

6-2014

# Mental Health Services for Asian Youths in the United States: A Structured Literature Review

Victoria A. Nguyen

Follow this and additional works at: <http://scholarsrepository.llu.edu/etd>



Part of the [Social Psychology Commons](#)

---

## Recommended Citation

Nguyen, Victoria A., "Mental Health Services for Asian Youths in the United States: A Structured Literature Review" (2014). *Loma Linda University Electronic Theses & Dissertations*. Paper 239.

This Doctoral Project is brought to you for free and open access by TheScholarsRepository@LLU: Digital Archive of Research, Scholarship & Creative Works. It has been accepted for inclusion in Loma Linda University Electronic Theses & Dissertations by an authorized administrator of TheScholarsRepository@LLU: Digital Archive of Research, Scholarship & Creative Works. For more information, please contact [scholarsrepository@llu.edu](mailto:scholarsrepository@llu.edu).

LOMA LINDA UNIVERSITY  
School of Behavioral Health  
in conjunction with the  
Department of Psychology

---

Mental Health Services for Asian Youths in the United States:  
A Structured Literature Review

by

Victoria A. Nguyen, M.A.

---

Project submitted in partial satisfaction of  
the requirements for the degree of  
Doctor of Psychology

June 2014

© 2014  
Victoria A. Nguyen  
All Rights Reserved

Each person whose signature appears below certifies that this doctoral project in his/her opinion is adequate, in scope and quality, as a doctoral project for the degree Doctor of Psychology

\_\_\_\_\_  
Sigrid James, Professor of Social Work and Social Ecology

Chairperson

\_\_\_\_\_  
David Vermeersch, Professor, Professor and Chair, Department of Psychology

## ACKNOWLEDGMENTS

I would like to express my appreciation to the individuals who helped me complete this study. I am grateful to Dr. James for being my Chair and dedicating her time to helping me successfully complete my project.

Thank you Dr. Vermeersch for always being there during my academic needs. I also want to thank family and amazing friends who have been there with me through this long journey. I am forever grateful for all of your support.

# TABLE OF CONTENTS

	Page
Approval Page.....	iii
Acknowledgments.....	iv
Abstract.....	x
Chapters:	
1. Introduction and Aims .....	1
2. Background and Literature Review .....	3
Mental Health Needs and Services of Youth .....	3
The Continuum of Mental Health Services .....	4
School-based Services .....	5
Community-based Mental Health Services .....	6
Group Homes .....	6
Residential Treatment Centers .....	7
Inpatient Psychiatric Cares .....	7
Mental Health Needs and Services Utilization for Minority Youth .....	7
Asians and Mental Health.....	9
Characteristics.....	9
Cultural Values .....	10
Needs.....	12
Service Access and Utilization .....	14
Acculturation.....	14
Evaluation and Diagnosis .....	15
Language Barriers .....	16
Physical Barriers .....	16
Gatekeepers.....	17
3. Methodology.....	18
Project Purpose and Review Guiding Questions .....	18
Search Strategy .....	18
A Priori Inclusion/Exclusion Criteria .....	19
Search Procedure .....	19

4. Results.....	21
API and School-based Mental Health Services (SBS) .....	21
Setting, Data source, and Design .....	21
Participants.....	23
Other Clinical and Non-clinical Characteristics .....	24
Gender.....	25
Age.....	25
Clinical Diagnosis/Symptomology .....	26
Referral Source/Public Sector Involvement.....	26
Caregiver.....	27
Measures of Mental Health Service Need/Utilization .....	28
Key Findings.....	29
API and Community-based Mental Health Services (MHS).....	30
Setting, Data Source and Design .....	30
Participants.....	31
Other Clinical and Non-clinical Characteristics .....	32
Gender.....	33
Age.....	33
Clinical Diagnosis/Symptomology .....	34
Referral Source/Public Sector Involvement.....	34
Caregiver.....	35
Measure of Mental Health Service Need/Utilization.....	35
Key Findings.....	36
API and Group Home/Residential Treatment (GH/RT) .....	38
Setting, Data Source, and Design .....	38
Participants.....	39
Other Clinical and Non-clinical Characteristics .....	39
Gender.....	40
Age.....	40
Clinical Diagnosis/Symptomology .....	40
Referral Source/Public Sector Involvement.....	41
Caregiver.....	41
Measures of Mental Health Service Need/Utilization .....	41
Key Findings.....	42

API and Inpatient Psychiatric Care (IPC).....	42
Setting, Data Source, and Design .....	42
Participants.....	43
Other Clinical and Non-clinical Characteristics .....	44
Gender.....	44
Age.....	44
Clinical Diagnosis/Symptomology .....	45
Referral Source/Public Sector Involvement.....	45
Caregiver.....	45
Measures of Mental Health Service Need/Utilization .....	45
Key Findings.....	45
API and 24hour-Crisis Care (CC).....	46
Setting, Data Source, and Design .....	46
Participants.....	47
Other Clinical and Non-clinical Characteristics .....	47
Gender.....	47
Age.....	48
Clinical Diagnosis/Symptomology .....	48
Referral Source/Public Sector Involvement.....	49
Caregiver.....	49
Measure of Mental Health Service Need/Utilization.....	49
Key Findings.....	49
API and Non-Specific Mental Health Services .....	50
Setting, Data Source, and Design .....	50
Participants.....	51-52
Other Clinical and Non-clinical Characteristics .....	52
Gender.....	52
Age.....	53
Clinical Diagnosis/Symptomology .....	53
Referral Source/Public Sector Involvement.....	53
Caregiver.....	54
Measures of Mental Health Service Need/Utilization .....	55
Key Findings.....	55



API and Non-specialty Services .....	56
Setting, Data Source, and Design .....	56
Participants.....	57
Other Clinical and Non-clinical Characteristics .....	57
Gender.....	57
Age.....	57
Clinical Diagnosis/Symptomology .....	57
Referral Source/Public Sector Involvement.....	57
Caregiver.....	58
Measures of Mental Health Service Need/Utilization .....	58
Key Finding .....	58
API and Mixed Treatment Services .....	59
Setting, Data Source, and Design .....	59
Participants.....	60
Other Clinical and Non-clinical Characteristics .....	61
Gender.....	62
Age.....	62
Clinical Diagnosis/Symptomology .....	63
Referral Sources/Public Sector Involvement .....	63
Caregiver.....	63
Measure of Mental Health Service Need/Utilization.....	66
Key Findings.....	66
5. Summary and Conclusion.....	69
Overall Utilization Rates of Mental health Services for API youths.....	69
Discussion.....	70
Conceptualization and Operationalizing API .....	71
Mental Health Services Utilization and API Youth.....	73
Mental Health Settings.....	73
Mental Health Service Utilization .....	74
Mental Health Service Use and Explanatory Models.....	75
Gender.....	75
Age.....	76
Clinical Diagnosis/Symptomology .....	77
Gatekeepers.....	78

Caregivers .....	78
Immigration Status.....	79
Education .....	79
Income.....	80
Insurance .....	81
Teachers .....	82
MHS Providers.....	82
Methodological Strengths and Challenges of Reviewed Studies .....	83
Study Design.....	83
Data Source.....	86
Measures .....	87
Limitations of this Review .....	88
Implications for Research Practice .....	88
Research.....	88
Clinical Practice .....	90
Assessment and Diagnosis.....	91
Referral .....	91
Treatment .....	91
6. Conclusions.....	93
References.....	95
Appendix.....	110

## ABSTRACT

### Mental Health Services for Asian Youth in the United States: A Structure Literature Review

by

Victoria A. Nguyen

Doctor of Psychology, Graduate Program in Psychology  
Loma Linda University, June 2014  
Sigrid James, Chairperson

This study is a structured review summarizing findings of the existing literature on mental health service use among Asian and Pacific Islanders (API) youth. The project aims to answer the following questions: (1) What type of services do API youths access to address their mental health needs? (2) To what extent are API youths utilizing these mental health services to address their needs? (3) What type of methodological approach is used to evaluate API youth's needs and utilization of mental health? (4) How can findings from this literature review contribute to clinical practice and future research? The methodological approach includes evaluating peer-reviewed articles from 1990 to 2012, which identified Asian and/or Pacific Islanders who are 19 years old and younger, and examined mental health services use as an outcome within a variety of specialty and/or non-specialty mental health service settings. Findings were broadly organized by level of restrictiveness and mental health service type. Studies were reviewed with regard to their study design, sample characteristics, measures used and key findings. Results showed that there were a limited number of studies evaluating API youth mental health services utilization. The studies that evaluated API youth mental health utilization demonstrated that they often accessed mental health services at a lower rate than other racial/ethnic groups. Types of services included: school-based mental health services, xi

community-based mental health services, group home/residential treatment, psychiatric care, 24-hr crisis care, and non-specialty mental health care (i.e. self-help groups). When API youth accessed mental health services, they were often school- and community-service based. The majority of studies reported a relationship between mental health service use and race/ethnicity. Those studies also confirmed disparities between mental health need and actual service use among API youth. Methods varied widely, using both cross-sectional and longitudinal designs and a range of standardized measures to evaluate needs and types of service accessed by API youths. Characteristics of the samples varied on clinical and non-clinical demographics. As noted by the way API groups were categorized across studies when looking at racial grouping, gender, age, number of participants, etc. Findings further showed that cultural factors such as stigma and beliefs about the etiology of mental health problems may not be directly influencing API youth access and utilization of mental health services, but are impacting caregiver's perception of need. This, consequently, affected the youth mental health service utilization. There was also some evidence that ethnic specific services seem to be more effective in facilitating access for API youths. A significant methodological limitation of reviewed studies involved the aggregation of various API groups or the aggregation of API youth with other racial/ethnic groups. Aggregation impacts understanding of within-group differences. Existing disparities between need and use underscore the need for further research in this area. Clinical implications include a need for more culturally appropriate psycho-education for gatekeepers to identify API youths who are in need and facilitate access to services.

## CHAPTER 1

### INTRODUCTION AND AIMS

It is estimated that 5.0% to 20.0% of children in the United States present with emotional and behavioral difficulties (Burns et al., 1995; Lavigne et al., 1996; McGee et al., 1990; Costello et al., 1996). This includes internalizing disorders (e.g. Major Depressive Disorder) and externalizing disorders (e.g. Conduct Disorder). While children with mental health problems have higher rates of mental health services utilization, there is evidence that many children do not receive any treatment or only inadequate treatment (Simpson, Bloom, Cohen, Blumberg, & Bourden, 2005). This is particularly true for children from minority racial/ethnic groups. Reducing these racial/ethnic disparities has become a national priority (Institute of Medicine: Health Care Disparities Report, 2002; President's New Freedom Commission on Mental Health: Surgeon General Report, 2003).

Much has been written about the mental health needs and disparities in mental health treatment among Latinos and African Americans (Miranda, Lawson, & Escobar, 2002). The literature on Asian/Pacific Islanders (APIs) is considerably smaller (Alegria et al., 2004), despite the fact that APIs are considered one of the fastest growing minority groups in the United States (Zhou, Siu, & Xin, 2009). The lack of attention paid to APIs in this area may be in part due to distorted notions about APIs. APIs are often viewed as the "model minority" (e.g., Sue & Morishima, 1982), implying that they are achievement-oriented and do not present with the types of problems often associated with other minority groups. In addition, APIs are often treated like a homogenous group in th

research literature, which obscures important differences seen among subgroups of APIs. Yet despite some similarities, there is evidence of significant within-group variability in terms of levels of mental health issues and disparities (Leong, 1986; Meyer, Zane, Cho, & Takeuchi, 2009; Ponce, Tseng, Ong, Shek, Ortiz, & Gatchell, 2009; Sue & Sue, 1990).

The knowledge gap is particularly glaring as it concerns API youth. Very little is known to date about the mental health needs and service utilization of this group. The broad aim of the proposed study is to conduct a structured literature review of studies that have investigated mental health service utilization among API youth. Based on existing literature, the goal is to determine what types of services API youth are accessing to address their mental health needs and to what degree such services are utilized. This study will further include a critical review of the methods used across existing studies. Implications for clinical practice and future research will be discussed.

## CHAPTER 2

### BACKGROUND AND LITERATURE REVIEW

#### **Mental Health Needs and Services of Youth**

In 2011, approximately 83.5 million youths living in the U.S. were under the age of 19 (United States Census Bureau [USCB], 2011). Data reports that anywhere from 5.0% to 20.0% of youths in the U.S. experience emotional distress (Simpson et al., 2005). However, many of these youths do not receive any or only inadequate treatment for their mental health problems (Bringewatt & Gershoff, 2010). The need for services, which is usually measured by the type or degree of emotional and behavioral problems, is an important factor in determining whether someone will receive services. Thus it has been found that the type and severity of problems will play a critical role in whether a parent seeks services for his or her children (Weisz & Weiss, 1991). However, the relationship between need and use does not appear to be linear and is influenced by many factors, including race/ethnicity. For instance, an analysis of the 2001 National Health Interview Survey found that the majority of youth, age 4 to 17, who experienced any mental health visits in the past year, were not reported to have serious emotional distress. Nevertheless, it is evident that many children with identified need did not receive care (Mark & Buck, 2006).

Based on the United States Congress Report in 2004, two-thirds of male youth and one-third of female youth were served in community-based mental health programs. Approximately half of these youths were identified as Caucasian. Thirty percent were reported to be African Americans. Approximately eight percent were identified as Latinos. Nine percent were identified as American Indians/Alaskans. One percent was

reported to be Asians and Native Hawaiians, and four percent were classified as “other” or multiracial (Substance Abuse and Mental Health Services Administration [SAMSHA], 2004).

Many youths who receive mental health services experience a range of mental health problems and have had exposure to multiple risk factors. Some of the problems mentioned in the literature include substance abuse, histories of abuse, and exposure to violence (Bringewatt & Gershoff, 2010). These youths are also known to have a hard time functioning successfully in the areas of school, home, and with their peers (Pumariega, Winters, & Huffine, 2003). It is not uncommon for youths who receive mental health services to be diagnosed with one or more psychological disorders (SAMSHA, 2004). Research also reveals that the six most common diagnoses for youths are Attention Deficit Hyperactive Disorders (ADHD) (36.5%), Depression Disorders (32.5%), Oppositional Defiant Disorder (ODD) (26.9%), Adjustment Disorder (12.8%), Conduct Disorder (11.5%), Post-traumatic Stress Disorder (PTSD) and Acute Stress (8.7%), and Substance Use (7.7%) (SAMHSA, 2004). Research comparing diagnoses between genders report that male youth who receive mental health services are more likely to be diagnosed with externalizing disorders, for example, ODD. This is compared to female youth who are more likely to be diagnosed with internalizing disorders, such as depression (Leadbeater, Kuperminc, Blatt, & Hertzog, 1999).

### **The Continuum of Mental Health Services**

Research shows that youths who struggle with emotional and behavioral disturbance are often involved in the child welfare system, juvenile justice system, and/or mental health system (Go & Le, 2005; Hines, Lee, Osterling, Drabble, 2007; MacDonald,



2003). For instance, one study reported that 50.0 to 70.0% of youths in the juvenile justice system experience emotional and behavioral disturbance (Teplin, Abram, McClelland, Dulcan, & Mericle, 2002). Similar trends have been reported with regard to the mental health needs of youths involved with the child welfare system (Burns et al., 2004).

The mental health system provides various types of mental health services for youths who struggle with emotional and behavioral disturbance. Mental health services are arranged on a continuum of restrictiveness. Hawkins, Almeida, Fabry, and Reitz (1992) define restrictiveness as confinement to an area where there is a lack of an option for movement due to the physical structure of the facility or rules that have been implemented by others, which affects how movement occurs in and out of the structure. This means that facilities or services that provide a lot of structure in terms of regulating daily activities and restricting movements are considered to have a high level of restrictiveness. Hawkins and colleagues (1992) developed a scale called ROLES (Restrictiveness of Living Environment Scale), which has been used in many studies to classify or conceptualize different types of mental health interventions and settings according to level of restrictiveness. The following is a basic description of some of the core interventions that are used in the treatment of youths with mental health problems.

### ***School-based Services***

The educational system plays a significant role in the continuum of mental health services offered to youths with psychological issues (Burns et al., 1995). There has been growing pressure for schools to provide more psychological services for youths who have been classified in academic settings as severely emotionally disturbed or SED

(Pumariega et al., 2003). SED is a label used for students who have been diagnosed within the last year with behavioral, emotional, or mental disorders that caused impairment to their daily life (Federal Register, 42478, 1997). Based on the Individualized Disability Educational Act, all youths with special educational needs are required to receive appropriate accommodations in the school environment (United States Department of Education, 2005). Depending on the severity of the psychological issues, youths may receive school-based mental health services. This can include school-based counseling and/or special education, such as being placed in a special classroom to address the youth's emotional and behavioral needs (Gudino, Lau, & Hough, 2008).

### ***Community-based Mental Health Services***

Community-based mental health services are considered an alternative to out-of-home care and are generally a preferred treatment option. An example is Wraparound services. These programs are considered the least restrictive form of treatment for youths with emotional and behavioral issues. They provide services for youths and their families within the community as an alternative to out-of-home treatment options (Pumariega et al., 2003). Community-based programs mental health services may incorporate individual therapy, group therapy, family therapy as well as case management (SAMHSA, 2004).

### ***Group Homes***

Third in the level of restrictiveness are group homes. Group homes tend to be smaller residentially based facilities that provide care to youths with various needs in a home-like setting. It is important to note that there are no clear distinctions between group homes and residential treatment centers (Curtis, Alexander, & Lunghofer, 2001).

### ***Residential Treatment Centers***

Second in the level of restrictiveness are residential treatment centers (RTC). An RTC is a highly structured facility that provides “milieu therapy” for youths who experience behavioral and emotional problems (Frensch & Cameron, 2002; Leichtman, 2006). Treatment in RTCs may involve traditional psychotherapy, skills training, and educational support while providing basic needs (Leichtman & Leichtman, 2003; Libby, Coen, Price, Silverman, & Orton, 2008).

### ***Inpatient Psychiatric Cares***

The most restrictive out-of-home mental health service has been identified as inpatient psychiatric care (IPC). Inpatient psychiatric care involves hospital-like facilities that provide 24-hour treatment for individuals with acute or chronic psychological issues (Olson, Gameroff, Marcus, Greenberg, & Shaffer, 2005).

### **Mental Health Needs and Services Utilization for Minority Youths**

National data have shown that the demographics in the United States are constantly changing. In 1990, 31.0% of youths were reported to have come from ethnic and racial minority groups (Hollmann, 1993). U.S. Census Bureau estimates that as of 2011, 49.7% of minority youths were under the age of five years old, which is up from 49.0% in 2010 (U.S. Census Bureau, 2010). In 2000, 48.0% of youths identified themselves as coming from ethnic and racial minority groups (USDHHS, 2001). At the same time, there is a growing number of minority youth seen in the child welfare, juvenile justice, mental health, and special education systems, which have raised major

concerns for many mental health providers (Crane & Ellis, 2004). Numerous studies have reported that minority youths experience greater levels of stress. This has in part been attributed to discrimination, acculturation stress, or exposure to trauma (Jenkins & Bells, 1997; Jones, Dauphinais, Sack, & Somervell, 1997; Nguyen et al., 2004; Pumariega et al., 2003). Minority youths with severe mental health problems are at a higher risk for experiencing poverty (McCaskill, Toro, & Wolfe, 1998; USCB, 1999) and engaging in delinquent behaviors (Cross, Earle, & Simmon, 2000).

The elevated risk of experiencing stressors in multiple domains of living further supports the need for specialized mental health services for minority youths. However, research has demonstrated that these youths do not always receive it (Kataoka, Zhang, & Wells, 2002). The types of mental health services that youths receive depend in part on the type of problems with which they present (Gudino et al., 2008). It is not uncommon for youths who experience externalizing problems to be more likely to receive mental health services compared to youths who experience internalizing problems. The possible explanation for this is that individuals who exhibit externalizing problems have a greater adverse impact on the people around them than individuals with internalizing problems (Thompson, 2005).

Some researchers have argued that there are no differences in the mental health needs between minority groups and Caucasians (Siegel, Aneshensel, Taub, Cantwell, & Driscoll, 1998), while others have argued that minority groups report higher rates of psychological needs compared to Caucasians (Costello et al., 1996). However, there is compelling evidence for the existence of mental health disparities among minority groups. Mental health disparities refer to the significant difference between need and use

as well as between services offered and those utilized (Cheung & Snowden, 1997). Some of these disparities can be explained by racial /ethnic variation (Sue & Dhindsa, 2006).

## **Asians and Mental Health**

### *Characteristics*

There are several ways researchers have attempted to classify “Asians” in the literature. “Asians” have been identified as Asian-Americans (USCB, 2009); Asian American and Pacific Islanders (USCB, 2002); Asian-American Native Hawaiians, and Pacific Islanders (Ponce et al., 2009). In this paper, APIs will be used to refer to any individuals who identify themselves as having origins from the Far East, East Asia, Southeast Asia, South Asia, or the Pacific Islands (USCB, 2002).

APIs are one of the fastest growing minority groups in the United States (Ponce et al., 2009). In 2009, it was reported that approximately 13.3 million APIs lived in the United States (USCB, 2009). This is compared to an estimated 12.5 million APIs in 2002 (USCB, 2003), and 6.9 million APIs in 2000 (USCB, 2000). Chinese, Filipinos, and Asian Indians make up the largest API subgroups in the United States (USCB, 2002). APIs tend to live in larger coastal, urban regions, and metropolitan areas predominantly in the states of California, New York, and Hawaii. Geographical trends reported that 49% of APIs live in the Western region of the United States (USCB, 2009). For example, APIs represent 13.4% of the 10 million people who populate Los Angeles County (USCB, 2010).

Contrary to the stereotype that ‘all APIs are the same,’ research over the years has demonstrated that APIs are a heterogeneous group of individuals (Sue & Sue, 1987; Yu, Huang, & Singh, 2010). Currently, APIs encompass over 43 Asian sub-ethnic groups

who speak over 100 different languages, express different cultural beliefs, norms, and attitudes (Lin & Cheung, 1999; USCB, 2004; USDHSS, 2001). In addition, there are many different reasons why APIs immigrated to the United States. This includes advancement in education, establishing financial stability or for political reasons (Leong & Lau, 2001; Yu et al., 2010). Variability seen within social economic status is also evident. For instance, USCB (2009) reported that APIs hold occupations that range from professional jobs to construction work. There is also variability within the API population with regard to educational level (Yu et al., 2010) and household income (USCB, 2009).

