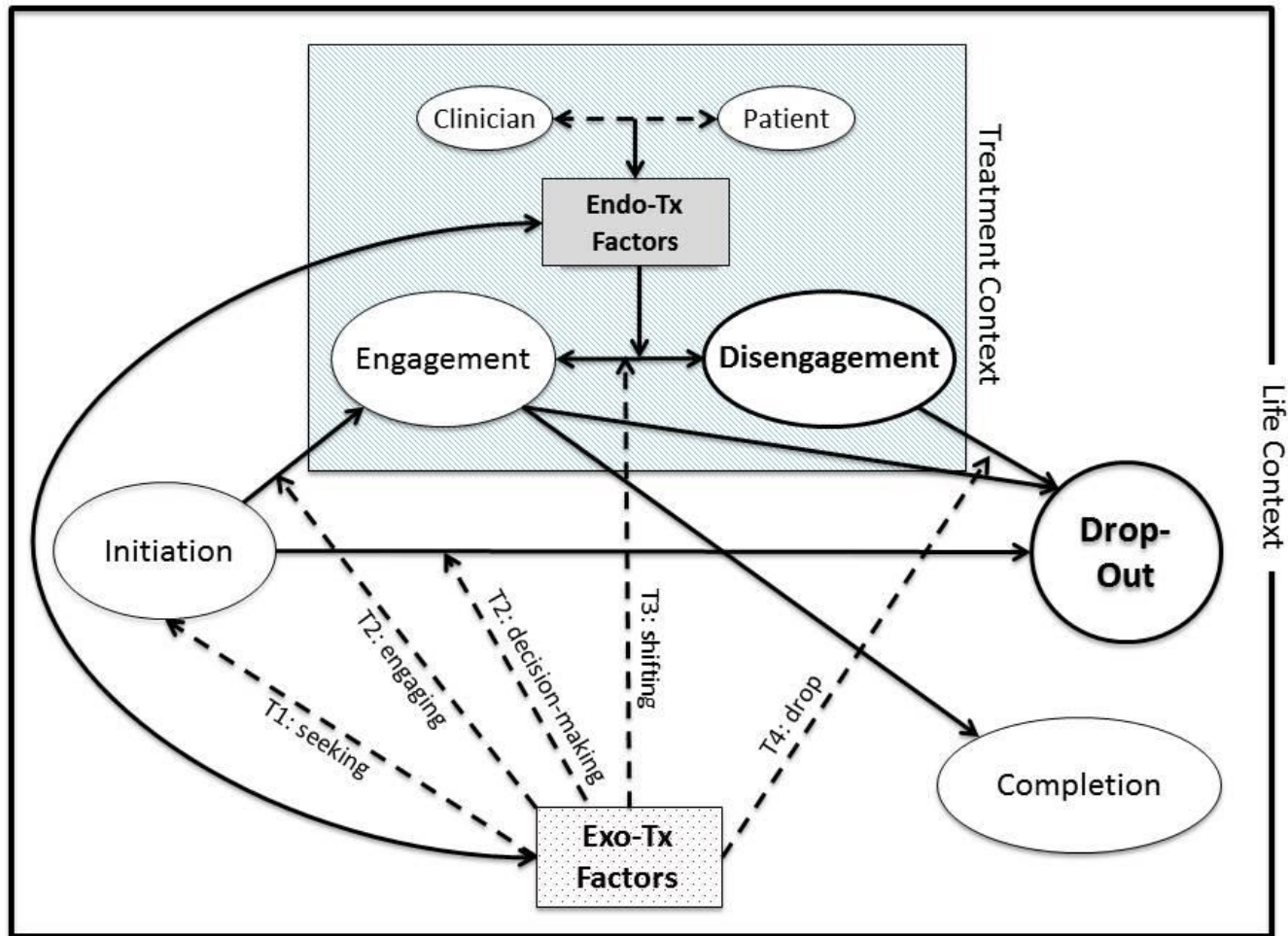
Figure III.1 Psychotherapy Disengagement and Drop-out Process Diagram