### *Cultural Values*

Cultural values are an important factor to understanding decision making within the API population (Barreto & Segal, 2005; Ho, Yeh, McCabe, & Hough, 2007; Yu et al., 2010). It is not uncommon to associate APIs with collectivism when looking at the cultural research literature (Triandis, Bontempo, Villareal, Asai, & Lucca, 1988).

Collectivism has been defined as placing individual personal goals second to the goals of the group (Leong & Lau, 2001; Triandis et al., 1988). Collectivism promotes a sense of family and interdependence. This is compared to individualism where an individual's goals are most important and the promotion of independence is most desirable (Triandis et al., 1988; Zhou et al., 2009).

Maintaining harmony is a very important aspect in a collectivistic society. Harmony can be accomplished by presenting the family in the best light (Lin & Cheung, 1999; Triandis et al., 1988). Cultural values such as "shame" or "saving face" are upheld in the strictest sense because there is a fear of dishonoring the family, which can include admitting to a mental health illness. This is supported by research that reports that APIs

tend to have an external locus of control (Zhou et al., 2009). External locus of control is referred to the acceptance of a situation by the individual through the modification of their cognition, affect, or behavior to accommodate the existing external world (Zhou et al., 2009). This is compared to Western thinking where individuals tend to adopt primary control. Primary control means that individuals believe they have control over their situation (Zhou et al., 2009). Hence, when an individual seeks help in the API community, it is usually a collaborative process between family members (Lin & Cheung, 1999). It is not uncommon for individuals who are collectivistic to have less of a desire to interact with individuals who are not part of their family (Leong & Lau, 2001; Triandis et al., 1988). Ultimately, the family plays a critical role in understanding an APIs' views on decision-making.

APIs' conceptualization of the cause, nature, and cures of illness is drastically different from Westerners (Cheung & Snowden, 1990; Leong & Lau, 2001; Zhou et al., 2009). APIs believe that the mind and body are one in the same. There is no difference between psychological and physical illnesses (Leong & Lau, 2001; Sheikh & Furnham, 2001). Hence, mental illnesses are often attributed to an organic causation that can be treated by addressing the somatization complaints (Sue & Morishima, 1982; Sue & Sue, 1987). APIs have been noted to cope with stressors by accessing alternative forms of treatment (Gurley et al., 2001) or their own cultural network rather than utilizing formal mental health services (Wynaden, Chapman, Orb, McGowan, Zeeman, & Yeak, 2005). Often times, formal health services tend to be accessed when all other options have been exhausted (Lin, 1983; Meyer et al., 2009).

### *Needs*

Compared to African Americans, Caucasians, and Latinos, the API population is not often referenced as a group of concern in the discussion about mental health disparities. Due to the low rate of admission to mental health services (Gee, 2004, Ho et al., 2007, Lin & Cheung, 1999; Leong & Cheung, 1999; Leong & Lau, 2001; Makini et al., 1996; Sue, 1977; 1998; Wells, Morrison, Fillmore, & Catalano, 1992), it is often assumed that APIs do not struggle with psychological issues (Ponce et al., 2009; Sue, 1977; Sue & Morishima, 1982; Thompson, 2005; USCB, 2008). This false assumption has made it possible for APIs to be erroneously dubbed the “model minority.” A model minority is a group that seeks a higher level of education, is affluent, assimilates to Western culture, does not participate in deviant behaviors, and is resilient from emotional and behavioral problems regardless of the adversity they experience (Lin & Cheung, 1999; Sue & Morishima, 1982; William & Mohammed, 2009).

Contrary to the model minority stereotype, current research has demonstrated that APIs live in unique and complex social systems and display considerable variability in a range of areas (Cheung & Snowden, 1997; Kim, 2006; Leong & Lau, 2001; Nguyen et al., 2004; Sue & Sue, 1987; Zhou et al., 2009). There is evidence from numerous research studies that APIs have significant mental health needs but do not receive the necessary services (Cheung & Snowden, 1997; Lau & Zane, 2000; Leong & Lau, 2001; Lin & Cheung, 1999; Matsuoka, Breaux, & Ryujin, 1997; Ponce et al., 2009; Sue & McKinney, 1975; Sue & Sue, 1987; Yu et al., 2010). As a result, when APIs do receive treatment they often express more severe pathology and may end up being admitted to inpatient psychiatric facilities (Chen, Sullivan, Lu, & Shibusawa, 2003; Sue, 1977; Sue, 1987).



There is also evidence of differences in the mental health needs between various API ethnic groups (Lin & Cheung, 1999; Sue & Morishima, 1982). Results from studies looking at differential diagnosis and comparing sub-ethnic and generational groups have been able to support this within-group difference. First, some have argued that APIs are more likely to be diagnosed with internalizing disorders and less likely to be diagnosed with externalizing disorders relative to non-Asians (Gudino et al., 2008; Nguyen et al., 2004). Secondly, there is evidence that certain sub-ethnic groups experience a higher rate of specific diagnoses. For instance, Barreto and Segal (2005) reported that Southeast Asians showed the highest rate of Major Depression compared to East Asians where Schizophrenia was the most evident. However, when compared across diagnosis, APIs suffer from a variety of mental health disorders from Depression and Anxiety Disorder (Nguyen et al, 2004) to disruptive behavior disorders (Mak & Rosenblatt, 2002). Other within-group or sub-ethnic group research reports that Southeast Asians suffer from more psychological and physical disorders compared to other APIs (Abe, Zane, & Chun, 1994; Leong & Lau, 2001). Specifically, Vietnamese people seem to express higher levels of emotional distress than other Southeast Asians, in particular PTSD (Kim, 2006). This may be due to war trauma and refugee experiences. Thirdly, further examination of mental health disparities research reveals that most studies tend to focus on API adults compared to youths (Gee, 2004; Yu et al., 2010). This lack of attention raises a lot of concerns for APIs who are already part of the youth-serving system (Lai, 2009). For example, between 1980 and 2000, the national arrest rate increased by 11.4% for API youth. In California alone, there was a 4.0% to 12.0% increase within the last decade (National Council and Crime Delinquency, 2001).

### *Service Access and Utilization*

The growing evidence of mental health disparities with APIs has made it possible for government funding to be allocated to this population for mental health services. However, only three percent of APIs have obtained services from the Department of Mental Health in Los Angeles (Ponce et al., 2009). There are several possible explanations to why there are so few APIs utilizing mental health services relative to other ethnic groups. An important mediator for mental health service utilization appears to be acculturation level of the client and the cultural awareness of the mental health service provider (Berry, 1990). Researchers have also examined family systems, language capacity, and the incorporation of traditional values in the therapy process to better understand the disparity seen within the API population (Leong & Lau, 2001; Sue & Sue, 1987). These studies have produced several interesting findings.

### *Acculturation*

It is believed that APIs are less likely to seek mental health services due to the acculturation level of the individual (Barretto & Segal, 2005; Berry, 1990; Miller, 2007). Acculturation is defined as the psychological and social adaptation from culture of origin to current cultural environment (Berry, 1990; 1997). For instance, a study conducted by Chen and Danish (2010) reported a relationship between acculturation level and willingness to express their emotions to others in stressful situations. Individuals who were less acculturated were less likely to express their emotions (Chen & Danish, 2010). Similar research findings have been reported by Meyers et al. (2009) and Ta et al. (2010), namely that U.S. born APIs tend to utilize more mental health services. This could

partially be explained by a higher acculturation level when compared to foreign-born APIs who tend to be less acculturated.

### *Evaluation and Diagnosis*

Appropriate mental health evaluation may also be another possible explanation to why APIs are underutilizing mental health services. Research looking at therapists' clinical evaluation of the client and usage of psycho-diagnostic tools (Lau, Chang, & Okazaki, 2010; Lin & Cheung, 1999) has been examined in order determine whether appropriate evaluation and diagnosis are being made (Knight & Hill, 1998). It may not be that uncommon for APIs to go to their primary physician to seek treatment for their psychological symptoms and receive inappropriate diagnosis and treatment interventions. Cultural factors like culturally bounded syndromes (Zhou et al., 2009) may not be considered during this process. In Korea, for instance, it has been reported that clients have been diagnosed with "hwa-byung" which is also known as unresolved anger. The symptoms presented in "hwa-byung" include symptoms such as anxiety or depression (Lin, 1983).

Evaluating the relationship between client and practitioner can also raise issues with the utilization process. Sue (1998) discussed the importance of therapists "dynamically sizing" their clients. Dynamic sizing refers to the therapist's ability to understand how stereotypes and cultural characteristics may affect the individual (Sue, 1998). Insensitive diagnoses and interventions may lead to APIs terminating prematurely from treatment (Sue & Dhindsa, 2006). Lack of empirically supported guidelines also makes it challenging for appropriate adaptation of empirically supported treatment (Satel & Forster, 1999; Zhou et al., 2009). A study by Akutsu, Tsuru, and Chu (2006) reported

that the lack of standardization of treatment for APIs results in mental health agencies creating their own standards. This may result in the low prioritization of APIs who come in contact with mental health agencies. The reason for this is that APIs have been known to be present with symptoms that require less urgent attention as seen with somatization symptoms when compared to psychotic or violent behaviors.

### ***Language Barriers***

Monolingual APIs who seek psychological services may face considerable language barrier issues (Akutsu et al., 2006). APIs who have limited English knowledge may not feel comfortable coming to a mental health professional who does not speak their native language (Sue & Sue, 1987; Yeh, Takecki & Sue, 1994). The heavy reliance on translators can lead to miscommunication and interpreter bias (Leong & Lau, 2001; Sue & Sue, 1987). The literature reports that one of the most significant problems with providing mental health services to ethnic minorities is the mismatching in linguistics between the therapist and client (Sue, 1998). Eventually, an increase in the error rate of information might be a result of this.

### ***Physical Barriers***

Systemic and resource physical factors, which are often associated with social class (Leong & Lau, 2001), can also plague APIs' ability to access mental health services (Chin, Takeuchi, & Suh, 2000). A recent study looking at access and utilization of health services reported that APIs were four times less likely to have health insurance (Yu et al., 2010). Challenges accessing mental health services have also been attributed to geographical problems, such as traveling long distances to see a mental health provider or

not being able to take time off from work to see a therapist (Leong & Lau, 2001; Zhou et al., 2009).

### *Gatekeepers*

Examining the critical roles of gatekeepers' can also help understand the relationship between API youth's access and utilization of mental health services (Yeh et al., 1994). Gatekeepers such as parents or systemic entities such as mental health providers are key figures in a youth's treatment process. Parents may face barriers as mentioned prior to obtaining mental health services youths for their child. This may have a direct impact on the type of services a youth may receive (Gudino et al., 2008). Other research, conducted by Yeh et al. (2005) and Ho et al. (2007) reported that API parents act as a partial mediating factor between the relationship of race/ethnicity and mental health. Secondly, mental health providers may also play an important gatekeeping role. They shape assessment procedures, make treatment recommendations and may influence placement decisions. Such decisions are not always based on the clinical needs of the youth but may be influenced by other factors, such as insurance, resources, parent's level of distress, etc. (Bringewatt & Gershoff, 2010; Dulcan et al., 1990). The unmet needs of youths demonstrate the fragmentations that exist in the mental health system. The mismatching unfortunately can lead to gaps in treatment and effectiveness of services.

## **CHAPTER 3**

### **METHODOLOGY**

#### **Project Purpose and Guiding Questions**

An initial review of the limited existing literature on the mental health services utilization among API youth indicates that there is still limited understanding of API youth's mental health needs and service disparities when compared to other racial/ethnic youth groups. As such, this project aims to answer the following questions: (1) What type of services are API youths accessing to address their mental health needs? (2) To what extent are API youths utilizing these mental health services to address their mental health needs? (3) What type of methodological approach is used to evaluate API youth's needs and utilization mental health? (4) How can the findings from this literature review contribute to clinical practice and future research?

#### **Search Strategy**

Peer-reviewed published articles from 1990 to 2012 were searched from the following databases: Academic Search Premiere, CINAHL Plus with full text, Health Source: Nursing/Academic Edition, PsychINFO, PsychARTICLES, SocialINDEX, ERIC, PubMed, Google Scholar, and Web of Science. The key phrase that was used to start the literature review was "Mental health services for Asian and Pacific Islanders' children and adolescents." Subsequently, derivatives of Asian Pacific Islanders' were used, such as APIs. The search further included a review of the reference lists of all articles included in the review to ensure that no relevant articles may have been excluded.

### **A Priori Inclusion/Exclusion Criteria**

To be included in the review, several criteria had to be met: (1) The study had to be published between 1990-2012 in a peer-reviewed journal. (2) Studies had to explicitly focus on or identify Asian and/or Pacific Islanders youths that were 19 years old and younger in their sample population. (3) The study must have examined mental health service use as an outcome within a variety of specialty and/or non-specialty mental health service settings, e.g. school-based mental health services, outpatient community mental health, group/residential treatment, inpatient psychiatric care. (4) Studies must have examined the relationship between ethnicity/race and utilization of mental health services. This review did not include studies that were solely focused on examining alcohol and drug treatment (ADT).

### **Search Procedure**

Using the search terms within the given parameters, 1218 articles were identified in “Academic Search Premiere,” 364 articles were identified in “CINAHL Plus with Full Text,” 324 articles were identified in “Health Source: Nursing/Academic Edition,” 660 articles were identified in “PsychoINFO,” 20 articles were identified in “PsychArticles,” 511 articles were identified in “SocialINDEX,” 715 articles were identified in “ERIC,” 9 articles were identified in “PubMed,” and 1000 were identified in “GoogleScholar.” Starting in chronological order, title, subject line, and abstract were reviewed to determine whether a study met criteria for inclusion. After this initial screening, a more critical examination of relevant articles was completed to verify whether they met inclusion criteria for this review. Duplicates and articles that did not meet criteria were subsequently excluded. This included studies, for instance, that referenced API youth

participants but did not report any key outcome findings. This process yielded altogether 28 unique articles.

Included articles were then organized by types of treatment settings and organized by level of restrictiveness. Several treatment settings had been identified a priori, i.e. school-based services, community-based mental health services, group home/residential treatment center, and inpatient psychiatric care. However, the review indicated the need to further add to these settings. Additional settings that were subsequently identified included 24-hour crisis care, non-specialty mental health services such as self-help groups or spiritual support, non-specific treatment settings which were not further described in the respective studies, and mixed-treatment settings, which involved the use of multiple treatment settings.

All articles were then reviewed again in order to abstract information about the purpose of each study, its design, sample characteristics (participants and caregiver if applicable), treatment delivery setting/mental services, measures used in the study, and key findings. This process resulted in the creation of a table (see Appendix).

The review process indicated variation in the way race/ethnicity was operationalized across identified articles. The same racial group descriptors that were used in the original studies were used in the table summary in this literature review. However, within the literature review, racial groups were categorized into five major racial/ethnic groups, which included API, Latino, African-American, Caucasian, and Other.



## CHAPTER 4

### RESULTS

A total of 28 articles that met criteria were identified. The results section presents findings from this review by mental health service types. For each treatment setting, information was summarized on the setting and design of the study, study participants which includes non-clinical and clinical characteristics of youths and care providers, measures, and key findings. For studies where findings were not reported separately for APIs, generalized summaries were made. It is important to note that some studies examined service use across multiple types of mental health settings. These mixed-treatment studies were included in all applicable treatment/service setting categories, but were only counted once in terms of the overall count of studies in this review. Table 1 provides a detailed overview of all studies included in this review.

#### **API and School-based Mental Health Services (SBS)**

Nine studies were identified which evaluated API youths' access and utilization of mental health School-Based Services (SBS).

#### ***Setting, Data Source, and Design***

In seven of the nine articles, SBS were one of several treatments or services examined (Cummings & Druss, 2011; Cummings, Ponce, & May, 2010; Gudino et al., 2008; Gudino, Lau, Yeh, McCabe, & Hough, 2009; McCabe et al., 1999; Wood et al., 2005; Yeh et al., 2002). Two studies specifically evaluated only SBS (Amaral, Geirstanger, Soleimanpour, & Brindis, 2011; Yeh, Forness, Ho, McCabe, & Hough, 2004). However, one of the studies did not provide a detailed description of services (Yeh

et al., 2004), whereas the other study examined service use in treatment settings in California (Amaral et al., 2011). Another study mentioned SBS as a linkage service option (Yeh et al., 2002). The definition of SBS was relatively consistent across all identified studies. In general, SBS included school counseling, assistance in regular classroom, placement in special classroom, or schools for emotional or behavioral issues (Gudino et al., 2008; Gudino et al., 2010; Wood et al., 2005).

Garland et al. (2001) first reported on the methods and findings of the Patterns of Care (POC) study, a longitudinal epidemiological survey that evaluated the needs, service uses and outcomes of children and adolescents who are at high risk for emotional and behavioral problems across multiple public services sectors (mental health, alcohol and drug, public school program for ED, child welfare, and juvenile justice). Five subsequent studies constituted secondary analyses of POC data (Gudino et al., 2008; Gudino et al., 2009; Wood et al. 2005; Yeh et al., 2004; Yeh et al., 2002). Two studies used cross-sectional methods, secondary data from the National Survey on Drug Use and Health (NSDUH), which is supported by the Substance Abuse and Mental Health Service Administration (Cummings & Druss, 2011, Cumming et al., 2010). One study used data from the California Department of Education (Amaral et al., 2011).

It is also important to note that studies took different approaches to capturing key variables. For instance, surveys such as the California Health Kids Survey (CHKS), used scales from the National Youth Risk Behavior Survey to assess for health and behavioral risk (Amaral et al., 2011). In the National Survey of Drugs Use and Health, Cummings and Druss (2011) evaluated utilization of mental health service. Utilization was dichotomized, i.e. participants reported receiving any emotional or psychological

counseling across clinical or school settings. Archival data from the Management Information System Data (MIS) was also used to obtain information on mental health utilization, need, and non-clinical characteristics: ethnicity/race, gender, type of insurance, caregiver's income level, caregiver's relation to participant, and caregiver's educational level (McCabe et al., 1999; Yeh et al., 2004; Yeh et al., 2002).

### *Participants*

The number of individuals who participated varied across studies ranged from 457 (Gudino et al., 2008) to 18,847 (Cummings et al., 2010). There were no noticeable and consistent trends evident regarding inclusion or exclusion criteria of articles evaluating SBS. The percentage of API youths in these studies ranged from 2.6% (Cummings & Druss, 2011) to 37.0% (Amaral et al., 2011). In all but three studies API youths were aggregated into one racial group. One study separated Asians and Pacific Islanders into two racial/ethnic groups (Amaral et al., 2011). The other study identified different API ethnic groups that participated in the study, identifying altogether five primary groups, Filipino, Cambodian, Pacific Islander, Vietnamese, and 'several other Asian groups' (Wood et al., 2005). The last study identified nine different API ethnic groups that included Filipino, Vietnamese, Laotian, Cambodian, Chinese, Korean, Indian, Samoan, and Japanese (McCabe et al., 1999). Four studies included an "other" or "unknown" category, which were individuals who did not identify themselves as Caucasian, African American, Latinos, or API (Amaral et al., 2011; Cummings & Druss, 2011; Cummings et al., 2010; McCabe et al., 1999). Interestingly, one study reported that APIs had the most participants at a rate of 37.0% when compared to Caucasians, Latinos, Pacific Islanders, African American, American Indians, and "Other" group (Amaral et al.,

2011). This study was conducted in Alameda County, California, which is located near the East Bay area. This area is known to have a higher percentage of API population. The remaining study reported that API youths were less likely to participate in studies when compared to African American, Caucasian, and Latino groups (Cummings & Druss, 2011; Cummings et al., 2010; Gudino et al., 2009; Wood et al., 2005; Yeh et al., 2004; Yeh et al., 2002). However, when “other” or “unknown” groups were considered, APIs did not have the lowest percentage of participation across racial/ethnic groups. Eight out of nine studies used Caucasian as the comparison group with one study using Latinos as the comparison population (Gudino et al, 2008).

Interestingly, five out of the nine studies came from secondary analysis of the POC study (Gudino et al., 2008; Gudino et al., 2009; Wood et al., 2005; Yeh et al., 2004; Yeh et al., 2002). These studies varied slightly in the way APIs were labeled. When examining these studies closely, most studies aggregated Asians and Pacific Islanders into one group (e.g. Cummings et al., 2010; Gudino et al., 2008; Gudino et al., 2009; McCabe et al., 1999; Wood et al., 2005; Yeh et al., 2004; Yeh et al., 2002), however, one study separated Asians versus Pacific Islander into two different racial/ethnic categories (Amaral et al., 2011)

### ***Other Clinical and Non-clinical Characteristics***

In cases where sample characteristics specific to APIs were not provided, a brief description of the overall sample is provided.

## **Gender**

In all but one study, information regarding gender participation was reported with males being the majority of participants (Cummings et al., 2010; Gudino et al., 2008; Gudino et al., 2009; Wood et al., 2005; Yeh et al., 2002). The percentage of participating males ranged from 50.8% (Cummings et al., 2010) to 66.9% (Gudino et al., 2008; Gudino et al., 2009).

One study disaggregated gender information by race/ethnicity (Yeh et al., 2002). As reported, there was a higher percentage of older API female participation when compared to older API males. Conversely, there was a higher percentage of younger API male participation when compared to younger female.

## **Age**

Most studies reported age of participants, which ranged from 0 (McCabe et al., 1999) to 18 years old (Chavira, Garland, Yeh, McCabe, & Hough, 2009; Gudino et al., 2008; Gudino et al., 2009; Yeh et al., 2002). Many of the studies reported the average age of participants, which ranged from 12.8 (Yeh et al., 2004) to 15.6 years old (Gudino et al., 2008). Two studies reported the grades of participants in the study instead of age, which ranged from 9<sup>th</sup> (Amaral et al., 2011) to 12<sup>th</sup> grade (Cummings et al., 2010).

Yeh et al. (2002) disaggregated age by race/ethnicity specifically by developmental stages of participants. As reported, 23.8% of APIs male children participated in the study compared to 16.4% API female children. When compared across racial/ethnic groups, APIs had the least participation for children. API adolescent males were the second least participating group at a rate of 25.4% when compared to other male racial/ethnic groups. However, API adolescent females had the highest participation rate

at 34.4% when compared to African American, Caucasian, and Latinos adolescent females (Yeh et al., 2002).

### **Clinical Diagnosis/Symptomology**

One study provided information about participants' diagnosis (Yeh et al., 2002), with the majority having Major Mood Disorder, Attention-Deficit Hyperactive Disorder, or Disruptive Behavior Disorder. Cummings et al. (2010) did not provide information about participants' diagnosis but discussed symptoms that participants reported which included depressive symptoms, suicidal ideations, suicide attempts, and/or delinquent behaviors.

### **Referral Source/Public Sector Involvement**

Four studies discussed referral sources for participants who utilized SBS (McCabe et al., 1999; Wood et al., 2005; Yeh et al., 2004; Yeh et al., 2002). Common referral sources were mental health (MH), severe and emotional disturbed (SED), alcohol and drug treatment (ADT), juvenile justice (JJ), and child welfare (CW) (Wood et al., 2005, Yeh et al., 2004). There were no noticeable trends regarding rates of referral source.

One study looked specifically at public sector involvements by race/ethnicity (McCabe et al., 1999). When compared across different public sectors, API participated in SED at a rate of 2.2%. Furthermore, APIs had the least involvement in SED relative to Caucasian who reported 57.0% involvement (McCabe et al., 1999).

## Caregiver

Non-clinical characteristics were gathered for caregivers in five studies (Cummings et al., 2010; Gudino et al., 2008; Gudino et al., 2009; Wood et al., 2005; Yeh et al., 2004). Non-clinical information obtained included: caregiver's income, educational level, and caregiver's relationship to participant. For studies that provided information regarding family income, the range was from \$15,000 to \$60,000 (Cummings et al., 2010). The higher end income range came from one national study which reported that most of the participants had private insurance (Cummings et al., 2010) with the other studies reporting below poverty rate income from families (Gudino et al., 2009; Wood et al., 2005; Yeh et al., 2004). One study provided information regarding immigration status of participants' parents, with most identifying themselves as immigrants (Gudino et al., 2009). Three studies provided information regarding parental education levels. Education levels ranged from less than a high school education to college graduate (Cummings et al., 2010; Wood et al., 2005, Yeh et al., 2004). Two studies reported caregiver's relationship to participants (Garland et al., 2005; Leslie et al., 2000).

Two studies provided non-clinical characteristics information about API caregiver characteristics (Gudino et al., 2009; Gudino et al., 2008). One study provided details about API caregivers' birthplace. As reported, the majority of caregiver's were born in a foreign country, specifically 30.4% were from the Philippines, 36.3% reported that they came from an unidentified Southeast Asian country, 7.9% were from "other" Asian countries, and 25.5% were from the United States (Gudino et al., 2008). Another study provided data specifically looking at API's incomes. Gudino et al. (2009) reported that API median income was \$18,000-18,999 per year, which was similar to the median

income for African Americans. However, this was lower than the overall average median income for Whites which was \$25,000-\$34,999 per year.

### *Measures of Mental Health Service Need/Utilization*

Standardized measures were used across most studies to obtain data regarding the key outcome finding, mental health service utilization and mental health need. Youths and/or caregivers' provided self-report via questionnaires or participated in semi-structured interviews to obtain key findings.

The most common used standardized measure to evaluate mental health utilization was the Service Assessment for Children and Adolescents (SACA). This measure assessed utilization of different types of mental health services (Gudino et al., 2008; Gudino et al., 2009; Wood et al., 2005). Several studies also used standardized measures to assess mental health need. Measures to assess mental health outcome functioning included: the Children's Global Assessment Scale (CGAS), which assessed global functional impairment (Shaffer, Gould, Brasic, Ambrosini, Fisher, Bird, & Aluwahlia, 1983); and the Columbia Impairment Scale (CIS), which measured any functional impairment seen in the youth (Bird, Shaffer, Fisher, & Gould, 1993).

Measures that evaluated symptomology included: the Diagnostic Interview Schedule for Children-IV (DISC-IV), which assessed for psychiatric diagnosis during the past year based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) (Shaffer, Fisher, Lucas, Dulcan, & Schwab-Stone, 2000); the Child Behavior Checklist (CBCL) parent version and Youth Self-Report, which assessed emotional and behavioral problems based on parent's report and youth's report (Achenbach, 1991a, b); the Center for Epidemiologic Studies Depression scale (CES-D), which assessed for mood disorders



and engagement in harmful behaviors (Radloff, 1997); and the Composite International Diagnostic Interview Short Form (CID-SF), which assessed for treatment of a major mood episode within the past year.

One study specifically examined parents' role in youth's access and utilization of MHS (Yeh et al., 2004). Yeh et al. (2004) used The Belief about the Causes of Child Problem-Parent Version to assess explanatory models for youth's problems based on caregiver's report.

### ***Key Findings***

Findings from these studies reported contradictory evidence regarding API youths' access and utilization of SBS. Two studies found no significant association between race/ethnicity and utilization of SBS (Cumming et al., 2010; Gudino et al., 2008). However, the remaining seven studies identified a relationship between race/ethnicity and utilization of SBS. In general, APIs were underrepresented in SBS and were less likely to utilize services compared to Caucasian (Cummings & Druss, 2011; Gudino et al., 2009; McCabe et al., 1999; Wood et al., 2005; Yeh et al., 2004; Yeh et al., 2002). One study reported that APIs were more likely to utilize SBS compared to Caucasian, African Americans, American Indians and other unidentified racial groups (Amaral et al., 2011). Another study reported that APIs and Latinos were less likely to receive SBS compared to Caucasians (Cummings & Druss, 2011). Other interesting findings reported that API youths were more likely to receive SBS at a later age than Caucasian youths (Wood et al., 2005) and that APIs with internalizing symptoms were less likely to receive SBS compared to Caucasian who had similar symptoms (Gudino et al., 2009). Gudino and colleagues (2009) also reported that unlike findings in regards to

APIs and internalizing symptoms, APIs who reported externalizing symptoms had a higher probability of using SBS compared to APIs with non-significant problems.

### **API and Community-based Mental Health Services (MHS)**

Eight studies were identified which evaluated API youths' access and utilization of Community-based Mental Health Service (MHS).

#### ***Setting, Data Source, and Design***

Two out of eight articles evaluated community-based MHS alongside other services (Cummings & Druss., 2011; Garland et al., 2005). The remaining studies evaluated only community-based MHS (Akutsu, Tsuru, & Chu, 2010; Bui & Takeuchi, 1992; Jerrell, 1998; Leslie et al., 2000; Yeh, Eastman, & Cheung, 1994; Yeh, Takeuchi, & Sue, 1994). Community-based MHS were commonly defined as services provided through community-based clinics or agencies. Services in community-based MHS may include: individual therapy, group therapy, and other services (e.g. consultation, psychological assessment) (Garland et al., 2005). As seen in the literature, community-based MHS are also identified as a type of specialty MHS or commonly known as outpatient MHS (Garland et al., 2005).

Interestingly, three studies examined culturally-specific community-based programs that provided services for API youths. These types of services are also known as parallel services (Akutsu et al., 2010; Jerrell 1998; Yeh et al., 1994). Parallel or ethnic- or culturally-specific services imply that an ethnic and/or language match occurs between therapist and client to improve the effectiveness of services (Akutsu et al., 2010; Yeh, Takeuchi, & Sue, 1994; Yeh et al., 1994). Conversely, mainstream MHS do not target

specific ethnic groups (Yeh et al., 1994). Most of the studies reported that treatment settings were evaluated in California and used a longitudinal method approach (Akutsu et al., 2010, Bui & Takeuchi, 1992; Garland et al., 2005; Jerrell, 1998; Leslie et al., 2000; Yeh et al., 1994; Yeh et al., 1994).

Other methods were used to obtain information that pertained to mental health utilization rates, needs, and non-clinical characteristics such as accessing Management Information Systems (MIS) data base (e.g. Akutsu et al., 2010; Jerrell, 1998) and non-specific interviewing process (Garland et al., 2005; Yeh et al., 1994; Yeh et al., 1994). Bui and Takeuchi (1992) used data from Los Angeles Department of Mental Health to gather information on utilization rates of mental health services, clinical (e.g. referral source and diagnosis) and non-clinical characteristics information (e.g. age and poverty status). Another data source referenced was Social Service Reporting System available by the County of Children Service Bureau from San Diego to gather non-clinical (e.g. sociodemographics) and clinical characteristic (e.g. maltreatment history and placement of child) (Leslie et al., 2000). Moreover, Leslie et al. (2000) used San Diego County Mental Health Management Information System (MHMIS) and Medicaid Management Information System (MMIS) to obtain information about number of reported outpatient mental health visits.

### *Participants*

The number of individuals who participated across studies ranged from 236 (Akutsu et al., 2010) to 7,704 (Cummings & Druss, 2011). There were some interesting trends noted that were introduced in this section for the first time. First, several of these studies only evaluated participants who were first time participants to MHS (Yeh,

Eastman, & Cheung, 1994; Yeh et al., 1994). Secondly, studies excluded participants who received other types of services that were not community-based MHS (Akutsu et al., 2010; Bui & Takeuchi, 1992; Leslie et al., 2000), emergency room or assessment services (Yeh, Eastman, & Cheung, 1994; Yeh et al., 1994), or had public sector involvements that were not MHS (Jerrell, 1998; Leslie et al., 2000). Only one study used secondary analysis from POC study (Garland et al., 2005). Leslie et al. (2000) conducted a secondary analysis on a foster care study in San Diego County, funded by the National Institute of Mental Health and The National Center for Child Abuse and Neglect.

API youths' participation of community-based MHS ranged from 2.6% (Cummings & Druss, 2011) to 100% (Akutsu et al., 2010). APIs had the fewest participants across the majority of the studies when compared to African Americans, Caucasian, and Latinos (Cummings & Druss, 2011; Garland et al., 2005; Leslie et al., 2000; Yeh et al., 1994). However, not all studies provided percentage of participation by race/ethnicity (Jerrell, 1998; Yeh et al., 1994). There was slight variability seen in the way API youths were grouped across studies. The majority of studies aggregated APIs into one racial group (Bui & Takeuchi, 1992; Cummings & Druss, 2011; Garland et al., 2005; Leslie et al., 2000; Yeh et al., 1994). However, one study combined APIs with "other" group (Leslie et al., 2000). Two studies disaggregated APIs into nine groups that included: Vietnamese, Chinese, Mien, Cambodian, Laotian, Filipino, other unidentified API groups (Akutsu et al., 2010), Japanese, and Korean (Yeh et al., 1994).

### ***Other Clinical and Non-clinical Characteristics***

In cases where sample characteristics specific to APIs were not provided, a brief description for the overall samples are provided.

## **Gender**

Almost all studies provided information regarding gender participation and the majority of participants reported to be males (Jerrell, 1998, Leslie et al., 2000; Cumming & Druss, 2011). The percentage of participating males ranged from 24.5% (Cummings & Druss, 2011) to 66.0% (Garland et al., 2005). Yeh et al. (1994) did not provide any information on the percentage of participation by gender (Yeh et al., 1994). One study evaluated only female participants (Jerrell, 1998).

One study disaggregated gender participation by race/ethnicity (Bui & Takeuchi, 1992). When APIs were disaggregated based on gender, there were more reported male participants at a rate of 56.0% than female participants at a rate of 44.0%, which is consistent with overall findings for gender participation.

## **Age**

The age of study participants ranged from 0 (Leslie et al., 2000) to 18 years old (Akutsu et al., 2010; Yeh et al., 1994). It is important to point out that some studies provided ranges and mean age (Akutsu et al., 2010; Leslie et al., 2000), whereas Garland et al. (2005) only provided the mean age of participants.

Two studies disaggregated participants' age by race/ethnicity (Akutsu et al., 2010; Bui & Takeuchi, 1992). Bui and Takeuchi (1992) reported the average age of API's participants was similar to African American at 15.3 years old. This was slightly higher than Latinos and Caucasian at 15.2 years old. Moreover, when compared to Akutsu et al. (2010) who reported age of participants based on different racial/ethnic groups, there was a slight discrepancy in the mean age of API participants. The average age of participants in Akutsu et al. (2010) was 13.3 years with the majority of the participants between the

ages of 16 years to 18 years. However, findings showed similar trends across all two studies, namely that the majority of API youths who participated in these studies were adolescents.

### **Clinical Diagnosis/Symptomology**

Three studies provided information about participants' diagnosis (Bui & Takeuchi, 1992; Jerrell, 1998; Yeh et al., 1994) or presenting symptoms (Akutsu et al., 2010; Leslie et al., 2000). Two studies did not report rates of clinical diagnosis (Jerrell, 1998, Yeh et al., 1994). The most commonly reported diagnosis was Major Mood Disorder (e.g. Akutsu et al., 2010). Common presenting issues or symptoms included: behavioral, depression, family issues (Akutsu et al., 2010), and/or child maltreatment (Leslie et al., 2000).

One study disaggregated clinical diagnosis by race/ethnicity (Bui & Takeuchi, 1992). API youths were commonly diagnosed with: organic disorders, drug and alcohol problems, cognitive impairments, non-psychiatric disorders, or a diagnosis that was deferred.

### **Referral Source/Public Sector Involvement**

Four studies provided information about the types of public sector involvement of participants, which included: MH, SED, ADT, JJ and CW (Bui & Takeuchi, 1992; Garland et al., 2005; McCabe et al., 1999, Wood et al., 2005).

One study specifically examined public sector involvement among API participants (Garland et al., 2005). This was the only study that aggregated involvement rates of MH, SED, and ADT into one group and CW and JJ into another group. When

comparing between the two groupings, 65.4% of APIs participants were involved with ADT, MH, and SED compared to 34.6% for the latter (Garland et al., 2005).

### **Caregiver**

Two studies reported non-clinical characteristics on caregivers (Garland et al., 2005; Leslie et al., 2000). Information obtained about caregivers included: caregiver's income, caregiver's educational level, and caregiver's relationship to participant. The overall reported caregiver income and educational levels were already discussed in the SBS section. Two studies reported caregiver's relationship to participants, with one reporting the majority being biological parents (Garland et al., 2005). In Leslie et al.'s study (2000) approximately half of the caregivers were foster parents.

One study provided non-clinical characteristics on API caregivers (Garland et al., 2005). API families were commonly identified as having lower SES. The majority of APIs reported family income between \$13,001 and \$25,000 per year (Garland et al., 2005).

### ***Measures of Mental Health Service Need/Utilization***

There were no new reported standardized measures used to assess mental health utilization and need. As noted in the SBS section, mental health service need was based on symptomology and functioning level. Conversely, mental health service utilization was evaluated by examining dropout rates, number of visits or length of stay, and types of mental services used across different types of settings. As referenced in the SBS, the most common measure used to evaluate utilization was the SACA. Moreover, common measures used to evaluate mental health service needs included: DISC, CES-D, CGAS,

CIS, CBCL, and the Caregiver Strain Questionnaire that have already been described in the SBS section.

### *Key Findings*

Findings from these studies reported contradicting evidence regarding API youths' access and utilization of community-based mental health services (MHS). Eight studies reported findings pertaining to APIs' access and utilization of MHS (Akutsu et al., 2010; Bui & Takeuchi, 1992; Cumming & Druss, 2011; Garland et al., 2005; Jerrell, 1998; Leslie et al., 2000; Yeh et al., 1994; Yeh et al., 1994). Five studies reported a relationship between race/ethnicity and utilization of MHS (Akutsu et al., 2010; Cummings & Druss, 2011; Garland et al., 2005; Leslie et al., 2000; Yeh et al., 1994; Yeh et al., 1994), and two studies found no significant association between race/ethnicity and utilization of community-based MHS (Bui & Takeuchi, 1992; Jerrell, 1998). Bui and Takeuchi (1992) reported no significant findings for length of stay across African American, API, Latino, and Caucasian participants. However, when similar variables were controlled, APIs tended to stay longer in treatment compared to other racial groups. It was relatively consistent across reported studies that APIs were less likely to utilize services. However, when compared across different racial/ethnic groups, there was slight variation regarding utilization rates. For instance in one study, APIs were less likely to utilize MHS compared to Caucasians but utilized services that were comparable to Latinos (Cumming & Druss, 2011) and African Americans (Garland et al., 2005). Another study reported that APIs were less likely to utilize services compared to Latinos, African Americans, and Caucasians (Leslie et al., 2000).



Another interesting finding came from an examination of at ethnic-specific services. For example, APIs who obtained ethnic-specific studies reported an increase in utilization rates. Specifically, higher rates of MHS utilization occurred when therapist-client were ethnically matched (Akutsu et al., 2010; Yeh et al., 1994). Ethnic match between therapist and client often occurred in situations where the intake interviewer also became the assigned therapist (Akutsu et al., 2010). Other benefits came from APIs utilizing parallel services. Ethnic-specific services have been defined as a program that services more than 50.0% of individuals from a specific minority group (i.e. APIs) (Takeuchi, Sue, & Yeh., 1995). The benefits included youths receiving more urgent care treatment (Akutsu et al., 2010), receiving services at a younger age when compared to mainstream services (Yeh et al., 1994), having lower attrition rates (Yeh et al., 1994) and higher functioning scores at admission (Yeh et al., 1994) and discharge (Yeh et al., 1994) when compared to APIs using mainstream services. Nevertheless, it is important to highlight that parallel services may not be as effective for younger APIs as seen in the non-significant findings in Yeh et al. (1994). There were conflicting results pertaining to length of stay for APIs individuals who utilized parallel services. Bui and Takeuchi (1992) reported that there were no significant differences in treatment stay, while Jerrell (1998) reported the converse, which was that API youths stayed longer in parallel services. It is also important to note that one study found a reported difference in utilization rates when API participants were disaggregated by age (Yeh et al., 1994). There was an association between adolescent APIs, ethnic matching and mental health utilization, but not for API children.

## **API and Group Home/Residential Treatment Center (GH/RTC)**

Three studies were identified which evaluated APIs youths' access and utilization of Group Home/Residential Treatment Center.

### ***Setting, Data Source, and Design***

In two of three articles, group home/residential (GH/RTC) treatment was one of several treatment services examined (Garland et al., 2005; Pottick, Warner, & Yoder, 2005). The remaining study looked specifically at group home/residential treatment center (Lu et al., 2004). One article provided details about the treatment settings that evaluated group homes in San Diego County and Lu et al. (2004) obtained data from Foster Care Mental Health Project (FCMH) (Lu et al., 2004). The other study reported using national samples from the Center of MHS (Pottick et al., 2005). GH/RTC are considered a type of inpatient facility (Chavira et al., 2009) and defined as a facility that provides 24-hour care for individuals who are emotionally and/or behaviorally disturbed (Curtis et al., 2001; Garland et al., 2005). It is important to note that GH/RTC was aggregated with Inpatient Psychiatric Care (IPC) in one of the studies (Garland et al., 2005). One study used secondary analyses from the POC study (Garland et al., 2005). One study used a cross-sectional approach (Pottick et al., 2005), whereas two involved longitudinal methods (Garland et al., 2005; Lu et al., 2004).

A study that was introduced in this section discussed using referral logs from group homes to gather non-clinical (e.g. sociodemographic) and clinical (e.g. reason for referral) characteristics (Lu et al., 2004). Social Service Reporting Systems (SSRS) were used to obtain information about out-of-home placement and rates of mental health service utilization (e.g. cases were open to services) (Lu et al., 2004). Client/Patient

Sample Survey (CPSS) was used to obtain data regarding type of mental service utilized, participant's living situation, types of diagnosis and clinical and non-clinical data on participants and caregivers (Pottick et al., 2005).

### ***Participants***

The number of individuals who participated across these identified studies ranged from 1,256 (Garland et al., 2005) to 3,995 (Pottick et al., 2005). The percentage of API youths participation ranged from 5.6% (Lu et al., 2004) to 13.4% (Pottick et al., 2005). Several studies showed that API youths had the fewest participants when compared to Caucasians, African Americans, and Latinos (Garland et al., 2005; Lu et al., 2004). This is compared to similar rates of participation between Latinos and API in Pottick et al. (2005). One study also included "biracial" and "others" as two distinctive racial groups (Garland et al., 2005). Similar to the reports in MHS section, API youths were aggregated into one racial group. Lu et al. (2004) combined APIs with "other" which referred to individuals who identified themselves as Native Americans, Alaskans or anybody who did not identify themselves as API, African American, Caucasian, or Latino. Moreover, Pottick et al. (2005) combined Native Alaskans with APIs into one racial group.

### ***Other Clinical and Non-clinical Characteristics***

In cases where sample characteristics specific to APIs were not provided, a brief description for the overall samples are provided.

## **Gender**

Two studies reported that males made up two-thirds of the participants (Garland et al., 2005; Pottick et al., 2005). One study had approximately equal amount of male and female participants (Lu et al., 2004). None of the studies disaggregated gender by race or ethnicity.

## **Age**

Two studies reported the age range of participants, which was from 0 (Lu et al., 2004) to 17 years (Pottick et al., 2005). However, there was a range in the way age was reported. Pottick et al. (2005) reported age of participants based on developmental stages (Pottick et al., 2005), whereas Garland et al. (2005) only reported average age, which was 13.9 years (Garland et al., 2005). There was no study that provided age of participants by racial/ethnic groups.

## **Clinical Diagnosis/Symptomology**

Two of three study mentioned information on clinical diagnosis/symptomology (Lu et al., 2004; Pottick et al., 2005). Pottick et al. (2005) was the only study that provided information regarding clinical diagnosis/ symptomology. Neglect or abuse and Conduct Disorder were most commonly reported in the study. These studies did not disaggregate clinical diagnosis/symptomology by race/ethnicity.

Conversely, one study did not identify clinical diagnosis but instead mentioned participant's reason for referral, which included: sexual abuse, physical abuse, and neglect by caregiver, which was disaggregated by race/ethnicity (Lu et al., 2004). In this study, APIs were more likely to be referred for reported sexual abuse when compared to

other types of reported reasons. Moreover, API youths often reported their parents to Child Protective Services (CPS) due to cultural parent-child power struggles (Lu et al., 2004).