CHAPTER IV

Conclusion

The aim of this dissertation was to explore the "twin problem" of mental health underutilization and psychotherapy dropout (Leong & Kalibatseva, 2011) in Asian Americans with depressive experiences. In particular, the role of co-occurring physical symptoms is important to explore since physical symptoms have long been described as part of depressive distress in persons of Asian heritage. However, such physical depressive symptomatology is not fully captured by DSM depression criteria and this dissertation sought to identify more broadly-defined depressive experiences and examine their relationship to mental health service use behaviors in Asian Americans. Two different data sets were analyzed with contrasting methodologies. First, in Study 1 (Chapter II), a nationally representative complex sample survey was quantitatively examined to identify subtypes of lifetime depressive experiences and symptom groups depictive of the Asian American depressive experience. Culturally-relevant symptoms (e.g., somatic, pain, anger, and social/work impairment) were included in the analyses. Results from the initial analyses were further investigated to understand whether any constellation of the Asian American depressive experience predicts utilization of mental health services, beyond sociobehavioral factors (e.g., age, gender, acculturation, and religiosity). Second, in Study 2 (Chapter III), a pilot, primarily qualitative, mixed-method approach was used with naturalistic archival clinic data to examine disengagement and dropout in Asian Americans who seek psychotherapy.

Study 1 supported the existence of multiple types of depressive experiences in the Asian American population when taking a broader perspective of lifetime depressive distress. Slightly more than half of the nationally representative Asian American population in the study were likely to experience a milder version of depression with symptoms as outlined by the DSM, while the rest of the population were likely to experience depression with greater severity and chronic physical symptomatology. Of those with depressive subtypes characterized by chronic physical symptoms, only persons with more psychological vulnerabilities (e.g., hopelessness, extreme guilt) and gastrointestinal issues had a greater probability of endorsing serious suicidal ideation and suicidal behaviors. Symptom factors uncovered from this study also revealed that the hallmark depressive symptoms of sadness and crying may not strongly relate to other depressive symptoms for Asian Americans. As mentioned by Ballenger et al. (2001), Asian Americans' depressive symptoms were best described by more somatic factors representing apathetic psychomotor retardation and abnormal sleep, alongside factors representing internal self-deprecation and suicidality. When examining the relationship between the identified depressive experiences and mental health service use, only persons endorsing chronic physical symptoms in their lifetime were likely to use any mental health services, in the form of alternative care/self-help or psychological counseling/therapy. When sad or depressed affect may not be a prominently highlighted experience, when endorsed, this predicted greater lifetime use of psychological counseling/therapy. Overall, Study 1 found support for the existence of heterogeneity in Asian Americans' depressive experiences, with some more characterized by physical symptoms and others were not. The study also found that while the symptom experience does influence which forms of mental health services are used, other sociobehavioral factors

155

(e.g., gender, age, perceived need, English proficiency, and religiosity) may have a stronger influence on decisions of where to receive help for emotional distress.

Study 2 also found that a majority of Asian Americans seeking psychotherapy for depressive distress present with physical symptoms, as documented in clinicians' psychotherapy notes. However, group comparisons of earlier dropouts vs. those who stayed for therapy demonstrated that while physical symptoms are important in Asian Americans' depressive experience they may not be related to earlier dropout. Despite limitations with the naturalistic data and mixed-method approach, clinicians' documentations were helpful in identifying reasons provided by Asian Americans prior to dropout, as well as generating ideas about what may contribute to psychotherapy dropout. Synthesizing details in the clinicians' notes with routinely noted quantifiable information (e.g., whether a patient had accepted insurance) and with patients' self-report of symptoms on intake measures, allowed for a richer description of Asian Americans who seek psychotherapy but subsequently discontinue their treatment. A key finding was that Asian Americans may provide reasons, such as needing to travel or limitations in ability to pay for psychotherapy. This may have been a way of "saving face" when disengagement occurred from experiences during the treatment process (i.e., delays in clear treatment planning, receiving mismatched care and administrative sanctions).

Both studies demonstrated that physical symptoms are an integral part of the Asian American depressive experience. As such, it will be important ask about the impact of physical symptoms for those who may not initially highlight typical depressive affect, and to consider the possibility of an alternate experience of depressive distress. Also, since physical symptoms, in the context of Asian Americans' with lifetime depressive experiences, are likely to predict seeking emotional help from alternative care providers, collaborative work with non-specialty

providers is also important. This may help increase access to specialty mental health services for those with a physical emphasis in their depressive distress. Although the emphasis on physical symptoms may occur, in part, as an acceptable cultural script for experiencing distress, chronic physical symptoms are related to serious outcomes such as functional disability and lifetime suicide attempt. Therefore, Asian Americans presenting with physical symptoms need to be evaluated more thoroughly over time. It may be especially valuable to have routine care specifically assessing interpersonal states of perceived burdensomeness and thwarted belongingness that have been found to predict suicidality (Joiner, 2005), since many Asian cultures encourage an interdependent self-construal that highly values interpersonal connectedness (Markus & Kitayama, 1991). Finally, both studies in this dissertation confirmed the need for continued efforts to change structural barriers contributing to Asian Americans' mental health care disparity. Suggestions for addressing systemic barriers, such as the limited availability of culturally-matched providers and regional differences in access to services, are mentioned in Chapter II. Additional suggestions for change in the psychotherapy context, at the administrative and therapeutic process level, were provided in Chapter III.

Depression affects over 340 million people worldwide and by the year 2020 it will rank second for premature mortality rates for all ages (World Health Organization, 2004). This prevalent disorder is not only comorbid with other mental disorders, but is also associated with chronic physical diseases (Chapman, Perry, & Strine, 2005), making the need to assess and treat globally imperative. Although Asians comprise only about 5% of U.S. population (Hoeffel, Rastogi, Kim, & Hasan, 2012), their numbers are growing. Asians also account for more than 50% of the world population. Thus, more evaluations of how depressive experiences vary and how care is accessed may be crucial in developing policy nationally but globally as well.

Assessments of Asian Americans should be approached with a more holistic view of the body and mind (Kleinman, 2004), as existing measures of depression may not fully capture culturally-relevant symptomatology (Leong, Okazaki, & Tak, 2003). Psychotherapy for Asian Americans will need to involve: clinic-wide strategies to prevent creating additional barriers for a population confronting multiple barriers prior to entering treatment; clear treatment plans consistent with patients' goals and values; careful monitoring of interpersonal functioning and perceived need in patients emphasizing physical symptoms; and "face saving" opportunities for addressing concerns to prevent dropout (Zane & Ku, 2014).

References

Ballenger, J. C., Davidson, J. R. T., Lecrubier, Y., Nutt, D. J., Kirmayer, L. J., Lépine, J. P., … Ono, Y. (2001). Consensus statement on transcultural issues in depression and anxiety from the international consensus group on depression and anxiety. *Journal of Clinical Psychiatry*, *62*(SUPPL. 13), 47–55.

Chapman, D. P., Perry, G. S., & Strine, T. W. (2005). The vital link between chronic disease and depressive disorders. *Preventing Chronic Disease*, *2*(1), 14.

Hoeffel, E. M., Rastogi, S., Kim, M. O., & Hasan, S. (2012). *The Asian population: 2010*. US Department of Commerce, Economics and Statistics Administration, US Census Bureau.

Joiner, T. (2005). *Why people die by suicide*. Cambridge, MA: Harvard University Press.

Kleinman, A. M. (2004). Culture and Depression. *New England Journal of Medicine*, *351*(10), 951–953. http://doi.org/10.1056/NEJMp048078

Leong, F. T. L., & Kalibatseva, Z. (2011). Cross-Cultural Barriers to Mental Health Services in the United States. *Cerebrum*, *2011*(March), 5.

Leong, F. T. L., Okazaki, S., & Tak, J. (2003). Assessment of depression and anxiety in East Asia. *Psychological Assessment*, *15*(3), 290–305. http://doi.org/10.1037/1040-3590.15.3.290

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, *98*(2), 224–253. http://doi.org/10.1037/0033-295X.98.2.224

World Health Organization. (2004). *Prevention of mental disorders : effective interventions and policy options : summary report*.