### **Referral Source/Public Sector Involvement**

One study discussed sources of referral for individuals who participated in the study. Details about these findings were mentioned in the community-based MHS section (Garland et al., 2005). None of the studies discussed referral sources based on racial/ethnic groups.

### **Caregiver**

Non-clinical characteristics were gathered for one out of the two studies (Garland et al., 2005). This study provided information about API caregivers' income and educational levels (Garland et al., 2005). Details about findings for Garland et al. (2005) were addressed in MHS section. Pottick et al. (2005) reported data regarding status of caregiver's relationship to participants, with most identifying themselves as biological parents.

### ***Measure of Mental Health Service Need/Utilization***

No standardized measures for mental health service utilization or need were used in the three studies.

### ***Key Findings***

Findings from these articles reported somewhat conflicting evidence about API youth's access and utilization of GH/RTC. Garland et al. (2005) and Pottick et al. (2005) found no significant differences between racial/ethnic groups' utilization of GH/RTC. This was in contrast to Lu and colleagues (2004) who reported that APIs had similar utilization rates to Caucasians and Latinos but not African Americans when assessing whether a case was opened, placed out of home, or not reunified with caregivers. Another interesting finding as reported by Lu et al. (2004), APIs and "other" participants between 11-17 years old had a higher rate of open cases when compared to Caucasians, African Americans, and Latinos.

### **API and Inpatient Psychiatric Care (IPC)**

Four studies were identified which examined APIs youths' access and utilization of Inpatient Psychiatric Care (IPC).

### ***Setting, Data Source, and Design***

In three out of the four articles, Inpatient Psychiatric Care (IPC) was only one of several treatments or services examined (Cummings & Druss, 2011; Garland et al., 2005; Jerrell, 1998). One study specifically evaluated IPC services (Chabra, Chavez, Harris, & Shah, 1999). A closer examination of these studies showed a slight variability in how IPC was classified. Interestingly, one out of the four studies grouped IPC with GH/RTC together, which was classified as a type of inpatient treatment (Garland et al., 2005). IPC is identified as hospital-like facilities that provide services for individuals with acute or chronic psychological issues (Olfson et al., 2005). Two studies were longitudinal

(Cummings & Druss, 2011; Garland et al., 2005); the other two were cross-sectional (Chabra et al., 1999; Jerrell, 1998). One study used a national sample (Cummings & Druss, 2011) and the remaining studies evaluated participants who came from treatment settings in California (Chabra et al., 1999; Garland et al., 2005; Jerrell 1998).

Only one study used secondary data from the POC study (Garland et al., 2005). One study reported using the California Office of Statewide Health Planning and Development, Health and Welfare Agency Data Center and California Office of Statewide Health Planning and Development to obtain hospital utilization rates (Chabra et al., 2009). Moreover, the same study reported that non-clinical characteristics and information regarding hospitalization need for adolescents based on gender and race were obtained from California Department of Finances. Lastly, Medical Care Statistic Section of the California Department of Health Services was also used to gather non-clinical information (Chabra et al., 1999).

### *Participants*

The number of individuals who participated ranged from 1,256 (Garland et al., 2005) to 27,595 (Chabra et al., 1999). Four out of five studies provided the percentage of participation for API youths, which ranged from 2.6% (Cummings & Druss, 2011) to 7.0% (Garland et al., 2005). All studies aggregated API youths into one racial/ethnic group (Chabra et al., 1999; Cummings & Druss, 2011; Garland et al., 2005; Jerrell, 1998). Interestingly, one group combined Asians and “others” into one racial group. “Others” was defined as individuals who identified as Alaskan, Native American, Eskimo, or individuals who did not identify themselves as African American, Caucasian or Latino (Chabra et al., 1999). One study included “other” groups as its own distinctive

racial group (Cummings & Druss, 2011). Two studies also included had African American, Caucasian, and Latino participants (Cummings & Druss, 2011; Garland et al., 2005). Jerrell (2011) was the only study that did not include African American in their study. Similar to other identified treatment sections, APIs had the fewest participants across studies when compared to African American, Caucasians, and Latinos.

### *Other Clinical and Non-clinical Characteristics*

In cases where sample characteristics specific to APIs were not provided, a brief description for the overall samples are provided.

#### **Gender**

Three out of four studies identified female and male participants in their studies (Chabra et al., 1999; Cummings & Druss, 2011; Garland et al., 2005). Females made up the majority in two studies (Cummings & Druss, 2011; Jerrell, 1998). In two studies, the majority of participants were male, ranging from 51.3% (Chabra et al., 1999) to 66.0% (Garland et al., 2005). Gender was not disaggregated by race/ethnicity for any of the studies.

#### **Age**

The age range of participants was from 12 years (Cummings & Druss, 2011) to 19 years (Chabra et al., 1999). One study provided the mean age of the participants, which was 13.7 years (Garland et al., 2005). None of the studies disaggregated age of participants by race/ethnicity.



### **Clinical Diagnosis/Symptomology**

Two studies provided general data of clinical diagnosis (Chabra et al., 1999; Jerrell, 1998). Findings from Jerrell (1998) were mentioned in MHS section. Types of clinical diagnosis were reported in Chabra et al. (2008) but the rates of types of diagnosis were not reported in the study.

### **Referral Source/Public Sector Involvement**

Two studies discussed referral sources of participants (Chabra et al., 1999; Garland et al., 2005). One study discussed public sector involvement by race/ethnicity (Garland et al., 2005). Details about Garland et al. (2005) findings were discussed in MHS section. Closer examination of Chabra et al. (1999) showed that participants in this study who utilized inpatient care were often referred from routine hospital visits.

### **Caregiver**

One study provided non-clinical characteristics information about caregivers, which were addressed in MHS section (Garland et al., 2005).

### ***Measures of Mental Health Service Use***

There were no new standardized measures introduced in the studies that evaluated IPC services.

### ***Key Findings***

Findings from these studies reported contradicting evidence regarding API youths' access and utilization of IPC. Two studies reported no significant association

between race/ethnicity and utilization of IPC (Cummings & Druss, 2011; Jerrell, 1998) while the remaining reported the converse (Chabra et al., 1999). Two studies reported that APIs were less likely to utilize IPC compared to Caucasian (Chabra et al., 1999; Garland et al., 2005).

### **API and 24-hour Crisis Care (CC)**

Five studies were identified which examined APIs youths' access and utilization of 24-hour Crisis Care (CC).

#### ***Setting, Data Source, and Design***

In two out of five articles, 24-hour CC was one of several treatments or services examined (Garland et al., 2005; Jerrell, 1998; Yeh et al., 2002). Two studies specifically evaluated 24-hour CC (Snowden, Masland, Fawley, & Wallace, 2009; Snowden, Masland, Libby, Wallace, & Fawley, 2008). Crisis care is defined as a service that attends to the immediate need or crisis of the client/patient. Crisis care services may occur in any type of MHS (e.g. Snowden et al., 2009). For the purpose of this study, non-specialty service is defined as a "catch all" for any services that did not meet criteria for specialty services (Chavira et al., 2009). The studies on 24-hour CC was examined in community mental health settings and/or hospital settings located in California (Jerrell, 1998; Snowden et al., 2009; Snowden et al., 2008; Yeh et al., 2002). Two studies used secondary analysis data with two studies using the POC study (Snowden et al., 2009; Yeh et al., 2002), whereas Snowden and colleague (2009) used data from Snowden et al. (2008) and Libby (2004) who originally examined utilization of MHS of children who have been placed in foster care. The majority of studies were longitudinal (Snowden et

al., 2009; Snowden et al., 2008; Yeh et al., 2002). However, a new data source was used to obtain important findings such as mental health service utilization outcome and needs of individuals suffering from various types of diagnoses. The data source discussed at hand was the California Department of Mental Health Medicaid Program (Snowden et al., 2009; Snowden et al., 2008).

### *Participants*

The number of individuals who participated varied greatly across studies and ranged from 1,256 (Garland et al., 2005) to 351,174 (Snowden et al., 2008). Four of the five studies provided rates of API participants (Garland et al., 2005; Snowden et al., 2009; Snowden et al., 2008; Yeh et al., 2002), which ranged from 3.1% (Yeh et al., 2002) to 7.0% (Garland et al., 2005). API youths were aggregated into one group across all studies. APIs had the fewest participants across studies (Garland et al., 2005; Snowden et al., 2009; Snowden et al., 2008; Yeh et al., 2002) when compared to African Americans, Caucasians, and Latinos. However, when “other” (Snowden et al., 2009) and Alaskan Indian were included, APIs did not have the fewest number of participation across studies.

### *Other Clinical and Non-clinical Characteristics*

In cases where sample characteristics specific to APIs were not provided, a brief description for the overall samples are provided.

#### **Gender**

The majority of studies had female and male participants. Male participation ranged from 0% (Jerrell, 1998) to 66.0% (Garland et al., 2005). However, there was

variability seen in rates of male to female participation. Jerrell (1998) had only female participants and Snowden et al. (2009) reported to have more female participants in foster care than not in foster care.

One study disaggregated gender participation by racial/ethnic groups. This study reported that 62.1% API males participated in the study when compared to Caucasian, African American, and Latino males (Snowden et al. 2008).

### **Age**

All studies provided the age of participants which ranged from 0 years (Snowden et al., 2009; Snowden et al., 2008) to 18 years (Snowden et al., 2009; Yeh et al., 2002). Several studies disaggregated age based on developmental stages (Snowden et al., 2009; Snowden et al., 2008; Yeh et al., 2002). Furthermore, Snowden et al. (2008) provided information regarding age of participants based on whether they were in foster care or not. Across studies, the majority of participants identified themselves as teenagers (Snowden et al., 2009; Snowden et al., 2008). This was supported by findings in Yeh et al. (2002) who reported that compared to other racial/ethnic groups, the majority of API participants who accessed 24-hour CC were older in age.

### **Clinical Diagnosis/Symptomology**

Four studies provided information pertaining to participant's clinical diagnosis (Jerrell, 1998; Snowden et al., 2009; Snowden et al., 2008; Yeh et al., 2002). Three studies reported clinical diagnosis but did not disaggregate the information by racial/ethnic groups (Jerrell, 1998; Snowden et al., 2009; Yeh et al., 2002). Snowden et al. (2009) referenced types of diagnosis but did not provide the rates of the diagnosis.

Findings from Jerrell (1998) and Yeh and colleague (2002) were discussed in previous sections.

One study disaggregated diagnosis by race/ethnicity (Snowden et al., 2008). However, there were no clear trends when looking at the types of diagnosis seen in API youths across studies. Snowden et al. (2008) reported that the most common clinical diagnosis for API youths were Major Depression (24.5%), Adjustment Disorder (15.3%), and Attention Deficit Hyperactive Disorder (13.0%).

### **Referral Sources/Public Sector Involvement**

One study discussed participants' referral sources. Details about findings have been discussed in the SBS section (Yeh et al., 2002).

### **Caregiver**

None of the studies reported non-clinical characteristics of caregivers.

### ***Measures of Mental Health Service Need/Utilization***

There were no new standardized measures introduced in articles that evaluated 24-hour CC. Standardized measures that were discussed have been mentioned in previous sections.

### ***Key Findings***

Findings from these studies reported contradicting evidence regarding youths' access and utilization of 24-hour CC. Four studies found no significant association between race/ethnicity and utilization of 24-hour CC (Garland et al., 2005; Jerrell, 1998;

Snowden et al., 2009; Yeh et al., 2002). One study found a significant relationship between youths' access and utilization of 24-hour CC (Snowden et al., 2008). First, API youths were more likely to utilize crisis stabilization and crisis intervention when compared to Caucasians. However, API youths who received 24-hour CC had fewer crisis visits than Caucasians who received 24-hour CC (Snowden et al., 2009). In the same study, foster care API youths who received crisis care services were less likely to have used prior mental health services compared to their Caucasians counterparts. However, across racial groups, there was no significant relationship between utilization of mental health services and different racial/ethnic groups for individuals who were in foster care (Snowden et al., 2009).

### **API and Non-Specific Mental Health Services**

Three studies were identified which evaluated APIs youths' access and utilization of Non-Specific Mental Health Services.

#### ***Setting, Data Source, and Design***

The articles identified in this section were studies that did not provide any specific description regarding the types of mental health service settings evaluated. Nevertheless, what was clear was that majority of the studies included treatment settings in California (Banta, James, Haviland, & Andersen, 2012; Javier, Lahiff, Ferrer, & Huffman, 2010; McCabe et al., 1999). Three studies used cross-sectional methodology (Banta et al., 2012; Javier et al., 2010; Lau, Lin, & Flore, 2012), whereas one study used longitudinal methodology (McCabe et al., 1999). Two studies obtained their data from California Health Interview Survey (CHIS), which is a national bi-annual survey (Banta et al., 2012;

Javier et al., 2010). Two studies used secondary analysis data from the National Survey of Children's Health, which is a random digital telephone survey (Lau et al., 2012) and the POC study (McCabe et al., 1999). The California Health Interview Survey (CHIS) was used in Banta et al. (2012) to obtain information regarding mental health visits, mental health needs based on caregiver's identification, and non-clinical characteristics for participants and caregivers. Conversely, Javier et al. (2010) used CHIS to gather non-clinical characteristics regarding participants and caregivers. The National Survey of Children's Health was used in Lau et al. (2012) to obtain information about mental health service utilization and need. For instance, participants were asked whether they received mental health services within the last year and several questions regarding reported symptomology.

### *Participants*

The number of participants ranged from 4,421 (Javier et al., 2010) to 48,742 (Lau et al., 2012). There were no specific trends that were evident across studies. The percentage of API youths in these studies ranged from 1.7% (Lau et al., 2012) to 11.3% (Banta et al., 2012). Two studies aggregated APIs youths into one racial/ethnic group (Banta et al., 2012; Lau et al., 2012). However, there was variability in the way API youths were aggregated. One study included Pacific Islanders with the "other" group (Banta et al., 2012), whereas Lau et al. (2012) combined Asians and Pacific Islander into one racial/ethnic group, which is more commonly seen. One study evaluated Filipinos and Caucasians (Javier et al., 2010), whereas another study disaggregated APIs into nine different ethnic groups and details about these sub-groups were discussed in a previous section (McCabe et al., 1999). In addition to evaluating APIs, African Americans,

Caucasians, and Latinos in the studies, other racial/ethnic groups were looked at which included “other” (Banta et al., 2012; McCabe et al., 1999), American Indian/Alaskan Native and Multiracial (Lau et al., 2012). Across studies, APIs had the lowest participation in studies when compared African Americans, Caucasians, and Latinos but not “other” group. Other information that was obtained from participants included two studies providing the rates of types of health insurance used by participants. One study reported that majority of participants had private insurance (Banta et al., 2012) and another study reporting that majority of Filipino had some type of insurance, even though they were less likely to be insured compared to Caucasians (Javier et al., 2010).

### *Other Clinical and Non-clinical Characteristics*

In cases where sample characteristics specific to APIs were not provided, a brief description for the overall samples are provided.

#### **Gender**

Three out of four studies provided information regarding gender participation, with males making up the majority of participants (Banta et al., 2012; Javier et al., 2010; Lau et al., 2012). Two studies disaggregated gender by race/ethnicity (Javier et al., 2010; Lau et al., 2012). Across both studies, API males had the highest percentage of participation compared to API females and other racial/ethnic males groups. For instance, Javier et al. (2010) reported that Filipino males made up 53.9% of participants when compared to Whites. This was comparable to the findings in Lau et al. (2012) who reported that 56.8% of API males participated in the study when compared White males or API females (Lau et al., 2012).



## **Age**

All studies provided information about age of participants (Banta et al., 2012; Javier et al., 2010; Lau et al., 2012; McCabe et al., 1999), which ranged from 0 to 18 years old (McCabe et al., 1999). Two studies disaggregated age by race/ethnicity (Javier et al., 2010; Lau et al., 2012).

Javier et al. (2010) evaluated Filipinos between the ages of 12 to 17 years, with the majority of the participants identified as being 14 years old. Findings were comparable to Banta et al. (2012) who reported that API participants were between 10 to 17 years old with the average age for API youths being 13.4 years old.

## **Clinical Diagnosis/Symptomology**

There was inconsistency in the reported rates of diagnosis for API youths. One study reported that API youths were less likely to be diagnosed with anxiety or depression when compared to Caucasians, Latinos, African Americans, American Indians/Alaskan Natives, or individuals who identified themselves as a multiracial. Another study showed that Filipinos were more likely to report depressive symptoms (Javier et al., 2010). What was also evident was that APIs were less likely to identify that they had emotional or behavior problems compared to Caucasians, African Americans, Latinos, and “other” groups (Banta et al., 2012; Lau et al., 2012).

## **Referral Source/Public Sector Involvement**

One study reported referral sources for mental health services (McCabe et al., 1999). Details about findings were mentioned in a previous section.

## Caregiver

Non-clinical characteristics for caregivers were obtained in three out of the four studies (Banta et al., 2012; Javier et al., 2010; Lau et al., 2012). Banta et al. (2012) aggregated data regarding marital status, parent's age, educational level, and income of caregivers. Two studies specifically disaggregated caregiver's information by different racial/ethnicity groups (Javier et al., 2010; Lau et al., 2012).

When comparing both studies, there were consistent findings seen in education level, income, and number of adults in household for API caregivers. APIs were more likely to report having more education compared to Caucasians, Latinos, African Americans, American Indians/Alaskan Americans, and multiracial (Lau et al., 2012). Similar findings were evident in Javier et al. (2012) who reported that Filipinos were more likely to report having a higher education when compared to Whites.

Another area of interest was API caregivers' income level, which reported some variability. Javier et al. (2010) reported that approximately 50.0% of API caregivers' identified as having income either less than 300% below poverty threshold. This was in contrast to Caucasian caregivers who reported that the majority had greater than or equal to 300% below poverty threshold. Conversely, Lau et al. (2012) who reported that the majority of API caregivers identified as being greater than or equal to 400% below federal poverty threshold when compared to other racial/ethnic groups in the study.

Another interesting finding was reported regarding household size, employment status, and language. Two studies reported that API identified commonly having two adults within a household compared to other minority groups who reported having one parent living in the house (Javier et al., 2010; Lau et al., 2012). Another study reported

that Filipino caregivers often identified themselves as immigrants and higher percentage of employment when compared to Whites (Javier et al., 2012). In Lau et al. (2012), API caregivers reported that 39.2% did not speak English as their primary language that was second to Latino.

### ***Measures of Mental Health Service Need/Utilization***

One new measure was introduced in a study that evaluated non-specific treatment settings. Javier and colleague (2010) reported using the CES-D8, an eight-item version of CES-D to measure mental health service utilization and symptomology.

### ***Key Findings***

Findings from these studies reported contradicting evidence regarding API youths' access and utilization of non-specific services. One study found no significant association between race/ethnicity and utilization of non-specific MHS. Specifically, Javier et al. (2010) found no difference between Filipino and NHW usage of counseling services. Two studies reported a relationship between race/ethnicity and utilization of non-specific MHS. Specifically, APIs were less likely to utilize non-specific MHS with variability seen in rates of utilization when compared to other racial/ethnic groups. For example, Lau et al. (2012) reported that APIs and African Americans were less likely to receive MHS compared to Caucasians. Banta et al. (2012) reported that API had the fewest MH visits compared to Caucasians, Latinos, and African Americans. This was consistent with findings from McCabe et al. (1999) who reported that APIs were underrepresented in MH sectors compared to African Americans, Caucasians, and Latinos.

It is also evident from the findings that parental perception of child's needs influenced whether mental health services were obtained. For example, API's parents were more likely to predict severity of symptoms but less likely to actually observe severity of symptoms (Banta et al., 2012). Secondly, Filipino males with family income of less than or equal to 300% federal poverty levels, parent having more than a college degree were significantly more likely to report using counseling than their Caucasian counterparts. However, Filipino females with family income of less than 300% below the federal poverty levels and parents with less than a college degree were significantly less likely to report using counseling than their Caucasian counterparts.

### **API and Non-specialty Services**

One study was identified which evaluated APIs youth's access and utilization of non-specialty services.

### ***Setting, Data Source, and Design***

In Garland et al. (2005), non-specialty services were included in the investigation of specialty services. Neither study provided a detailed description about the facility except that they were located in San Diego, California. There was slight variability in the way non-specialty services were defined and labeled across studies. The study defined non-specialty services as informal services such as peer counseling or participation in self-help groups, or services with a culturally specific professionals (Garland et al., 2005). This was in contrast to a study that was not included in this literature review that identified non-specialty services as visits to medical professionals, or with an in-home counselor (Chavira et al. (2009).

### ***Participants***

There were 1,255 (Garland et al., 2005) participants identified in Garland et al. (2005). The percentage of participating API youths was 7.0% (Garland et al., 2005). The study aggregated APIs into one racial/ethnic group. In addition to API youths, there were Caucasians, African Americans, and Latinos participants (Garland et al., 2005). When compared to other racial/ethnic groups, APIs had the fewest participants across studies.

### ***Other clinical and Non-clinical Characteristics***

In cases where sample characteristics specific to APIs were not provided, a brief description for the overall samples are provided.

#### **Gender**

Two-thirds of the participants reported being male (Garland et al., 2005). The study was not disaggregated race/ethnicity when evaluating gender of participants.

#### **Age**

The mean age of participants was only provided was reported to be 13.7 years old. The study was not disaggregated age by race/ethnicity.

#### **Clinical Diagnosis/Symptomology**

No data was gathered on clinical diagnosis/symptomology in Garland et al. (2005).

#### **Referral Source/Public Sector Involvement**

Garland et al. (2005) reported overall participants' involvement with public sectors (Garland et al., 2005). Study reported percentage of API youths' involvement in

different public sectors such as MH, SED, JJ, and CW. Findings were aggregated between MHS and SED compared to JJ and CC with the majority accessing treatment service (Garland et al. (2005).

### **Caregiver**

Non-clinical characteristics were obtained regarding caregivers' relationships to participants. The study reported that the majority of caregivers identified themselves as biological parents (Garland et al., 2005). Moreover, API caregivers' income and education level (Garland et al., 2005). Details about the findings were mentioned in MHS sections.

### ***Measures of Mental Health Service Need/Utilization***

Similar to the other studies that have been evaluated, Garland et al. (2005) used the SACA to evaluate utilization of mental health need of youth. The DISC-IV was used to evaluate psychiatric diagnosis. The youth functioning level was assessed by the C-GAS and CIS. CIS also looked at parents' observation of youth's function level. Further data was obtained by using the Caregiver Strain Questionnaire and the CES-D8 to gather information about parents' perception of caring for a child with behavioral problems and their depression level, respectfully.