Zane, N. W. S., & Ku, H. (2014). Effects of ethnic match, gender match, acculturation, cultural identity, and face concern on self-disclosure in counseling for Asian Americans. *Asian American Journal of Psychology*, *5*(1), 66–74. http://doi.org/10.1037/a0036078

APPENDICES

Table A.1 Logistic Regression Results with Higher-level Survey Symptom Items[†]

	Psychiatrist Nw=900,430 OR (95% CI)	Other Mental Health Provider Nw=900,430 OR (95% CI)	Physical Health Provider Nw=900,430 OR (95% CI)	Alternative Care Provider/ Self-Help Nw=2,527,004 OR (95% CI)	Psychotherapy Nw=2,527,004 OR (95% CI)
	Model 4: Higher-level symptom items with sociobehavioral factors				
(Constant)	0.06[§] (0.01-0.55)	0.28 (0.02-3.97)	0.13 (0.01-1.45)	**0.00*** (0.00-0.01)**	**0.00*** (0.00-0.05)**
Need Factors					
Lifetime symptoms					
Physical arousal/ Pains	0.18 (0.00-8.01)	0.58 (0.03-9.76)	27.69[§] (1.61-467.9)	1.92 (0.26-13.93)	0.08[§] (0.01-0.79)
DSM affective threshold symptoms	3.68 (0.78-17.39)	0.32 (0.07-1.42)	1.59 (0.49-5.15)	2.61[§] (1.08-6.26)	**4.78** (1.86-12.27)**
Suicidality	1.65 (0.61-4.43)	3.90[§] (1.18-12.92)	0.79 (0.22-2.87)	1.28 (0.42-3.95)	2.62 (0.83-8.31)
Irritability[a]	1.26 (0.54-2.97)	1.55 (0.62-3.85)	**0.32* (0.16-0.62)**	**1.87* (1.13-3.08)**	1.12 (0.67-1.87)
Anger attacks [a]	1.88 (0.73-4.82)	0.69 (0.33-1.44)	1.03 (0.54-1.96)	1.46[§] (0.98-2.18)	1.22 (0.72-2.06)
Cognitive difficulty[a]	2.35 (0.87-6.35)	0.50 (0.18-1.36)	0.37[§] (0.17-0.83)	0.71 (0.33-1.53)	0.77 (0.35-1.69)
Chronic fatigue[a]	1.77 (0.68-4.62)	0.66 (0.28-1.56)	0.62 (0.21-1.83)	0.89 (0.45-1.78)	2.21 (1.04-4.73)
Functional Disability	1.32 (0.18-9.88)	0.27 (0.04-1.64)	0.25 (0.03-1.72)	1.70 (0.56-5.10)	1.00[§] (0.19-5.28)
Perceived need for care[a]	**3.55* (1.75-7.20)**	2.08[§] (1.12-3.84)	1.80[§] (1.07-3.01)	**3.11** (1.68-5.75)**	**7.86*** (3.52-17.57)**
Enabling/Disabling Factors					
Poverty index	0.97 (0.90-1.05)	1.05 (0.99-1.11)	0.97 (0.91-1.02)	1.02 (0.98-1.06)	1.02 (0.98-1.07)
English fluency	1.07 (0.75-1.51)	**1.78* (1.23-2.58)**	0.93[§] (0.68-1.27)	1.35[§] (0.99-1.85)	**2.10** (1.42-3.11)**
Acculturative stress	1.05 (0.99-1.11)	0.97 (0.91-1.04)	0.97 (0.92-1.03)	1.01 (0.97-1.04)	1.05[§] (1.01-1.10)
Predisposing Factors					
Gender (ref. = Male)	0.55 (0.11-2.59)	2.40 (0.66-8.79)	3.47 (1.06-11.39)	0.61 (0.29-1.27)	0.57 (0.18-1.77)
Age	1.03 (0.99-1.07)	1.03 (0.99-1.08)	**1.06* (1.03-1.10)**	1.00 (0.97-1.02)	1.01 (0.97-1.04)
Gender x Age	1.00 (0.96-1.04)	0.98 (0.93-1.02)	0.97 (0.93-1.00)	**1.03* (1.00-1.06)**	1.04 (0.98-1.10)
Education	0.66 (0.42-1.04)	0.99 (0.70-1.41)	1.41 (0.86-2.32)	1.06 (0.84-1.33)	0.93 (0.64-1.34)
Not married [c]	1.27 (0.63-2.56)	**2.50* (1.54-4.04)**	0.74 (0.42-1.29)	1.05 (0.59-1.85)	1.60 (0.81-3.17)
Religious attendance	0.87 (0.65-1.17)	0.81 (0.64-1.02)	1.10 (0.80-1.51)	**1.39** (1.14-1.70)**	0.91 (0.74-1.12)
Personal stigma	0.78 (0.42-1.43)	1.49 (0.89-2.51)	1.18 (0.72-1.92)	1.04 (0.75-1.45)	0.83 (0.61-1.12)