### ***Key Findings***

There was no reported association between racial/ethnic groups and non-specialty services.

## **API and Mixed Treatment Services**

Eleven studies were identified which evaluated APIs youths' access and utilization of mixed-treatment services.

### ***Setting, Data Source, and Design***

The majority of the studies mentioned in this section have been discussed in previous section. Nevertheless, there are also three studies that will be introduced in this section (Ho et al., 2007; Richardson, DiGiuseppe, Garrison, & Christakis, 2003; Yeh, McCabe, Hough, Duprise, & Hazen, 2003). For the purpose of this review, all articles were considered to fall into the mixed-treatment services category if they evaluated two or more specialty and/or non-specialty treatment settings. Specialty services included: SBS, outpatient community services, group/residential treatment service, inpatient hospital services, and 24hr CC. All studies used cross-sectional or longitudinal methods, with the majority of the studies using secondary from POC study and/or evaluating treatment settings in California (Garland et al., 2005; Gudino et al., 2008; Gudino et al., 2009; Ho et al., 2007; McCabe et al., 1999; Wood et al., 2005; Yeh et al., 2002; Yeh et al., 2003; Yeh et al, 2005). Other data sources were also used to obtain information about rates of mental health utilization, need, and non-clinical characteristics. The Washington State Medical Claims Data source was used in another study to obtain data on mental health utilization based on number of visits (Richardson et al., 2003). Richardson et al. (2003) also used Rural Urban Commuting Area coding system for Washington and other government data sources to obtain non-clinical characteristics.

### *Participants*

The number of individuals who participated varied significantly and ranged from 457 (Gudino et al., 2008) to 18,846 (Cummings et al., 2010). Three noticeable trends were evident regarding inclusion/exclusion criteria across studies. For instance, all participants had to provide information regarding key variables (Gudino et al., 2009; Gudino et al., 2008; Ho et al., 2007; Yeh et al., 2005). Secondly, individuals who were considered for the study needed to have received treatment within the first year of when data was collected (Cummings & Druss, 2011; Cummings et al., 2010; Garland et al., 2005; Ho et al., 2007; Yeh et al., 2002). Lastly, some studies excluded participants who did not meet criteria for one out four commonly identified racial/ethnic group which were African American, Latino, API, and Caucasian (Wood et al., 2005; Yeh et al., 2002).

The rates of participation for APIs ranged from 2.6% (Cummings & Druss, 2011) to 19.6% (Gudino et al., 2009). In all but two studies, API youths were aggregated into one racial group (Ho et al., 2007; Wood et al., 2005). One study combined APIs with Native Alaskans (Pottick et al., 2005). Two studies disaggregated API participants into several racial/ethnic groups, which included: Vietnamese, Laotian, Cambodians, Chinese, Korean, Indian, Japanese, Samoan, Pacific Islander, and Filipino (Ho et al., 2007; Wood et al., 2005).

Individuals of Vietnamese, Filipinos, and Cambodians culture were most represented across studies. However, there was also some variability seen in the percentage of participation. When comparing across studies, 4.1% (Ho et al., 2007) versus 13.0% (Wood et al., 2005) were Vietnamese, 31.0% (Wood et al., 2005) versus 38.1% (Ho et al., 2007) were Filipino, 16.5% (Ho et al., 2007) versus 20.0% were



Cambodian (Wood et al., 2005). However, it is important to highlight that there were other API ethnic groups that participated in the studies but were not specifically identified (Ho et al., 2007). In addition to evaluating APIs, almost all studies had Caucasians, African Americans, and Latinos participation. However, it is important to point out that Gudino et al. (2008) study included only Latinos and APIs. Three studies also included an “other” category for individuals who did not identify themselves as Caucasian, African American, API, or Latino (Cummings & Druss, 2011; Cummings et al., 2010; Richardson et al., 2003). Lastly, one study reported information about birthplace of participants. The majority of API participants reported that they were born in the U.S., which was consistent with other racial/ethnic groups identified in the study (Ho et al., 2010).

Three studies provided data regarding the types of insurance coverage for participants (Cummings et al., 2010; Pottick et al., 2005; Richards et al., 2003). There were no studies that disaggregated insurance information by race/ethnicity. There was slight variability seen in the reported types of insurance utilized across studies, which ranged from most participants (Pottick et al., 2005) to all participants receiving Medicaid (Richard et al., 2003). However, most of the participants in Cummings et al. (2010) reported having private insurance.

### ***Other Clinical and Non-clinical Characteristics***

In cases where sample characteristics specific to APIs were not provided, a brief description for the overall samples are provided.

## **Gender**

The majority of studies had more male than female participants. The range of male participation was 50.8% (Cummings et al., 2010) to 69.9% (Gudino et al., 2009). One study reported an approximately similar percentage of female and male participation (Cummings et al., 2010). Two studies did not provide rates of participation by gender (McCabe et al., 1999; Richardson et al., 2003). Two studies reported significantly more female than male participants (Cummings & Druss, 2011; Yeh et al., 2003).

There was one study that disaggregated gender by race/ethnicity (Ho et al., 2007). API youths had higher percentage of participation when compared against other racial/ethnic groups. The majority (73.2%) of API participants were males (Ho et al., 2007).

## **Age**

With the exception of Cummings et al. (2010) who reported grades of participants, all of the studies provided data regarding age of participation. There was variability seen in the way age was reported across studies. Studies reported range and/or mean age of participants (e.g. Ho et al., 2007; Yeh et al., 2003; Yeh et al., 2005). When the age of participants was provided, the reported range was from 1(Yeh et al., 2002) to 18 years old (e.g. Gudino et al., 2008; Gudino et al., 2009; Yeh et al., 2002). Eight studies reported the mean age of participants, which ranged from 13.9 years (Wood et al., 2005) to 15.6 years (Gudino et al., 2008). It was evident that across studies, the majority of participants were teenagers. None of the studies disaggregated age by race/ethnicity.

### **Clinical Diagnosis/Symptomology**

Two studies reported the clinical diagnosis of participants (Cummings et al., 2010; Yeh et al., 2002). Cumming et al. (2010) only reported symptomology with no specific rates, whereas Yeh et al. (2002) reported the most commonly clinical diagnosis in their study was Major Mood Disorder and Attention Deficient-Hypoactive Disorder. None of the studies disaggregated clinical diagnosis or symptomology by race/ethnicity.

### **Referral Sources/Public Sector Involvement**

Seven studies provided data regarding participants' involvement with public sectors and/or types of referral services with the majority of participants reporting existing involvement with mental health (Garland et al., 2005; Gudino et al. 2009; Ho et al., 2007; Wood et al., 2005; Yeh et al., 2002; Yeh et al., 2003; Yeh et al., 2005). This was compared to Yeh et al. (2002) who reported that the majority of their participants were referred from child welfare.

One study looked specifically at public sector involvement of different racial/ethnic group. When evaluating API participation, there was less involvement with CW and JJ compared to ADT, MH, and SED (Garland et al., 2005). However, when compared against Latinos, African Americans, and Caucasians, APIs had the second highest percentage involvement in ADT, MHS, and SED, which was just less than Whites and second to Whites when looking at CW and JJ.

### **Caregiver**

Non-clinical characteristics were gathered for caregivers in nine studies (Cummings et al., 2010; Garland et al., 2005; Gudino et al., 2008; Gudino et al., 2009;

Ho et al., 2007; Richardson et al., 2003; Wood et al., 2005; Yeh et al., 2003; Yeh et al., 2005) with four studies providing information on API caregivers (Garland et al., 2005; Gudino et al., 2008; Gudino et al., 2009; Ho et al., 2007). Common non-clinical information that was gathered included: caregiver's income, educational level, caregiver's relationship to participant, and immigration status.

Seven studies provided data regarding parental income (Cummings et al., 2010; Garland et al., 2005; Gudino et al., 2010; Ho et al., 2007; Wood et al., 2005; Yeh et al., 2003; Yeh et al., 2005) with two studies disaggregating income data by race/ethnicity (Garland et al., 2005; Gudino et al., 2009). Across studies, overall family income ranged from <\$13,000 (Garland et al., 2005) to \$60,000 (Cummings et al., 2010). However, the majority of caregivers' reported having incomes level from \$19,000 (Yeh et al., 2003) to \$29,000 (Ho et al., 2007). It was apparent across both studies that API caregivers' income was similar to African Americans, but less than Caucasians and more than Latinos (Garland et al., 2005; Gudino et al., 2008).

Six studies evaluated caregivers' education level (Cummings et al., 2010; Garland et al., 2005; Ho et al., 2007; Wood et al., 2005; Yeh et al., 2003; Yeh et al., 2005) and two studies disaggregated caregivers' education based on racial and ethnic groups (Garland et al., 2005; Ho et al., 2007). One noticeable trend that was evident across education level was that many caregivers reported to have some high school education (Cummings et al., 2010; Ho et al., 2007; Wood et al., 2005; Yeh et al., 2003; Yeh et al., 2005).

Two studies reported findings for API caregiver's education level (Ho et al., 2007; Garland et al., 2005). When comparing both studies, there were different reported

rates of education level for API caregivers. It was reported in Ho et al. (2007) that 27.8% had higher than a high school degree and 74.2% reported having lower than a high school degree. This is compared to Garland et al. (2005) that reported that 22.7% of API reported having any type of education.

Five studies reported information regarding the relationship of the caregiver to the youth (Garland et al., 2005; Ho et al., 2007; Wood et al., 2005; Yeh et al., 2003; Yeh et al., 2005). The majority of caregivers identified themselves as biological parents, which ranged from 70.0% (Wood et al., 2005) to 76.1% (Yeh et al., 2005). The remaining caregivers identified themselves as foster parents, stepparents, adoptive parents, professional care (Garland et al., 2005), other non-relative care (Ho et al., 2007; Yeh et al., 2003), or blood relatives (Yeh et al., 2003; Yeh et al., 2005). None of the studies disaggregated their findings based on different racial/ethnic groups.

One study provided data pertaining to caregiver's gender by racial/ethnic groups (Ho et al., 2007). Across racial groups, African Americans, APIs, Latinos, and Caucasians, the majority of caregivers identified themselves as females. When compared across male caregivers, the majority of male caregivers were APIs. Three studies discussed caregiver's birthplace (Gudino et al., 2008; Ho et al., 2007) and both studies disaggregated data by race/ethnicity (Gudino et al., 2008; Ho et al., 2007). Across studies there were differences seen in reported status of caregivers' birthplace. Ho et al. (2007) reported that the majority of API caregivers identified that they were born in the U.S. However, in Gudino et al. (2008) the majority of API caregivers identified themselves as immigrants. Moreover, reported that 30.4% of caregivers came from the Philippines,

36.3% came from Southeast Asian countries, and the remaining came from other Asian countries.

### ***Measures of Mental Health Service Need/Utilization***

One new measure was introduced in articles that evaluated mixed-treatment settings. The PAN Acculturation Scale was used to measure participants' and caregivers' acculturation level as a potentially mediating or moderating factor to youths' utilization of mental health service (Ho et al., 2007; Yeh et al., 2003). The SACA was commonly used to measure mental health service utilization. Other commonly used standardized measures to evaluate mental health need included: CBCL, YSR, DISC-IV, C-GAS, CIS, CES-D, and Belief about the Cause of Child Problems-Parent Version.

### ***Key Findings***

Findings from these studies reported slightly contradicting evidence regarding API youths' access and utilization of mixed treatment MHS. One study found no significant association between race/ethnicity and utilization of MHS in a mixed treatment setting (Richards et al., 2003).

Conversely, the remaining studies identified a relationship between race/ethnicity and utilization of MHS in studies that reported mixed treatment settings (Cummings & Druss, 2011; Cummings et al., 2010; Garland et al., 2005; Gudino et al., 2008; Gudino et al., 2009; Ho et al., 2007; Wood et al., 2005; Yeh et al., 2002; Yeh et al., 2003; Yeh et al., 2005). In general, APIs were less likely to report utilization of MHS when compared to Whites even when variables were controlled (Cummings & Druss, 2011; Garland et al., 2005; Gudino et al., 2008), evaluated by symptomology (Cummings et al., 2010; Gudino

et al., 2008) or utilization of follow-up services (Ho et al., 2007; Yeh et al., 2005). One study reported that APIs were less likely to utilize MHS when compared to Latinos (Gudino et al., 2008). It is important to note that this study only evaluated APIs and Latinos.

These studies also provided valuable information about mediating and moderating factors. Interestingly, in studies that examined mixed-treatment settings, expression of symptomology did not necessarily influence whether API received MHS when compared to Caucasians. For example, there were no statistically significant findings between APIs who utilized clinical counseling and a higher degree of delinquent behaviors (Cummings et al., 2010).

There were interesting findings about parental perception of barriers and cultural identity influencing API youth's access and utilization of MHS. API parents were less likely to perceive barriers to mental health services compared to Whites even though they were less likely to access services (Yeh et al., 2003). This could partially be explained by cultural influences that impact perceived barriers that are faced to access and utilize mental health services for API youths. Two studies reported that there was a relationship between API caregiver's cultural identity and youths' rates of utilization of mental health services. Specifically, two studies reported that API caregivers were more likely to identify with their culture of origin when compared to alternative culture (e.g. American culture) which influenced and decreased youths' ability to access mental health services at the 2-year follow-up (Ho et al., 2007; Yeh et al., 2005). These findings were consistent with Yeh et al. (2003) who reported that API caregivers were less likely than Caucasian

caregivers to raise concerns about MHS delivery and were more likely to raise concerns regarding language barriers.



## CHAPTER 5

### SUMMARY AND CONCLUSION

#### **Overall Utilization Rates of Mental Health Services for API youths**

When looking at all evaluated studies, the majority of the studies found an association between API youths and mental health services. Specifically, many of the studies reported API youths using lower rates of services when compared to Caucasians. Regarding SBS, three studies reported lower rates of utilization for API youths (Cummings & Druss, 2011; McCabe et al., 1999; Yeh et al., 2004). Three studies also reported lower rates of MHS utilization for API youths (Garland et al., 2005; Leslie et al., 2000; Yeh et al., 2003). However for GH/RTC, only one study reported lower rates of utilization by API youths (Lu et al., 2004). There were no findings regarding 24hr CC care or non-specialty services, however two studies showed that API youths utilized IPC at a lower rate (Chabra et al., 1999; Garland et al., 2005). As for non-specific services utilization, three studies identified lower rates for API youths (Banta et al., 2012; Lau et al., 2012; McCabe et al., 1999). Lastly, three studies looked at mixed treatment settings and reported lower utilization rates for API youths (Cummings & Druss, 2011; Garland et al., 2005; Gudino et al., 2008).

Conversely, there were only a few studies that identified higher rates of mental health service utilization when compared to Caucasians. For instance, three studies reported API youths had higher utilization rates of SBS (Amaral et al., 2011), MHS (Akutsu et al., 2010; Yeh et al., 1994). At the same time, there were also studies that reported no association between API youths and utilization of mental health services. This was seen for SBS in Cummings et al. (2010) and Gudino et al. (2008). One study

showed no relationship between API youths and MHS (Jerrell, 1998). Moreover, Garland et al. (2005) and Pottick et al. (2005) showed no relationship between API youths and GH/RTC. Furthermore, there were also two identified studies that showed a relationship for IPC and API youths (Cummings and Druss, 2011; Jerrell, 1998). Not to mention, four studies reported no relationship for 24hr CC (Garland et al., 2005; Jerrell, 1998; Snowden et al., 2008; Yeh et al., 2002). Lastly, there were also studies that reported no relationship between API youths and utilization of non-specialty services (Garland et al., 2005), non-specific services (Javier et al., 2010), and studies examining mixed treatments (Gudino et al., 2009; Richard et al., 2003).

## **Discussion**

Disparities in mental health care affect many minorities. To reduce existing disparities a number of studies have attempted to examine discrepancies between needs, access and utilization of mental health services of minority youth. As of now, most of these efforts appear to be focused on Latino and African American youth, with relatively less literature written on API youth. To the best of our knowledge, there are no existing structured literature reviews examining the research on API youths' accesses and utilization of mental health services. Therefore, the purpose of this structured literature review was to summarize findings from existing studies on API youths' current utilization of mental health services. The review process yielded 28 studies that fit a priori inclusion/exclusion criteria. The paper conceptually organized mental health services in terms of level of restrictiveness and included a review of methods used across studies. Findings from this review provide important information to support existing

understanding of API youths' mental health needs and service use and underscore the need for more work in this area.

### *Conceptualizing and Operationalizing API*

Results indicated similarity and variability in the way API was conceptualized and operationalized across studies. It may not be surprising that only three studies focused solely on API youths and did not include Latino and African American youths in their sampled population (Akutsu et al., 2010; Javier et al., 2010; Yeh et al., 1994). Furthermore, there were only five studies that disaggregated API youths into different ethnic subgroups (Akutsu et al., 2010; Ho et al., 2007; McCabe et al., 1999; Wood et al., 2005; Yeh et al., 1994). There is a stark contrast between the different API ethnic groups represented across these studies and the total number of API ethnic groups identified in the general population. Ten API ethnic subgroups were identified in this literature review, which included: Filipino, Pacific Islander, Vietnamese, Laotian, Cambodian, Chinese, Korean, Indian, Samoan, and Japanese. This is compared to national reports that identify 43 API ethnic groups (Lin & Cheung, 1998; USCB, 2004). Furthermore, there were differences noted in languages represented across studies, which include: Chinese, Vietnamese, Cambodian, Laos, and Tagalog. This is compared to the over 100 API-identified languages spoken nationally (Lin & Cheung, 1999; USCB, 2004).

The methodological impact that aggregation of key variables had on the findings across many of the studies is significant. In most studies, API youths were aggregated into one group, which is generally the agreed upon classification of this racial/ethnic group and also consistent with U.S. census classification (USCS-Race, 2012). Interestingly, there were subtle variations in the way APIs were labeled. For instance,

APIs were classified as Asian American-Pacific Islanders (e.g. Cummings et al., 2010), Asian-American (e.g. Amaral et al., 2011), and Asian (e.g. Cummings & Druss, 2011). Not acknowledging slight variations in nominal definitions may reinforce some of the misidentification issues that inhibit APIs from accessing and utilizing services (Sue & Dhindsa, 2006; Leong & Lau, 2001; Yu, Huang, & Singh, 2010). Four studies aggregated Asians into a racial/ethnic group of “other,” which included various ethnic groups that were not similar to APIs in any significant way such as Native Americans and Alaskans (Chabra et al., 1999; Leslie et al., 2000; Lu et al., 2004; Pottick et al., 2005). Only one study disaggregated Asians and Pacific Islanders into two distinctive groups (Banta et al., 2012).

The subtle variability seen in how APIs were labeled may partly reflect changing societal views of APIs. Historically, from the 1890’s to 1920’s the U.S. Census Bureau only acknowledged Chinese and Japanese. The categories for API ethnic groups further expanded from the 1930’s to 1980’s, which then included individuals from Southeast Asia, South Asia, and the Pacific Islands. However, not until the 1990’s were APIs aggregated into one racial group that included individuals who identified themselves as East Asians, South Asians, Southeast Asians, and Pacific Islanders (e.g., Filipinos, Hawaiian Natives, Samoans, and Guamanians) (Lee, 1993). Aggregating APIs into one racial/ethnic group unfortunately obscures many potentially important within-group differences (e.g., regional differences level of acculturation) (Spencer, Chen, Gee Fabian, & Takeuch, 2010), which could inform the development of more targeted practice and policy guideline and aimed at improving mental health services. Furthermore, aggregation leads to potential misrepresentation of different racial/ethnic groups (Choi &

Lahey, 2006). More specifically, perpetuating the stereotype that APIs are the model minority and obscuring the true needs that API youths have for mental health services. It is important to acknowledge that if APIs were disaggregated, it may create a more complex picture, which may often be beyond the scope of a particular study.

### *Mental Health Service Utilization and API Youth*

#### **Mental Health Settings**

It was evident from this literature review that API youths are accessing an array of mental health services of varying degrees of restrictiveness. Mental health services that API youth are utilizing include: school-based mental health services, outpatient-based mental health services, group home/residential treatment center, inpatient psychiatric care, 24-hour CC, and non-specialty services, which includes: peer counseling, self-help groups, culturally specific services (Garland et al., 2005), and a range of non-specialty mental health services (Chavira et al., 2009).

School-based services and community-based MHS were the most studied treatment types. It may be influenced by the increased emphasis on community-based services and the overall focus on minimizing restrictive care. There are an increasing number of specialized types of community mental health services catering to the API, which makes these types of services of particular interest to researchers and clinicians.

Overall, there were few studies that examined API youths in restrictive settings (group homes, residential treatment and inpatient psychiatric care). This may reflect a decreased lack of interest in out-of-home restrictive care (in favor of more community-based settings). However, it may also indicate that fewer APIs may be represented in these settings, perhaps reflecting the notion that due to cultural factors service

interventions may not be sought until symptomology is very severe. It may also mean that not a sufficient number of APIs are in these settings to permit separate analyses.

There is very little systematic knowledge about APIs in these settings.

A closer examination of the studies in this literature review showed that many of the identified articles evaluated multiple treatment settings in one study. This necessitated the adding of a special category of ‘mixed-treatment settings.’ This makes it difficult to understand what types of services may be more or less utilized by API youth.

### **Mental Health Service Utilization**

Only one study looked solely at API youths (Akutsu et al., 2010), reflecting the gap of knowledge in this area. One study reported that API youth’s had the highest percentage of representation in a study that evaluated school-based services settings (Amaral et al., 2011). This is not usually the common trend when comparing against Caucasian. However, the study was conducted in a school located in a county with a large API youth population.

In all but one study, API youths were the least likely to utilize mental health services when compared to Caucasians (Amaral et al., 2011). However, this was not necessarily the finding when API youths were compared to other minority groups, specifically Latino youths. Six studies showed similar utilization rates between API and Latino youths (Cummings & Druss, 2011; Gudino et al., 2008; Snowden et al., 2009; Chabra et al., 1999; Ho et al., 2007; Yeh et al., 2005). Supporting research shows that APIs and Latinos hold similar values and explanatory models of mental health (Toyokawa & Toyokawa, 2013). There are many barriers that face APIs that also affect Latinos utilization of mental health services (i.e. acculturation level) (Alegria et al.,

2007). There are indications that API youths are utilizing less mental health services and delaying mental health services utilization until symptoms are severe and un-manageable.

### *Mental Health Services Use and Explanatory Models*

API youths live in a complex network of systems, which influences how they access and utilize mental health services. In order to identify and remove barriers to mental health service for API youths, it is important to understand factors that may be influencing APIs help-seeking behaviors (Yeh et al., 2004). A number of clinical and non-clinical characteristics may possibly act as mediating and moderating factors that can impact mental health service access and utilization for API youths. Some of these factors are reviewed and summarized in the next section. Many studies in the area of mental health service use research used Andersen's Behavioral Model of Access to Health Care (Andersen, 1995) as a conceptual framework to examine factors influencing mental health utilization. Two of the studies in this review explicitly reported using this model as a framework (Banta et al., 2012; Jerrell, 1998). Many of the studies remain pretty descriptive and don't refer to a theory. In the next section, findings regarding common explanatory factors for mental health service use among API youth are summarized.

### **Gender**

There was a slight discrepancy noted when looking at rates of utilization of mental health for API youths by gender when compared to other racial/ethnic groups. Findings from these articles showed that API youth reported slightly more even rates between genders (Akutsu et al., 2010; Bui & Takeuchi, 1992; Javier et al., 2010) compared to more male participation in mental health services in other racial/ethnic

groups (Ho et al., 2007; Snowden et al., 2008; Yeh et al., 2002; Yeh et al., 1994). Generally, when compared to overall youth utilization rates of mental health services, male youths receive more mental health support (Power, Eiraldi, Clark, Mazzuca, & Krain, 2005). At the same time, national reports also show that an increasing number of female youth are accessing mental health services (SAMHSA, 2008). The discrepancy may partially be explained by presenting symptomology. Males tend to report more externalizing issues, which may be easier to identify and are more disruptive. With that said, it is important to be mindful that only a handful of studies disaggregated gender by race/ethnicity. When looking at the gender distribution of API youths based on gender, it was often eventually distributed. APIs were often oversampled due to the lack of participation in the studies in this literature review compared to other racial/ethnic groups. Therefore findings may be a skewed reflection of the limitations in sampling.

### **Age**

API youths' who access mental health services were older when compared to Caucasian youths. At the same time, API youths who receive ethnic-specific services are younger in age than individuals who receive mainstream services (Akutsu et al., 2010). This may indicate that ethnic-specific services are more effective in providing services to their target ethnic groups or that minorities are more open to accessing services when they are provided within their own communities. At the same time, the finding that mental health service utilization is highest during older ages is perhaps disconcerting but not unusual when compared to the general mental health service use literature. Adolescents tend to have higher utilization rates than children, most likely because their problems or symptoms have become more disruptive and may be less manageable by



parents and schools (Karaoka et al., 2002). The older age of API youths may support the hypothesis that this group tends to delay services until symptoms are externalized or more severe.

### **Clinical Diagnosis/Symptomology**

A total of 11 studies reported information about diagnosis or symptomology (Akutsu et al., 2010; Bui & Takeuchi, 1992; Chabra et al., 1999; Cummings et al., 2010; Jerrell, 1998; Leslie et al., 2000; Pottick et al., 2005; Snowden et al., 2009; Snowden et al., 2008; Yeh et al., 1994; Yeh et al., 2002). From these studies, four studies disaggregated diagnosis or symptomology by race/ethnicity (Akutsu et al., 2010; Banta et al., 2012; Lau et al., 2012; Snowden et al., 2008). Findings indicated that API youths may commonly experience mood disorders, disruptive behavior disorders, adjustment disorders as well as anxiety disorders, which is consistent with another study (Merikangas et al., 2010). A closer examination of API youth's utilization of mental health may show that there may be a relationship between types of symptoms presented with API youths and utilization of mental health services. For instance, API youths who demonstrate externalizing or behavioral issues were more likely to utilize mental health services than API youths who demonstrated internalizing issues or mood disorders (Gudino et al., 2009). Interestingly, there were not much discussion in this literature review regarding API youths and Attention-Deficit/Hyperactive Disorder, which is one of the most common disorders seen in youths (Merikangas et al., 2010).

## **Gatekeepers**

Another important area to consider is the interaction between culture and gatekeepers. Gatekeepers such as parents or other community members may act as mediating or moderating factors for API youths' access to and utilization of mental health services. The importance of gatekeepers is based in part on the distress threshold hypothesis, which claims that culture influences adults' distress threshold levels over children's problems and influences how they appraise the severity of the problem and respond to it (Weisz et al., 1988; Weisz et al., 1993).

It is undeniable how gatekeepers within the family, school, and community settings can impact API youths' ability to access and utilize mental health services. On one hand, gatekeepers can act as advocates for the youth, but at the same time can be barriers to receiving mental health services. (Cauce et al., 2002).

## **Caregivers**

It could be argued that caregivers are the most important gatekeepers (Gudino et al, 2008; Gudino et al., 2009; Lau & Takeuchi, 2001). Parental cultural values, views on mental illness, and stigma associated with mental illness are factors that have been shown to influence whether and how API youths receive services (Cauce et al., 2002; Lau & Takeuchi, 2001; Lee et al., 2009). Non-clinical characteristics of API's caregivers such as immigration status, education level, income level, types insurance, caregiver's relationship to youth, and immigration status may influence help-seeking behaviors that impact API youths' access and utilization of mental health services.

### ***Immigration Status***

A parent's ability to identify access and utilize needed services may be influenced by their level of acculturation and immigration status. There were five studies that looked at API immigration status and acculturation level (Banta et al., 2012; Gudino et al., 2008; Ho et al., 2007; Javier, 2010; Yeh et al., 2005). In three of the studies, API caregivers identified themselves as immigrants (Gudino et al., 2008; Ho et al., 2007; Javier, 2010) and reported that they identified more with their culture of origin than American culture (Ho et al., 2007; Yeh et al., 2005). Explanatory models of the etiology of mental health problems are heavily influenced by acculturation level when evaluating API adults (Leong & Lau, 2001). Therefore, it is possible that acculturation level of API caregivers could impact help-seeking behaviors for their children. The literature showed a discrepancy between perceptions of need of mental health services for API youths' versus actual need (Ho et al., 2007). This is supported by findings that show API youths are less likely to return for follow-up appointments when compared to Caucasian youths (Yeh et al., 2005).

### ***Education***

Similar to findings in other areas, education status was not consistently reported. There was variability seen in the way education levels were categorized. When reported, it wasn't always disaggregated by race/ethnicity (Banta et al., 2012; Cummings et al., 2010; Wood et al., 2005; Yeh et al., 2004; Yeh et al., 2002; Yeh Met al., 2005). Four studies described API caregiver's education level (Garland et al., 2005; Ho et al., 2007; Javier et al., 2010; Lau et al., 2012). Some studies reported that API caregivers have higher education level compared to other minority groups (e.g. Javier et al., 2010; Lau et

al., 2012). Other studies found API caregivers to have less education compared to Caucasians (e.g. Ho et al., 2007). National survey data reported that approximately 50.0% of Asians and 15.0% of Pacific Islanders adults have at least a bachelor degree, 85.0% of Asians and 87.0% of Pacific Islanders adults have at least a high school degree, and 20.0% of Asians and 4.0% of Pacific Islanders have at least a master degree (U.S. Census, 2010). There were no findings to support that education level directly impacts an API caregiver's decision regarding API's youth access and utilize of mental health services.

### ***Income***

A closer examination showed that API caregivers' income were below or equivalent to poverty level (Garland et al., 2005; Gudino et al., 2009; Javier et al., 2010; Lau et al., 2012). Moreover, when compared against Caucasian caregivers, API caregivers' income was reported to be consistently lower. Furthermore, U.S. Census Bureau, 2010 Community Survey estimated that the median household income for single-race Asians was \$67,022 with Native Hawaiians and Pacific Islanders reporting a median income of \$52,776 (U.S. Census, 2010). There are several factors that might explain the differences seen in reported income. As mentioned previously, many of the participants were sampled from the POC survey. This means that these individuals were more likely to be involved in public sector systems and as result were more likely to fall into the lower social economic status category. Another factor to consider is that minorities, such as APIs, are known to live in multi-generational households (Burr & Mutchler, 1993). This implies that there may be multiple incomes coming into the household. Therefore, this may reflect the higher income seen within the API population. In the end, the

findings regarding API income underscore the need to be aware and examine intra-group differences, and avoid making assumptions based on an overall average.

### *Insurance*

The majority of these studies identified that participants were sampled from public sector systems. It is important to be reminded that individuals who received care provided through public sector systems are at much higher risk for mental health problems and present with a range of other risk factors associated with lower income and less resources in general. Therefore, it may be argued that API youths who are involved in the public sector are more likely to have public health insurance, which also means that they have increased opportunities to access and utilize mental health services. However, findings from this literature review show that API youths who are part of the public sectors are less likely to utilize mental health services.

Findings from this literature review may demonstrate that APIs are involved in public sector care but at a lower rate than other racial/ethnic groups. However, it is important to point out that the rates of API youth involvement in mental health services in this literature review are not clear due to the few studies that disaggregated findings by race/ethnicity. For example, one study reported that there were higher rates of API youths involved in mental health services compared to other sectors (Garland et al., 2005). This is compared to community sample study that reported API youths were more likely to be involved in juvenile justice (McCabe et al., 1999). Ultimately, findings must be evaluated with caution due to the limited number of studies that actually included API youths. By understanding the path that API youths take to obtain services, it may be easier to remove barriers to care and thus decrease existing mental health disparities. With that said, it

appears that the findings about API caregivers' non-clinical characteristics may reflect barriers that face many of these families which further highlights the needs that API youths have for mental health services.

### **Teachers**

Research has shown that teachers act as gatekeepers to children's ability to receive SBS (Woods et al., 2005). None of the studies included in this review examined the impact of teachers' roles on access and utilization of mental health services among API youth.

### **MHS Providers**

A few studies examined MHS providers' role and the impact they have on API youths' access and utilization of mental health services. These findings were highlighted in three studies that examined ethnic-specific services (Akutsu et al., 2010; Yeh et al., 1994; Yeh et al., 1994), which all showed that this type of service may be more effective for API youths in facilitating service access and utilization. For instance, API youths were more likely to stay in treatment longer when receiving ethnic-specific services compared to mainstream services. Ethnic-specific services may be meeting the needs of API youths by taking cultural factors into consideration that influence utilization of mental health services. One possible way is that therapists and clients are being ethnically matched (Akutsu et al., 2010; Yeh et al., 1994; Yeh et al., 1994). Matching brings a comfort level that may contribute to a perception of understanding and thus increase the likelihood of service utilization. Secondly, the API youths who access ethnic services are younger in age when compared to individuals who are accessing mainstream services

(Yeh et al., 1994; Yeh et al., 1994). This may reflect a higher sensitivity towards evaluation of issues and symptomology that are facing API youths. Culturally mindful approaches that ethnic-specific services take may be a key component to servicing API youths. Ultimately, the success of these types of programs is being reflected in the higher total number of sessions that API youths attend and higher functioning level when discharged from services (Yeh et al., 1994; Yeh et al., 1994). It is essential for mental health service providers to be culturally competent when working with API youths in order to decrease barriers that impact access and utilization of mental health services.

### *Methodological Strengths and Challenges of Reviewed Studies*

#### **Study Design**

The relatively small number of studies along with methodological issues connected with the review process and methodological limitations of the studies reviewed need to be considered when interpreting findings. It is important to highlight the general strengths and challenges of using the various methodological approaches, which included longitudinal and, cross-sectional designs and also involved secondary analysis. Nine studies used cross-sectional methodology (Amaral et al., 2011; Banta et al., 2012; Chabra et al., 1999; Javier et al., 2010; Jerrell, 1998; Lau et al., 2012; Pottick et al., 2005; Richard et al., 2003; Yeh et al., 1994), two studies conducted secondary analysis of cross-sectional methodology (Cummings & Druss, 2011; Cummings, Ponce, Cummings et al., 2010), nine studies conducted secondary analysis of longitudinal studies (Garland et al., 2005; Gudino et al., 2008; Gudino et al., 2009; Ho et al., 2007; Leslie et al., 2000; Lu et al., 2004; Snowden et al., 2009; Yeh et al., 2003; Yeh et al., 2005), eight studies used longitudinal methods and primary data collection (Akutsu et al., 2010; Bui & Takeuchi,

1992; McCabe et al., 1999; Snowden et al., 2008; Wood et al., 2005; Yeh et al., 2004; Yeh et al., 2002; Yeh, Takeuchi, & Sue, 1994).

First, using a cross-sectional approach makes it feasible to obtain participants within a short period of time without requiring a lot of financial resources. This approach is very useful when trying to identify prevalence rates at a certain point in time. However, cross-sectional designs are limited in their ability to determine cause-effect relationships. Furthermore, time-in-point designs are vulnerable to bias as the likelihood of being included in a cross-sectional study on mental health service use is greater for participants who are heavier users of mental health services (Mann, 2003).

Secondly, the benefit from using a longitudinal approach is that it gives the researcher a better understanding of relationships/trends over a longer period of time, but it can also be time consuming and expensive (Farrington, 1991). Many of the studies used a longitudinal approach. Interestingly, the studies that used this approach did not report a significant relationship between API youths and utilization of mental health services.

It was clear that many of the studies used archival data and conducted secondary analysis. Ten studies relied on analysis of the same longitudinal data, namely the Patterns of Care (POC) study, conducted in San Diego. The POC study was one of the first studies that examined patterns of service representation for different racial/ethnic group across public sectors (McCabe et al., 1999). This approach provides a breadth of data when there are economic limitations. Using previously collected data allows comparisons over time due to a standardized process (Mann, 2003). Nevertheless, despite considerable methodological rigor in these studies, these analyses are impacted by the same methodological limitations of the POC study. Youth who participated in the POC study



were high risk youth who had access to public sector care, which also means that there was access to more mental health services in general (et al., 2010; Yeh et al., 2003). Moreover, the POC study used broad categories of race/ethnicity, which includes Asians, African American, Latino, and Caucasian (Ho et al., 2007; McCabe et al., 1999). Multiracial and acculturation rates were not taken into consideration (Yeh et al., 2005). Lastly, geographic limitation of the study may also restrict findings to service systems that are regionally similar to what is seen in California. California is known as one of the areas to have the highest percentage of API youths relative to other areas (U.S. Census Bureau, 2005). Based on census reports, as of 2012 it is estimated that 13.9% identified themselves as Asians in California (U.S. Census, 2012). The higher percentage of APIs may reflect the type of services provided in this area.

Sampling issues are a significant concern across many studies (Akutsu et al. 2006; Kim, 2006; Meyer et al., 2009; Nguyen et al., 2004; Sue, 2007). Studies tend to use clinical samples and not population-based samples, which may lead to inappropriate generalizations of APIs' mental health status (Lau et al., 2010). In addition, when APIs participate in studies they are usually comprised of smaller samples (Hurley et al., 2009; Lu et al., 2004). As a result, APIs are often aggregated into a larger category (e.g. "other") or become absorbed into the entire study sample (Casey et al., 2010; Helegerson, Matinvich, Durkin, & Lyon, 2005; Strack, Anderson, Graham, & Tomoyasu, 2007; Sue & Dhindsa, 2006). Conversely, sometimes it is not clear whether APIs actually participated in a study if the researchers of the studies do not provide an ethnic breakdown of the "other" group (Landsman, Groza, Tyler, & Malone, 2001; Trout et al., 2010; Wilmshurt, 2002). The variability seen within API mental health disparities

suggests that it is inappropriate to collapse APIs into a single group when trying to conduct research on mental health disparity.

### **Data Source**

Ten studies used POC data (Garland et al., 2005; Gudino et al. 2008, Gudino et al., 2009; Ho et al., 2007; Wood et al., 2005; Yeh et al., 2004; Yeh et al., 2003; Yeh et al., 2005; Yeh et al., 2002), four studies used national samples (Cummings & Druss, 2011; Cummings et al., 2010; Leslie et al., 2000; Lau et al., 2012), seven studies used management information system to obtain state data (Bui & Takeuchi, 1992; Chabra et al., 1999; Jerrell, 1998; McCabe et al., 1999; Richardson et al., 2003; Snowden et al., 2009; Snowden et al., 2008), four studies used survey data (Amaral et al., 2011; Banta et al., 2012; Javier et al., 2010; Pottick et al., 2005), two studies gathered their own data (Yeh et al. 1994; Yeh et al., 1994), and one study conducted secondary analysis from a longitudinal data source. Details about the original data source were not specified in this study (Akutsu et al., 2010).

Data sources such as such as Client/Patient Sample Survey (CPSS), CA Department of MHS record (Snowden et al., 2008), Medicaid Claims Data (Richardson et al., 2003) and National surveys, such as California Health Kids Survey (Amaral et al., 2011), National Survey of Drug Use & Health (Cummings & Druss, 2011), and National Survey of Children's Health (Lau et al, 2012) were used to obtain non-clinical and clinical characteristic information, and key variables such as rates out utilization and need. A couple of the studies used less standardized approaches to gather information. For instance, some studies referenced used 'interviewing' methods to obtain non-clinical information but did not go into great detail about what type of method was actually used

(Wood et al., 2005; Yeh et al., 1994) or logs kept by the mental health service (Lu et al., 2004).

## **Measures**

Many of the studies used standardized measures with good psychometric properties. There was consistent use of standardized measures across the majority of the studies to examine key target outcomes and measure key predictors of outcome. The most utilized measure to capture mental health utilization was the SACA which is a reliable and valid assessment tool that is based on parents' and older children's report of mental health service use history and within the last year (Horwitz et al., 2001). Standardized measures used to evaluate mental health needs included: DISC-IV, CBCL, YSR, YSR, and CES-D. C-GAS and CIS were used to measure functional impairment. Using standardized measure makes findings more reliable.

When looking at evaluation assessment tools, there were noticeable language limitations. The majority of the studies conducted their evaluation and assessment in English or Spanish (Chavira et al., 2009; Lau et al., 2012). There were only four studies that conducted interviews in API language or translated standardized measures (Banta et al., 2012, Gudino et al., 2008; Ho et al., 2007; Javier et al., 2010). This may also reflect why there may be challenges with recruiting API youths who have parents that may not feel as comfortable speaking English. One can only speculate how much information may have been lost due to limited language capacity. As noted, significant problems arise when language needs are not met, especially when discussing a complex issue such as mental health problems. The findings regarding language capacity further reinforce the systematic and practical barriers that are placed on API caregivers and youth. They

further underscore the need for standardized measures to be properly translated and accessible to researchers.

### *Limitations of this Review*

While this literature review was structured, it was not a full systematic review, therefore, making it less rigorous. However, given the variability of study designs and general methodological limitations to the study of API mental health service use, a structured review was warranted. A considerable strength of the current approach is the formation of a priori questions which guided the review process, a priori inclusion/exclusion criteria and a search that followed clear rules such as only including articles that were peer reviewed, limiting the search to studies that were published within the last 20 years, and evaluating only studies that looked at the key outcome variable.

### *Implications for Research and Practice*

#### **Research**

Findings from this literature review emphasize the need for continued research in the area of API youths and mental health services. Steps can be taken by conducting studies that specifically focus on API or oversample API in samples with multiple racial/ethnic groups to permit an examination of intra-group differences, or at the least facilitate analysis of API as a separate group that is not aggregated with “other” ethnic groups that have little in common. Sampling can be an issue when evaluating API youths. However, findings from this literature review demonstrate that one of the sources to obtain API youth participants may be within a school setting that has a large API population or community health centers that provide ethnic-specific services.

Another area that was not explored was alcohol/substance issues and treatment. Even though some existing research has shown that APIs report lower rates of alcohol (SAMHSA, 2000, 2001) and substance abuse (SAMHSA, 2009), there is research showing a correlation between mental health issues and alcohol/substance issues. At the same time, there is some evidence that some API youths struggle with alcohol and substance abuse issues (Bui & Takeuchi, 1992) but approach it in a similar manner as dealing with mental health issues. This remains an important area for further investigation.

An essential area of treatment that was not discussed in this literature review is the role of pharmacological therapy. For a proportion of the population who are suffering with mental health issues, medication is a necessity and essential part of the therapy process. Currently, there is limited knowledge regarding pharmacological treatment for API youths when compared to other racial/ethnic groups. There is limited evidence from the cross-cultural literature that API youths are reportedly less likely to use prescription medication compared to Caucasians (Cummings & Druss, 2011). However, the extent may not be as clear and therefore reinforces the importance of further research in this area to expand the knowledge regarding API youths and mental health.

Furthermore, it is important to continue to conduct studies to examine the cross-cultural validity and reliability of existing measures in the mental health field and to translate the best measures into API languages in order to improve the data collection process and be able to include API participants in research studies regardless of language barriers.

Another way to expand this structured literature review is to consider looking at dissertations in order to minimize publication bias also known as “file drawer” effect (Scargle, 2000). Inclusion criteria could also look at alternative services, which this literature review did not focus on unless it was discussed in conjunction with other mental health services (Choi & Kim, 2010).

Lastly, there needs to be a continuous focus on cross-cultural studies. More studies, nationally and internationally, should explore factors related to in mental health utilization among API youth. It is apparent that there are multiple factors that impact an API youth’s ability to access and utilize mental health services. Therefore, it may be of great importance to understand the state of mental health services impacting API youths not only within the United States relative to other racial/ethnic groups, but the API youths in other countries.

### **Clinical Practice**

The knowledge obtained from research looking at API youths’ access and utilization of mental services will have great clinical implications. Improvement in the appropriate assessment and diagnosis of mental health problems and subsequent referral to mental health services are essential to enhancing the quality of mental health services for API youths. A knowledge base steeped in empirical findings about clinical and nonclinical factors that present barriers to these processes could lead to evidence-based approaches to the assessment, engagement and treatment of API youth and their families.

### ***Assessment and Diagnosis***

Accurate assessment and diagnosis of mental health problems is the essential first step to helping API youths receive mental health services. Even though there were a limited number of studies that actually disaggregated findings by race/ethnicity and clinical diagnosis and presenting symptoms, inference can be made that presenting symptoms, clinical diagnosis/symptomology and impairment in daily functioning are key factors to evaluating mental health need for API youths.