Public stigma	1.19 (0.73-1.96)	0.73 (0.51-1.05)	0.90 (0.63-1.27)	0.95 (0.74-1.22)	0.74[§] (0.56-0.98)

Environment
Region (ref. =West)

Northeast	**0.02** (0.01-0.12)	0.63 (0.21-1.90)	**3.33* (1.56-7.12)**	1.50[§] (1.04-2.17)	0.38 (0.08-1.87)
Midwest and South	1.70 (0.61-4.76)	0.74 (0.30-1.84)	0.35[§] (0.14-0.88)	1.21 (0.41-3.57)	1.23 (0.46-3.25)

Note. Nw= weighted sample size. These regressions were run to provide a contrast with the Study 1 Model 3 regressions which used multiply imputed factor scores as predictors. The symptom variables selected to best represent the items which were included in the factor analyses, though an exact representation was not possible due to limited survey structure. [†]These items did not need to be multiply imputed since most survey respondents were asked these questions. [a]Binary variable (no/yes) and reference category is no. [c]Reference category is married or cohabitating.

Table B.1 Bivariate Correlations for Study 2

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Age	-													
2. Gender[§]	-.084	-												
3. Immig. Gen.	-.346	-.037	-											
4. Married	.483[*]	-.210	-.442	-										
5. Delay to appt.	-.037	-.022	.378	-.251	-									
6. Insurance	-.047	.161	.216	-.114	.001	-								
7. Prior MH use	.250	-.029	.[c]	.228	.001	.335	-							
8. No. of Sessions	.050	-.059	.321	-.212	.200	.251	.224	-						
9. Extra fees	-.287	-.272	.707[**]	-.558[*]	.421[*]	-.100	-.635[*]	.189	-					
10. PAI ICN	.148	-.293	-.041	.115	-.083	.050	.018	.038	-.089	-				
11. PAI INF	-.069	-.437[**]	.027	.366	.099	-.227	.006	.243	.161	-.102	-			
12. PAI NIM	-.144	-.010	-.293	.183	-.181	-.101	.243	-.254	-.163	-.131	.142	-		
13. PAI PIM	.332	-.142	-.032	.197	.249	-.163	-.073	-.047	-.147	.094	.135	-.450[**]	-	
14. PAI SOM	-.054	.084	-.110	.100	-.020	-.224	-.071	-.200	.156	.058	-.056	.562[**]	-.414[*]	-

*$p<.05$. **$p<.01$, [§]Gender coded as 0=M, 1=F

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
15. PAI ANX	-.311	.324	-.088	.022	-.096	-.056	-.048	-.400*	.075	-.307	-.006	.571**	-.587**	.550**
16. PAI ARD	-.256	.319	-.004	-.044	-.112	.073	-.054	-.192	-.037	-.318	-.025	.566**	-.430*	.352*
17. PAI DEP	-.275	.423*	-.041	-.323	-.154	-.188	-.149	-.199	.198	-.340*	-.022	.429*	-.603**	.527**
18. PAI MAN	-.243	-.304	-.224	.123	-.151	-.033	.094	.023	.164	-.146	.248	.415*	-.305	.077
19. PAI PAR	-.298	.158	.146	-.116	.165	-.133	.056	.083	.130	-.097	.196	.565**	-.360*	.249
20. PAI SCZ	-.208	.149	-.462*	.078	-.371*	-.121	.183	-.462**	-.382	-.098	-.081	.696**	-.387*	.321
21. PAI BOR	-.296	.367*	-.038	-.178	-.140	.085	.166	-.116	.079	-.164	-.107	.623**	-.669**	.340*
22. PAI ANT	-.132	-.323	-.115	-.040	-.031	-.156	.181	.094	.192	.032	.194	.405*	-.358*	.033
23. PAI ALC	-.182	-.127	.270	-.215	.054	.176	.238	.268	.273	-.081	.076	.147	-.228	-.006
24. PAI DRG	.009	-.156	-.331	-.163	-.202	-.036	-.040	-.031	.170	.531**	-.181	.178	-.177	.221
25. PAI AGG	.075	-.053	.025	.345	-.138	-.060	.314	-.004	-.078	.053	.069	.407*	-.280	.252
26. PAI SUI	-.120	.404*	-.321	-.051	-.121	.034	.229	-.216	-.362	-.103	-.209	.218	-.115	.103
27. PAI STR	.055	-.127	-.429	.231	-.085	.003	.155	.171	-.129	-.079	.216	.529**	-.338	.196
28. PAI NON	-.127	-.155	-.101	-.083	-.109	-.190	.091	-.174	.044	.257	.093	.531**	-.301	.398*