### ***Referral***

Knowing where to properly refer API youths is essential to the treatment process. There was limited discussion regarding referral sources of API youths across studies. As noted, there was only one article that disaggregated referral findings by race and showed that API youths' referrals came predominately from family members (Bui & Takeuchi, 1992). This goes back to the important role of gatekeepers. There are many channels that a youth may travel through for mental health services as seen with the many types of identified services and referral agencies reported in this literature review. Understanding referral sources is a key component to understanding how to help API youth access necessary services. Furthermore, the referral process is also largely dependent on the availability of services and treatments. As this review indicated there is some (if limited) data to suggest the need for expansion of ethnically matched services.

### ***Treatment***

Overall, studies included in this review did not discuss specific mental health interventions for API youths, but simply addressed mental health service use in general.

As stated there is limited evidence that certain types of interventions such as SBS or ethnic-specific community health facilities may be more effective when working with API youths' needs. Much more information is needed to understand which of the available evidence-based mental health interventions is effective cross-culturally, i.e. with APIs. There is indication from prior research that many empirically supported treatments lose effectiveness when implemented in different cultural contexts (Lau et al., 2010). Given the comparably lower utilization rates of APIs, there is much more need to be studied about the acceptability and effectiveness of particular mental health treatments with the API community.

Gatekeepers such as educators, mental health providers, and caregivers play a critical role in API youths' ability to access and utilize needed services. Thus, there needs to be more promotion of cultural training for these gatekeepers in a practical manner. This could be done by collaborative process with various community organizations providing cultural practical skills through psycho-education. It is important to have caregivers feel empowered by encouraging families to take a critical role in the treatment process.

Efforts to promote mental health awareness within a school setting at an earlier age may be key to decreasing stigma that is attached to mental health. By presenting "good" mental health as a means to improving API's education, there may be more support from their family members. Furthermore, there needs to be more outreach and empowerment regarding API youths' ability to seek appropriate services that may be consistent with cultural concerns for this population. At the same time their needs to be more efforts to trying to recruit APIs to enter the mental health field.



## **Conclusion**

This may be the only known literature review looking at API youth access and utilization of mental health services on a continuum of restrictiveness. Due to the limitations inherent in a structured literature review, inferences can only be made from the findings captured in the 28 reviewed studies. This literature review fills an important gap within the API literature. Moreover, it highlights the need for further research in the area of API youths' needs, access and utilization of mental health services. This literature reviews illustrates what is suspected, which is API youths are accessing mental health services at a lower rates. However, when services are accessed, they often are school-based services and community services. An ongoing methodological limitation of API studies, which was evident in this literature, is key measured variables were aggregated such as race/ethnicity. As a result, this impacts understanding of within-group characteristics on a deeper level. At the same time, measuring mental health service need and utilization were often done by standardized measures. Furthermore, what was also interesting is that findings from this literature showed that cultural factors such as stigma and etiology factors barriers may not be directly influencing API youths access and utilization of mental health services but actually impacting caregiver's perception of need, which in turn impacts API youths' access and utilization. This literature reviews demonstrates that there need to be more translated measures and diagnostic tools to successfully assess need and training regarding referral and treatment.

The debate between aggregating versus disaggregating race in research studies is an ongoing issue in the literature. APIs are a complex group of individuals with unique characteristics that influence their beliefs and help-seeking patterns with regard to mental

health. Historically, APIs have not always been an accessible group of individuals to study when evaluating mental health when compared to other racial/ethnic groups, which also may have been reflected across these identified articles. This clearly impacted the interpretation of findings in this literature review. Therefore, the current research literature captures only a small portion of APIs, and thus, likely paints a picture of APIs with very broad strokes. Much work will need to be done to truly understand the needs of APIs.

## Reference

- Abe, J., Zane, N., & Chun, K. (1994). Differential responses to trauma: Migration-related discriminates of post-traumatic stress disorder among Southeast Asian refugees. *Journal of Community Psychology, 22*(2), 121-135.
- Achenbach, T.M. (1991a). *Manual for the Child Behavior Checklist/4-18 and 1991 profile*. Burlington: University of Vermont, Department of Psychiatry.
- Achenbach, T. M. (1991b). *Manual for the YSR and 1991 profile*. Burlington: University of Vermont, Department of Psychiatry.
- 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.
- Akutsu, P. D., Tsuru, G. K., & Chu, J. P. (2010). Pre-intake attrition or non-attendance of intake appointments at an ethnic-specific mental health program for Asian American children and adolescents. *AAPI Nexus Journal, 8*(2), 39-61.
- Alegria, M., Mulvaney-Day, N., Woo, M., Torres, M., Gao, S., & Oddo, V. (2007). Correlates of past-year mental health services use among Latinos: Results from the National Latino and Asian American Study. *97*(1), 76-83.
- Alegria, M., Takeuchi, D., Canino, G., Duan, N., Shrout, P, Xiao-Li, M.,...Gong, F. (2004). Considering context, place and culture: The national Latino and Asian American study. *International Journal of Methods in Psychiatric Research, 13*(4), 208-222.
- Amaral, G., Geierstanger, S., Solemanipour, S., & Brindis, C. (2011). Mental health characteristics and health-seeking behaviors of adolescent school-based health center users and nonuser. *Journal of School Health, 81*(3), 138-145.
- Andersen, R. M. (1995). Revisiting the behavioral model and access to medical care: Does it matter? *Journal of Health and Social Behavior, 36*(3), 1-10.
- Banta, J. E., James, S., Haviland, M. G., & Andersen, R. M. (2012). Race/ethnicity, parent-identified emotional difficulties, and mental health visits among California children. *Journal of Behavioral Health Services & Research, 40*(1), 1-14.
- Barreto, R. M., & Segal, S. P. (2005). Use of mental health services by Asian Americans. *Psychiatric Services, 56*(6), 746-749.
- Berry, J. W. (1990). Psychology of acculturation: Understanding individuals moving between cultures. *Applied Cross-Cultural Psychology, 14*, 232-253.

- Berry, J. W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology: An Interview Review*, 46(1), 5-68.
- Bird, H. R., Shaffer, D., Fisher, P., & Gould, M. S. (1993). The Columbia impairment scale (CIS): Pilot findings on a measure of global impairment for children and adolescents. *Internal Journal of Methods in Psychiatric Research*, 3(3), 167-176.
- Brannan, A. M., Heflinger, G. A., & Bickman, L. (1997). The caregiver strain questionnaire: Measuring the impact on the family of living with a child with serious emotional disturbance. *Journal of Emotional and Behavioral Disorders*, 5, 212-222.
- Bringewatt, E. H., & Gershoff, E. T. (2010). Falling through the cracks: Gaps and barriers in the mental health system for American's disadvantaged children. *Children and Youth Service Review*, 32, 1291-1299.
- Bui, K. V. T., & Takeuchi, D. T. (1992). Ethnic minority adolescents and the use of community mental health care services. *American Journal of Community*, 20(4), 403-417.
- Burns, B. J., Costello, E. J., Angold, A., Tweed, D., Stangl, D., Farmer, E. M., & Erkanli, A. (1995). Children's mental health service use across service sectors. *Health Affairs*, 14(3), 147-159.
- Burns, B. J., Phillips, S. D., Wagner, H. R., Barth, R. P., Kolko, D., Cambell, Y., & Landsverk, J. (2004). Mental health need and access to mental health services by youths involved with child welfare: A national survey. *Journal of the American Academy of Child and Adolescent Psychiatry*, 43(8), 960-970.
- Burr, J. A., & Mutchler, J. E. (1993). Nativity, acculturation, and economic status: Explanations of Asian American living arrangement in later life. *Journal of Gerontology: Social Sciences*, 48(2), 55-63.
- California Healthy Kids Survey*. San Francisco, CA: West Ed., 2000-2005.
- Casey, K. J., Reid, R., Trout, A. L., Hurley, K. D., Chmelka, M. B., & Thompson, R. (2010). The transition status of youth departing residential care. *Child Youth Care Forum*, 39, 323-340.
- Cauce, A. M., Domench-Rodriguez, M., Paradise, M., Cochran, B. N., Shea, J. M., Srebnik, D., & Baydar, N. (2002). Cultural and contextual influences in mental health help seeking: A focus on ethnic minority youth. *Journal of Consulting and Clinical Psychology*, 70(1), 44-55.
- Center for Control and Prevention. (2001). *National health interview survey-child* [Data file and code book]. Retrieved from [ftp://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/Datasets/NHIS/2001/](ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Datasets/NHIS/2001/).

- Chavira, D. A., Garland, A., Yeh, M., McCabe, K., & Hough, R. L. (2009). Child anxiety disorder in public system of care: Comorbidity and service utilization. *The Journal of Behavioral Health Service & Research, 36*(4), 492-504.
- Chen, J. C., & Danish, S. J. (2010). Acculturation, distress disclosure within Asian populations. *Asian American Journal of Psychology, 1*(3), 200-211.
- Chen, S., Sullivan, N. Y., Lu, Y. E., & Shibusawa, T. (2003). Asian Americans and mental health services: A study of utilization patterns in the 1990's. *Journal of Ethnic & Cultural Diversity in Social Work, 12*(2), 19-42.
- Chin, D., Takeuchi, D. T., & Suh, D. (2000). Access to health care among Chinese, Korean, and Vietnamese Americans. In C. Hogue, M. Hargrave, & K. Collins (Eds.), *Minority Health in America: Findings and Policy Implications from the Commonwealth Funding Minority Health Survey*. MD: Johns Hopkins University Press.
- Choi, N. G., & Kim, S. (2010). Utilization of complementary and alternative medicines for mental health problems among Asians Americans. *Community Mental Health Journal, 46*, 570-578.
- Choi, Y., & Lahey, B. B. (2006). Testing the model minority stereotype: Youth behaviors across racial and ethnic groups. *Social Service Review, 8*(3), 420-455.
- Costello, E. J., Angold, A., Burns, B. J., Stangl, D. K., Tweed, D. L., Erkanli, A., & Worthman, C. M. (1996). The Great Smoky Mountain study of youth. *Archives of General Psychiatry, 53*, 1129-1136.
- Crane, K. D., & Ellis, R. A. (2004). Benevolent intervention or oppression perpetuated: Minority overrepresentation in children's services. *Journal of Human Behavior in the Social Environment, 9*(1), 19-38.
- Cross, T. A., Earle, K. A., & Simmons, D. (2000). Child abuse and neglect in Indian country: Policy issues. *Families in Society, 81*, 49-58.
- Cummings, J. R., & Druss, B. G. (2011). Racial/ethnic differences in mental health service use among adolescents with major depression. *Journal of the American Academy of Child & Adolescent Psychiatry, 50*(2), 160-170.
- Cummings, J. R., Ponce, N. A., & Mays, V. M. (2010). Comparing racial/ethnic differences in mental health service use among high-need subpopulations across clinical and school-based settings. *Journal of Adolescent Health, 46*, 603-606.

- Curtis, P. A., Alexander, G., & Lunghofer, L. A. (2001). A literature review comparing the outcomes of residential group care and therapeutic foster care. *Children and Adolescent Social Work Journal, 18*(5), 377-392.
- Dulcan, M. K., Costello, E. J., Costello, A., Edelbrock, C., Brent, D., & Janiszewski, S. (1990). The pediatrician as gatekeeper to mental health care for children: Do parents' concerns open the gate? *Journal of the American Academy of Children & Adolescent Psychiatry, 29*(3), 453-458.
- Farrington, D. P. (1991). Longitudinal research strategies: Advantages, problem, and prospects. *Journal of the American Academic of Children and Adolescent Psychiatry, 30*(3), 369-374.
- Federal Register Code 42473. (1997). 42(163).
- Frensch, K.M., & Cameron, G. (2002). Treatment of choice or a last resort? A review of residential mental health placements for children and youth. *Child & Youth Care Forum, 31*(5), 307-333.
- Garland, A. F., Hough, R. L., McCabe, K. M., Yeh, M., Wood, P. A., & Aarons, G. A. (2001). Prevalence of psychiatric disorders in youth across five sectors of care. *Journal of American Academy of Children and Adolescent Psychiatry, 40*(4), 409-419.
- Garland, A. F., Lau, A. S., Yeh, M., McCabe, K. M., Hough, R. L., & Landsverk, J. A. (2005). Racial and ethnic differences in utilization of mental health services among high-risk youths. *American Journal of Psychiatry, 162*(7), 1336-1342.
- Gee, C. B. (2004). Assessment of anxiety and depression in Asian American youth. *Journal of Clinical Child and Adolescent Psychology, 33*(2), 269-271.
- Go, C. G., & Le, T. N. (2005). Gender differences in Cambodian delinquency: The role of ethnic identity, parental discipline, and peer delinquency. *Crime Delinquency, 51*, 220-237.
- Gudino, O. G., Lau, A. S., & Hough, R. L. (2008). Immigrant status, mental health need, and mental health service utilization among high-risk Hispanic and Asian Pacific Islander youth. *Children Care Forum, 37*, 139-152.
- Gurley, D., Novins, D. K., Jones, M. C., Beals, J., Shore, J. H., & Manson, S. M. (2001). Comparative use of biomedical services and traditional health options by American Indian veterans. *Psychiatric Services, 52*, 68-74.
- Hawkins, R. P., Almeida, C. M., Fabry, B., & Reitz, A. L. (1992). A scale of measure restrictiveness of living environments for troubled children and youths. *Hospital & Community Psychiatry, 43*, 54-58.

- Helegerson, J., Martinovich, Z., Durkin, E., & Lyons, J. S. (2005). Differences in outcome trajectories of children in residential treatment. *Residential Treatment for Children Youth & Youth, 22*(4), 67-79.
- Hines, A. M., Lee, P. A., Osterling, K. L., & Drabble, L. (2007). Factor predicting family reunification for African American, Latino, Asian and White families in the child welfare system. *Journal of Child and Family Studies, 16*, 275-289.
- Ho, J., Yeh, M., McCabe, K., & Hough, R. L. (2007). Parental cultural affiliation and youth mental health service use. *Journal of Youth Adolescence, 36*, 529-542.
- Hollmann, F. W. (1993). *U.S. population estimates, by age, sex, race, and Hispanic origin: 1980 to 1991* (U.S. Bureau of the Census, Current Population Reports Series P25, No. 1095). Washington, DC: U.S. Government Printing Office.
- Horwitz, S. M., Hoagwood, K., Stiffman, A. R., Summerfeld, T., Weisz, J. R., & Costello, E. J.,...Norquist, G. (2001). Reliability of the service assessment for children and adolescents. *Psychiatric Services, 52*, 1088-1094.
- Hurley, K. D., Trout, A., Chmelka, M. B., Burns, B. J., Epstein, M. H., Thompson, R. W., & Daly, D. L. (2009). The changing mental health needs of youth admitted to residential group home care: Comparing mental health status at admission in 1995 and 2004. *Journal of Emotional and Behavioral Disorder, 17*(3), 164-176.
- Institute of Medicine: National Healthcare Disparities Report. (2002). Retrieved from <http://www.ahrq.gov/qual/nhdr03/fullreport/index.html>
- Javier, J. R., Lahiff, M., Ferrer, R. R., & Huffman, L. C. (2010). Examining depressive symptoms and use of counseling in the past year among Filipino and non-Hispanic White adolescents in California. *Journal of Developmental and Pediatrics, 31*(4), 295-303.
- Jenkins, E. J., & Bell, C. C. (1997). Exposure and response to community violence among children and adolescents. In J. Osofsky (Ed.), *Children in a violent society*. New York: Guilford Press.
- Jerrell, J. M. (1998). Effect of ethnic matching of young clients and mental health staff. *Cultural Diversity and Mental Health, 4*(4), 297-302.
- Jones, M. C., Dauphinais, P., Sack, W. H., & Somervell, P. D. (1997). Trauma-related symptomatology among American Indian adolescents. *Journal of Traumatic Stress, 10*, 163-173.

- Kataoka, S. H., Zhang, L., & Wells, K. B. (2002). Unmet need for mental health care among U.S. children: Variation by ethnicity and insurance status. *American Journal of Psychiatry*, *159*, 1548-1555.
- Kim, W. (2006). Diversity among Southeast Asian ethnic groups. *Journal of Ethnic and Cultural Diversity in Social Work*, *15*(4), 83-100.
- Knight, G. P., & Hill, N. E. (1998). Measurement equivalence in research involving minority adolescents. In: McLoyd, V. & Steinberg, L., (Eds.), *Study of minority adolescents: Conceptual, methodological and theoretical issues*. Hillsdale, NJ: Erlbaum.
- Lai, M. H. (2009). Toward an integrative and collaborative approach to Asian American and Pacific Islander youth violence research, practice, and policy. *Aggression and Violence Behavior*, *14*(6), 454-460.
- Landsman, M. J., Groza, V., Tyler, M., & Malone, K. (2001). Outcome of family-centered residential treatment. *Child Welfare League*, *3*, 371-389.
- Lau, A. S., Chang, D. F., & Okazaki, S. (2010). Methodological challenges in treatment outcome research with ethnic minorities. *Cultural Diversity and Ethnic Minority Psychology*, *16*(4), 573-580.
- Lau, M., Lin, H., & Flores, G. (2012). Racial/ethnic disparities in health and health care among U.S. adolescent. *Health Service Research*, *47*(5), 2031-2059.
- Lau, A., & Takeuchi, D. (2001). Cultural factors in help-seeking for child behavior problems: Value orientation, affective responding, and severity appraisals among Chinese-American parents. *Journal of Community Psychology*, *29*(6), 675-692.
- Lau, A., & Zane, N. (2000). Examining the effects of ethnic-specific services: An analysis of cost-utilization and treatment outcome for Asian American clients. *Journal of Community Psychology*, *28*(1), 63-77.
- Lavigne, J. V., Gibbons, R. D., Christoffel, K. K., Arend, R., Rosenbaum, D., & Binnis, H....Isaacs, C. (1996). Prevalence rates and correlates of psychiatric disorders among preschool children. *Journal of American Academy Child and Adolescent Psychiatry*, *35*, 204-214.
- Leadbeater, B. J., Kuperminc, G. P., Blatt, S. J., & Hertzog, C. (1999). A multivariate model of gender differences in adolescents' internalizing and externalizing problems. *Developmental Psychology*, *35*(5), 1268-1282.
- Lee, S. M. (1993). Racial classifications in the US census: 1890-1990. *Ethnic and Racial Studies*. *16*(1). 75-86.



- Lee, S., Juon, H., Martinez, G., Hsu, C. E., Robinson, S., B., J., & Ma, G. X. (2009). "Model minority at risk" expressed needs of mental health by Asian American youth adults. *Journal of Community Health, 34*, 144-152.
- Leichtman, M. (2006). Residential treatment of children and adolescents: Past, present, & future. *American Journal of Orthopsychiatry, 76*(3), 285-294.
- Leichtman, M., & Leichtman, M. L. (2002). Facilitating the transition from residential treatment into the community: Making use of community resources. *Residential Treatment for Children & Youth, 19*(3), 42-52.
- Leong, F. T. L. (1986). Counseling and psychotherapy with Asian American: Review of the literature. *Journal of Counseling Psychology, 33*, 196-206.
- Leong, F. T. L., & Lau, A. S. L. (2001). Barriers to providing effective mental health services to Asian Americans. *Mental Health Services Research, 3*(4), 201-214.
- Leslie, L. K., Landsverk, J., Ezzet-Lofstrom, R., Tschann, J. M., Slymen, D. J., & Garland, A. F. (2000). Children in foster care: Factors influencing outpatient mental health service use. *Child Abuse & Neglect, 24*(4), 465-475.
- Libby, A. M. (2004). Mental health care and foster care interaction. CA: California HealthCare Foundation.
- Libby, A. M., Coen, A. S., Price, D. A., Silverman, K., & Orton, H. D. (2008). Inside the black box: What constitutes a day in a residential treatment centre? *International Journal of Social Welfare, 14*, 176-183.
- Lin, K. M. (1983). Hwa-Byung: A Korean culture-bound syndrome? *American Journal of Psychiatry, 140*, 105-107.
- Lin, K. M., & Cheung, F. (1999). Mental health issues for Asian Americans. *Psychiatric Services, 30*(6), 774-780.
- Lu, Y. E., Landsverk, J., Ellis-Macleod, Newton, R., Ganger, W., & Johnson, I. (2004). Race, ethnicity and case outcomes in child protective services. *Children and Youth Services Review, 26*, 447-461.
- MacDonald, J. M. (2003). The effect of ethnicity of juvenile court decision making in Hawaii. *Youth Society, 35*, 243-262.
- Mak, W., & Rosenblatt, A. (2002). Demographic influences on psychiatric diagnoses among youth served in California system of care. *Journal of Children and Family Studies, 11*, 165-178.

- Makini, G. K., Andrade, N. N., Nahulu, L. B., Yuen, N., McDermott, J. F., Danko, G. P.,...Waldron, J. A. (1996). Psychiatric symptoms of Hawaiian adolescents. *Cultural Diversity Mental Health, 2*, 183-191.
- Mann, C. J. (2003). Observational research methods. Research design II: Cohort, cross-sectional, and case-control studies. *Emergency Medical Journal, 20*, 54-60.
- Mark, T. L., & Buck, J. A. (2006). Characteristics of U.S. youths with serious emotional disturbance: Data from the national health interview survey. *Psychiatric Services, 57*(11), 1573-1578.
- Matsuoka, J. K., Breaux, C., & Ryujin, D. H. (1998). National utilization of mental health services by Asian Americans/Pacific Islanders. *Journal of Community Psychology, 25*(2), 141-145.
- McCabe, M., Yeh, M., Hough, R. L., Landsverk, J., Hurlburt, M. S., Culver, S. W., & Reynolds, B. (1999). Racial/ethnic representation across five public sectors of care for youth. *Journal of Emotional and Behavioral Disorder, 7*(2), 72-82.
- McCaskill, P. A., Toro, P. A., & Wolfe, S. M. (1998). Homeless and matched housed adolescents: A comparative study of psychopathology. *Journal of Clinical and Child Psychology, 27*, 306-319.
- McGee, R., Feehan, M., William, S., Partridge, F., Silva, P. A., & Kelly, J. (1990). DSM-III disorder in a large sample of adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 29*, 611-619.
- Merikangas, K. R., He, J. P., Brody, D., Fisher, P. W., Bourdon, K., & Koretz, D.S. (2010). Prevalence and treatment of mental disorders among US children in the 2001-2004 National Health and Nutrition Examination Survey (NHANES). *The American Academic of Pediatrics, 125*(1), 75-81.
- Meyer, O. L., Zane, N., Cho, Y., & Takeuchi, D. T. (2009). Use of specialty mental health service by Asian Americans with psychiatric disorders. *Journal of Consulting and Clinical Psychological, 77*(5), 1000-1005.
- Miranda, J., Lawson, W., & Escobar, J. (2002). Ethnic minorities. *Mental Health Services Research, 4*(4), 231-237.
- Nguyen, L., Arganza, G. F., Huang, L. N., Liao, Q., Nguyen, H. T., & Santiago, R. (2004). Psychiatric diagnoses and clinical characteristics and Asian American youth in children's services. *Journal of Child and Family Studies, 13*(4), 483-495.
- Office of Extramural Research. (1999) *Review and Award Code for the NIH Inclusion of Children Policy*. Washington, DC: U.S. Department of Health and Human Services. Retrieved from <http://grants.nih.gov/grants/oer.html>.