*p<.05. **p<.01, [§]Gender coded as 0=M, 1=F

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
29. PAI RXR	-.069	-.267	.264	-.172	.359*	-.191	.130	.249	.044	.344*	.132	-.323	.508**	-.321
30. PAI DOM	-.101	-.148	.117	-.019	-.122	-.193	-.225	.270	.019	-.064	.075	-.081	.068	.056
31. PAI WRM	-.153	-.174	.026	.006	-.050	.102	-.310	.147	.171	-.048	.185	-.204	.178	-.287
32. OQ-45 Total	-.176	.283	-.035	-.541*	.114	-.315	.c	-.052	.241	.056	.010	.483*	-.490*	.549*
33. OQ-45 SD	-.198	.507*	.078	-.676**	.131	-.049	.c	.049	.284	-.193	-.217	.301	-.553**	.365
34. OQ-45 IR	.119	-.054	.028	-.242	-.012	-.090	.c	.055	.122	.421	-.119	.527*	-.343	.431
35. OQ-45 SR	.058	.342	.018	-.211	-.076	.090	.c	-.183	.310	-.193	-.172	.152	-.321	.292
36. Initial GAF	-.021	-.324	.614*	-.109	.433*	-.016	-.004	-.074	.529	-.029	.024	-.027	.285	-.040
37. Somatic emphasis	.080	.126	-.172	.210	-.068	-.141	-.346	-.111	-.066	-.150	-.019	-.296	.098	-.118
38. Pain emphasis	.131	.038	-.428	.081	.089	.035	.149	-.018	-.059	.012	-.125	-.115	-.045	-.055

*p<.05. **p<.01, §Gender coded as 0=M, 1=F, c Cannot be computed because at least one of the variables is constant

Variables	15	16	17	18	19	20	21	22	23	24	25	26	27	28
15. PAI ANX	-													
16. PAI ARD	.748[**]	-												
17. PAI DEP	.723[**]	.432[*]	-											
18. PAI MAN	.287	.402[*]	-.003	-										
19. PAI PAR	.476[**]	.496[**]	.440[**]	.254	-									
20. PAI SCZ	.576[**]	.508[**]	.514[**]	.321	.360[*]	-								
21. PAI BOR	.670[**]	.646[**]	.599[**]	.336	.597[**]	.620[**]	-							
22. PAI ANT	.183	.311	.036	.655[**]	.485[**]	.286	.419[*]	-						
23. PAI ALC	.199	.384[*]	.000	.477[**]	.401[*]	.115	.349[*]	.636[**]	-					
24. PAI DRG	.073	.148	-.021	.067	.160	.152	.173	.397[*]	.476[**]	-				
25. PAI AGG	.167	.185	.152	.395[*]	.487[**]	.345[*]	.486[**]	.409[*]	.123	-.077	-			
26. PAI SUI	.213	.213	.404[*]	.051	.127	.457[**]	.313	-.111	-.333	-.251	.304	-		
27. PAI STR	.370[*]	.485[**]	.193	.313	.614[**]	.298	.447[**]	.483[**]	.313	.189	.403[*]	-.043	-	
28. PAI NON	.168	.084	.386[*]	-.191	.409[*]	.398[*]	.249	.182	-.043	.382[*]	.138	.026	.422[*]	-

*p<.05. **p<.01, [§]Gender coded as 0=M, 1=F

Variables	15	16	17	18	19	20	21	22	23	24	25	26	27	28
29. PAI RXR	-.527**	-.272	.497**	.018	.082	.348*	.424*	.090	.052	.001	.030	.070	.071	.006
30. PAI DOM	-.228	.020	.243	.317	.122	.185	.101	.087	.037	.158	.058	.101	.044	.311
31. PAI WRM	-.142	-.013	-.376*	310	.158	.336	.191	.035	.095	.017	.318	.185	.191	.536**
32. OQ-45 Total	.668**	.468*	.718**	-.024	.643**	.477*	.656**	.199	.076	.231	.101	.292	.257	.396
33. OQ-45 SD	.628**	.410	.699**	-.154	.432	.291	.578**	.072	.081	.036	.148	.268	.065	.156
34. OQ-45 IR	.302	.358	.343	-.039	.558**	.367	554**	.256	.150	.479*	.274	.017	.524*	.602**
35. OQ-45 SR	.465*	.148	.489*	.074	.068	.118	.218	.087	.241	.223	.023	.270	.053	.090
36. Initial GAF	-.158	-.046	-.310	.098	-.224	-.202	-.091	.052	.204	.166	.028	.229	.378	.188
37. Somatic emphasis	-.148	-.251	-.028	-.306	-.433*	-.088	-.186	-.525**	-.473**	.260	.206	.065	.290	.144
38. Pain emphasis	-.058	-.357*	-.011	-.194	-.219	-.139	-.136	-.178	-.283	-.057	.147	.081	.046	.106

*p<.05. **p<.01, §Gender coded as 0=M, 1=F

Variables	29	30	31	32	33	34	35	36	37	38
29. PAI RXR	-									
30. PAI DOM	.156	-								
31. PAI WRM	.019	.519**	-							
32. OQ-45 Total	-.141	-.168	-.155	-						
33. OQ-45 SD	-.346	-.082	.003	.843**	-					
34. OQ-45 IR	-.022	-.222	-.215	.682**	.471*	-				
35. OQ-45 SR	-.526*	.041	.050	.447*	.593**	.118	-			
36. Initial GAF	.275	-.096	-.111	-.258	-.325	.110	-.399	-		
37. Somatic emphasis	-.198	-.051	.050	-.330	-.116	-.219	-.208	-.045	-	
38. Pain emphasis	-.145	-.313	-.088	-.032	.020	.033	.169	-.208	.444**.	-

*p<.05. **p<.01, [§]Gender coded as 0=M, 1=F

APPENDIX C

Table C.1 Personality Assessment Inventory Subscale Descriptions

	Scale Name	Brief Description of Moderately Elevated Scores*
Validity Scales		
ICN	Inconsistency	Carelessness or inattention
INF	Infrequency	Unusual or random response style
NIM	Negative Impression Management	Exaggerated representation of problems
PIM	Positive Impression Management	Underrepresentation of problems
Clinical Scales		
SOM	Somatic Complaints	Concerns about health or perceived impairment from somatic symptoms
ANX	Anxiety	Presence of stress and worry
ARD	Anxiety-Related Disorders	Maladaptive efforts of managing various anxious situations
DEP	Depression	Unhappy or self-doubting
MAN	Mania	Restlessness, impulsivity, high energy
PAR	Paranoia	Skeptical and interpersonally cautious
SCZ	Schizophrenia	Withdrawn and unconventional
BOR	Borderline Features	Moody and uncertain about goals
ANT	Antisocial Features	Risk-taking, impulsive, unsentimental
ALC	Alcohol Problems	Regular use of alcohol with adverse consequences
DRG	Drug Problems	Regular use of drugs with adverse consequences
Treatment Consideration Scales		
AGG	Aggression	Irritable, easily provoked
SUI	Suicidal Ideation	Fleeting ideation, pessimistic about future
STR	Stress	Experiencing stress from life difficulties
NON	Nonsupport	Few close relationships or perceives inadequate social support
RXR	Treatment Rejection	Unlikely to engage in treatment, lower insight
DOM	Dominance	Confident, dominant, others describe as ambitious
WRM	Warmth	Warm, friendly, harmonious in relationships

*Descriptions are from Leslie Morey's (2003) book titled "*Essentials of PAI assessment*" to aid in a better contextualization of findings in Study 2 and do not reflect the entirety of how to interpret the subscales. Please refer to the book for a more nuanced understanding of PAI interpretation.