- Olfson, M., Gameroff, M. J., Marcus, S. C., Greenberg, T., & Shaffer, D. (2005). National trends in hospitalization of youth with intentional self-inflicted injuries. *American Journal of Psychiatry*, *162*, 1328-1335.
- Ponce, N.A., Tseng, W., Ong, P., Shek, Y. L., Ortiz, S., & Gatchell, M. (2009). The state of Asian American, Native Hawaiian and Pacific Islander health in California report. UCLA Center for Health Policy Research. Retrieved from <http://escholarship.org/uc/item/3s89c1cm>.
- Pottick, K.J., Warner, L.A., & Yoder, K. A. (2005). Youths living away from families in the U.S. mental health system: Opportunities for targeted intervention. *Journal of Behavioral Health Services and Research*, *32*, 264-281.
- Power, T. J., Eiraldi, R. B., Clarke, A. T., Mazzuca, L. B., & Krain, A. L. (2005). Improving mental health service utilization for children and adolescents. *School Psychology Quarterly*, *20*(2), 187-205.
- President's New Freedom Commission on Mental Health: Surgeon General Report (2003). <http://govinfo.library.unt.edu/mentalhealthcommission/reports/FinalReport/downloads/ExecSummary.pdf>.
- Pumariega, A. J. Winters, N. C., & Huffine, C. (2003). The evolution of systems of care for children's mental health: Forty years of community child and adolescent psychiatry. *Community Mental Health Journal*, *39*(5), 399-425.
- Scargle, J. D. (2000). Publication bias: The "file-drawer" problem in scientific inference. *Journal of Scientific Exploration*, *14*(1), 91-106.
- Shaffer, D., Fisher, P., Lucas, C., Dulcan, M. K., & Schwab-Stone, M. (2000). NIMH diagnostic interview schedule for children (NIMH DISC-IV): Description, differences, from previous versions, and reliability of some common diagnosis. *Journal of the American Academy of Child and Adolescent Psychiatry*, *39*, 28-38.
- Shaffer, D., Gould, M.S., Brasic, J., Ambrosini, P., Fisher, P., H., & Aluwahlia, S. (1983). A children's global assessment scale (CGAS). *Archives of General Psychiatry*, *40*, 1228-1231.
- Sheikh, S., & Furnham, A. (2000). A cross-cultural study of mental health beliefs and attitudes towards seeking professional help. *Social Psychiatry/Psychiatric Epidemiology*, *35*, 326-334.
- Siegel, J. M., Aneshensel, C. S., Taub, B., Cantwell, D. P., & Driscoll, A. K. (1998). Adolescent depressed mood in a multiethnic sample. *Journal of Youth and Adolescence*, *27*, 413-427.

- Simpson, G. A., Bloom, B., Cohen, R. A., Blumberg, S., & Bourdon, K. H. (2005). U.S. children with emotional and behavioral difficulties: Data from the 2001, 2002, and 2003 national health interview surveys. *Center for Disease Control and Prevention: Advance Data From Vital & Health Statistics*, 360, 1-14.
- Snowden, L. R., Masland, M. C., Fawley, K., & Wallace, N. (2009). Ethnic differences in children's entry into public mental health care via emergency mental health services. *Journal of Children and Family Studies*, 18, 512-519.
- Snowden, L. R., Masland, M. C., Libby, A. M., Wallace, N., & Fawley, K. (2008). Racial/ethnic minority children's use of psychiatric emergency care in California's public mental health system. *American Journal of Public Health*, 98(1), 118-124.
- Spencer, M. S., Chen, J., Gee, G. C., Fabian, C.G., & Takeuchi, D. T. (2010). Discrimination and mental health-related service use in a national study of Asian Americans. *American Journal of Public Health*, 100(12), 2410-2419.
- Strack, R. W., Anderson, K. K., Graham, C. M., & Tomoyasu, N. (2007). Race-gender differences in risk and protective factors among youth in residential group homes. *Child and Adolescent Social Work Journal*, 24(3), 261-283.
- Substance Abuse & Mental Health Service Administration. (2004). *Comprehensive community mental health services for children and their families program evaluation findings: Annual report to Congress 2004* [Data file]. Retrieved from <http://store.samhsa.gov/shin/content//SMA-CB-E2004/SMA-CB-E2004.pdf>.
- Substance Abuse & Mental Health Service Administration. (2005). *The drug and alcohol services information system report-Adolescents with co-occurring psychiatric disorders: 2003*. Retrieved from <http://oas.samhsa.gov/2k5/youthMH/youthMH.html>.
- Substance Abuse and Mental Health Services Administration. (2008). *Results from the 2007 National Survey on Drug Use and Health: National findings*. Rockville, MD. Retrieved from <http://oas.samhsa.gov>.
- Substance Abuse and Mental Health Services Administration. (2009). *Results from the 2008 National Survey on Drug Use and Health: National Findings* (Office of Applied Studies, NSDUH Series H-36, HHS Publication No. SMA 09-4434). Rockville, MD. Retrieved from <http://www.oas.samhsa.gov/nsduh/2k8nsduh/2k8Results.cfm>.
- Substance Abuse & Mental Health Service Administration. (2009). *The NSDUH Report: Adolescent mental health: Service Settings and reasons for receiving care*. Rockville, MD.

- Substance Abuse & Mental Health Service Administration. (2012). *Result from the 2010 National Survey on Drug Use and Health: Mental health findings*. Rockville, MD. Retrieved from [http://www.samhsa.gov/data/nsduh/2k10MH\\_Findings/2k10MHResults.htm#Ch3](http://www.samhsa.gov/data/nsduh/2k10MH_Findings/2k10MHResults.htm#Ch3)
- Sue, S. (1977). Community mental health services to minority groups: Some optimism, some pessimism. *American Psychologist*, 32, 616-624.
- Sue, S. (1998). In search of cultural competence in psychotherapy and counseling. *American Psychologist*, 53(4), 440-448.
- Sue, S., & Dhindsa, M. (2006). Ethnic and racial health disparities research: Issues and problems. *Health Education and Behavior*, 33(4), 459-469.
- Sue, S., & McKinney, H. (1975). Asian-American in the community health care system. *American Journal of Orthopsychiatry*, 45, 111-118.
- Sue, S., & Morishima, J.K. (1982). *The mental health of Asian Americans*. San Francisco: Jossey- Bass Publishers.
- Sue, D., & Sue, S. (1987). Cultural factors in the clinical assessment of Asian Americans. *Journal of Consulting and Clinical Psychology*, 55(4), 479-487.
- Takeuchi, D. T., Sue, S., & Yeh, M. (1995). Return rates and outcome from ethnicity-specific mental health programs in Los Angeles. *American Journal of Public Health*, 85, 638-643.
- Teplin, L., Abram, K., McClelland, G., Dulcan, M., & Mericle, A. (2002). Psychiatric disorders in youth in juvenile detention. *Archives General Psychiatry*, 59, 1133-1143.
- Thompson, R. (2005). The course and correlates of mental health care received by young children: Descriptive data from a longitudinal urban high-risk sample. *Children and Youth Services Review*, 27(1), 39-50.
- Triandis, H. C., Bontempo, R., Villareal, M. J., Asai, M., & Lucca, N. (1988). Individualism and collectivism: Cross-cultural perspectives on self-ingroup relationships. *Journal of Personality and Social Psychology*, 54(2), 323-338.
- Trout, A. L., Chmelka, M. B., Thompson, R. W., Epstein, M. H., Tyler, P., & Pick, R. (2010). The departure status of youth from residential group care: Implications for aftercare. *Journal of Child and Family Studies*, 19(1), 67-78.
- United States Census Bureau. (1999). *The Black population in the United States: March 1999 (P20-530)*. Washington, DC: U.S. Government Printing Office. Retrieved from <http://www.census.gov/population/www/socdemo/race/black99rep.html>.

- United States Census Bureau. (2000). *The Asian and Pacific Islander population in the United States*. (PPL-146). Washington, DC: Government Printing Office. Retrieved at <http://www.census.gov/population/www/socdemo/race/ppl-146.html>.
- United States Census Bureau. (2002). *Race data: The Asian alone population in the United States*. (P20-540). Washington, DC: Government Printing Office. Retrieved from <http://www.census.gov/population/www/socdemo/race/ppl-aa09.html>.
- United States Census Bureau. (2003). *Population by sex, age, for Asian Alone and White alone, not Hispanic: March 2003*. Retrieved from <http://www.census.gov/population/www/socdemo/race/ppl-aa09.html>.
- United States Census Bureau. (2009). *Race data: The Asian alone population in the United States*. Washington, DC: Government Printing Office. Retrieved from <http://www.census.gov/population/www/socdemo/race/ppl-aa09.html>.
- United States Census Bureau (2010). *America Community Survey-Household Income in the Past 12 Months (Native Hawaiians and Other Pacific Islanders)* [Tables B19013E] Retrieved from [http://factfinder2.census.gov/bkmk/table/1.0/en/ACS/10\\_1YR/B19013E](http://factfinder2.census.gov/bkmk/table/1.0/en/ACS/10_1YR/B19013E).
- United States Census Bureau (2010). *America Community Survey-Median Household Income in the Past 12 Months (Asian Alone Householder)* [Table B19013D]. Retrieved from [http://factfinder2.census.gov/bkmk/table/1.0/en/ACS/10\\_1YR/B19013D](http://factfinder2.census.gov/bkmk/table/1.0/en/ACS/10_1YR/B19013D).
- United State Census Bureau (2010). *America Community Survey- Sex by Educational Attainment for the population 25 years and Over (Asian Alone)* [Tables B15002D]. Retrieved from [http://factfinder2.census.gov/bkmk/table/1.0/en/ACS/10\\_1YR/B15002D](http://factfinder2.census.gov/bkmk/table/1.0/en/ACS/10_1YR/B15002D).
- United States Census Bureau (2010). *America Community Survey-Sex by Educational Attainment for the population 25 years and Over (Native Hawaiians and Other Pacific Islanders)* [Tables B15002E]. Retrieved from [http://factfinder2.census.gov/bkmk/table/1.0/en/ACS/10\\_1YR/B15002E](http://factfinder2.census.gov/bkmk/table/1.0/en/ACS/10_1YR/B15002E).
- United States Census Bureau. (2010). *Los Angeles county quick facts*. Washington, DC: Government Printing Office. Retrieved from <http://quickfacts.census.gov/qfd/states/06/06037.html>.
- United States Census Bureau. (2011). *Birth, Death, Marriage, and Divorces* [Data file]. Retrieved from <http://www.census.gov/prod/2011pubs/11statab/vitstat.pdf>.

- United State Census Bureau (2012). *Census Bureau Reports: Most children younger than age one are minorities*. Retrieved from <https://www.census.gov/newsroom/releases/archives/population/cb12-90.html>.
- United States Census Bureau (2012). *State and County Quick Facts for San Diego and California*. Data derived from Population Estimates, American Community Survey, Census of Population and Housing, State and County Housing Unit Estimates, County Business Patterns, Non-employer Statistics, Economic Census, Survey of Business Owners, Building Permit. Retrieved from <http://quickfacts.census.gov/qfd/states/06/06073.html>.
- United States Census Bureau (2012). *People and Household-Race*. Retrieved from <http://www.census.gov/population/race/>
- United States Department of Education. (2005). 27<sup>th</sup> Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act, 2005, Vol. 2. Washington, DC: Government Printing Office. Retrieved from <http://www.eric.ed.gov/PDFS/ED499020.pdf>.
- United States Department of Health and Human Services. (2001). *Mental health: Culture, race, and ethnicity—A supplement to mental health: A report of the surgeon general*. Washington, DC: Government Printing Office. Retrieved from <http://www.surgeongeneral.gov/library/mentalhealth/cre/execsummary-1.html>.
- United States Department of Health and Human Services. (2003). *State Regulation of Residential Facilities for Children with Mental Illness*. Washington, DC: Government Printing Office. Retrieved from [www.samhsa.gov/News/NewsReleases/residfacilchildrenFinal.pdf](http://www.samhsa.gov/News/NewsReleases/residfacilchildrenFinal.pdf).
- United States Department of Health and Human Services. (2007). Trends in foster care and adoption FY 2000–FY 2005. Washington, DC: Government Printing Office. Retrieved from [http://www.acf.hhs.gov/programs/cb/stats\\_research/index.html](http://www.acf.hhs.gov/programs/cb/stats_research/index.html).
- United States Public Health Service (2000). *Report of the surgeon general's conference on children's mental health: A national action agenda*. Washington, DC: Government Printing Office: Retrieved from <http://www.surgeongeneral.gov/topics/cmh/childreport.html>.
- Weisz, J. R., Suwanlert, S., Chaiyasit, W., Weiss, B., Achenback, T. M., & Eastman, K. L. (1993). Behavioral and emotional problems among Thai and American adolescents: Parent report for ages 12-16. *Journal of Abnormal Psychology*, 102(3), 395-403.
- Weisz, J. R., Suwanlert, S., Chaiyasit, W., Weiss, B., Walter, B. R., & Anderson, W. W. (1988). Thai and American perspective on over- and undercontrolled child

- behavior problems: Exploring the threshold model among parents, teachers, and psychologist. *Journal of Consulting and Clinical Psychology*, 56(4), 601-609.
- Weisz, J. R., & Weiss, B. (1991). Studying the “referability” of child clinical problems. *Journal of Consulting and Clinical Psychology*, 59(2), 266-273.
- Wells, E. A., Morrison, D. M., Fillmore, M. R., & Catalano, R. F. (1992). Race differences in antisocial behaviors and attitudes and early initiation of substance use. *Journal of Drug Education*, 22, 115-130.
- Williams, D. R., & Mohammed, S. A. (2009). Discrimination and racial disparities in health: Evidence and needed research. *Journal of Behavioral Medicine*, 32(1), 20-47.
- Wood, P. A., Yeh, M., Pan, D., Lambros, K. M., McCabe, K. M., & Hough, R. L. (2005). *Mental Health Service Research*, 7(3), 184-196.
- Wynaden, D., Chapman, R., Orb, A., McGowan, S., Zeeman, Z., & Yeak, S. (2005). Factors that influence Asian communities’ access to mental health. *International Journal of Mental Health Nursing*, 14, 88-95.
- Yeh, M., Eastman, K., & Cheung, M. K. (1994). Children and adolescents in community health centers: Does the ethnicity or the language of the therapist matter? *Journal of Community Psychology*, 22, 153-163.
- Yeh, M., Forness, S. R., Ho, J., McCabe, K., & Hough, R. L. (2004). Parental etiological explanations and disproportionate racial/ethnic representation in special education services for youths with emotional disturbance. *Behavioral Disorders*, 29(4), 348-358.
- Yeh, M., McCabe, K., Hough, R. L., Dupuis, D., & Hazen, A. (2003). Racial/ethnic differences in parental endorsement of barriers to mental health services for youth. *Mental health Services Research*, 5(2), 2003.
- Yeh, M., McCabe, K., Hough, R., Lau, A., Fakhry, F., & Garland, A. (2005). Why bother with beliefs? Examining relationships between race/ethnicity, parental beliefs about causes of child problems, and mental health service use. *Journal of Consulting and Clinical Psychology*, 73(5), 800-807.
- Yeh, M., McCabe, Hurlbert, M. K., Hough, R., Hazen, A., Culver, S.,...Landsverk, J. (2002). Referral source, diagnoses, and service types of youth in public outpatient mental health care: A force on ethnic minorities. *Journal of Behavioral Health Services & Research*, 29(1), 45-60.



- Yeh, M., Takeuchi, D. T., & Sue, S. (1994). Asian American children treated in mental health system: A comparison of parallel and mainstream outpatient service centers. *Journal of Clinical Child Psychology*, 23, 5-12.
- Yu, S. M., Huang, Z. J., & Singh, G. K. (2010). Health status and health services access and utilization among Chinese, Filipino, Japanese, Korea, South Asian, and Vietnamese children in California. *Research and Practice*, 100(5), 823-832.
- Zhou, Z., Siu, C. R., & Xin, T. (2009). Promoting cultural competence in counseling Asian American children and adolescents. *Psychology in the Schools*, 46(3), 290-298.

## Appendix

### Overview of Studies Included in the Review

Study	Purpose	Design	Sample	Treatment Delivery Setting/MH Services	Measure	Key Findings
<i>School-based Mental Health Services (SBS)</i>						
Amaral, Geirstanger, Soleimanpour, & Brindis (2011)	-Evaluated predictors of School Based Health Centers (SBHC)-Mental Health Service (MHS) use -Compared MH characteristics of students who used SBHC vs. non-users -Examined relationship btw insurance status, utilization of other types of health srvs, & usage of SBHC	-Cross-sect. study from CA Dept. of Edu. (original sample N=5,451) - Survey administered in classrooms in all but 1 yr by teachers -API students overrepresented in survey compared to overall school pop	- N= 4,721 -Exclusion criteria: individuals who did not provide info about SBHC use -Race/Ethnicity: W=23.0%, H/L=22.0%, As-A=37.0%, PI=9.0%, AA=12.0%, AI=3.0%, Other=12.0% -Grade: 9-11 -Gender: F=56.0%; M=44.0%	-Four schools in Alameda County, CA w/ SBHC-MHS	-California Healthy Kids Survey (CHKS): assessed youth's health risk & behavioral, physical & mental status, SBHC use, insurance status, & healthcare utilization	-Lower proportion of SBHC-MHS API users than API non-users. -More APIs used SBHC-MHS compared to all identified racial/ethnic grps
Cummings & Druss (2011)	Examined differences in MH tx btw four racial/ethnic grps w/ MDD to any tx received, usage of prescription medication, tx for MDD across providers & usage of MHS types <sup>1</sup>	-Secondary analysis of cross-sectional study using data from National Survey on Drug Use & Health (original sample size N=90, 855) -Survey administered in Eng. & Span.	- N=7, 704 -Inclusion criteria: non-institutionalized individuals, U.S. civilian pop. from 50 states & DC. -Sub-sample of adolescents who experienced a MDE in the prev. yr -Race/Ethnicity: NHW= 61.8%, H=16.0%, A= 2.6%,	-MHS usage across inpatient, outpatient, & school settings in the US	-Computer-assisted interviewing instrument (CAI). Adapted from the depression section of the National Co-morbidity Survey-Adolescents (modified version of the Health	-As & Hs were sig. < likely to receive counseling in a school setting compared to NHWs

API (Asian-Pacific Islander): Asian (A)/Asian-American (As-A)/Asian-American Pacific Islander (AAPI)/Asian Pacific Islander American (APIA)

Latino (L): Hispanic (H)/Hispanic American (HA)/Mexican American (MA)/Latino/a American (LA)

African-American (AA): Black (B)

Caucasian: (C)/White (W)/Non-White Hispanic White (NHW)

			B= 11.7%, O= 7.0% -Age: 12-17yrs -Gender: M=24.5%; F=72.5%		Organization Composite International Diagnostic Interview- Short Form) (CID-SF): Tx of MDE in the past yr -National Survey of Drug Use & Health (NSDUH): receipt of MH tx across settings, provider types, race/ethnicity, non- clinical characteristics (age, gender, family status) & health status measures	
Cummings, Ponce, & May (2010)	-Evaluated differences btw racial/ethnic minority adolescents in MH counseling in clinical & school settings for individuals w/ high lvl of MH needs	-Secondary analysis of cross-sect. study that used data from the National Long. Study for Adolescents Health (original sample N=20, 745)	-N=18, 847 -Inclusion criteria: received psych. counseling in a clinical or school setting w/n the prev. 12 mths -Exclusion criteria: individuals w/ missing info on key variables -Race/Ethnicity: W=66.8%, H=12.0%, B=15.8%, AAPI=3.6%, Other=1.7% -Grade:7-11 -Gender: M=50.8%, F=49.2% -Dx: Depressive symptoms; S/T's; Suicide attempts; delinquent behaviors  <b>Caregiver's characteristics</b> -Family income: <15K=18.9%, 15-30K=18.2%,	-Specialty MHS/Psychological or emotional srvs received in clinical (private doctor's office, community health clinic, &/or hospital) or a school setting	-Center for Epidemiologic Studies Depression Scale (CES-D): Assess for MDD or dysthymia, reporting of S/T's w/ intent in the past 12 mths, & delinquent behavior, & MH need	-No sig. differences seen btw racial/ethnic minority adolescents for usage of counseling in school settings

Other (O): American Indian (AI)/Alaskan Native (AN)/Native Alaskan (NA)/Unknown (U), Bi-racial, Multi-racial

30-45K=19.7%,  
 45-60K=15.6%,  
 60K+=27.7%  
 -Resident parent(s) edu.:  
 <than HS=12.4%, HS  
 grad.=27.5%, some  
 college=30.5%, college  
 grad.=29.6%  
 -Insurance status: private  
 insurance=72.2%, public  
 insurance  
 (Medicaid/Medicare)=10.9%  
 , Other insurance=4.0%,  
 Uninsured=12.9%

Gudino, Lau, & Hough (2008)	<p>-Examined family immigrant status (FIS) &amp; MHS (internalizing vs. externalizing) effects on MHS use        - H1: There will be an assoc. btw lower use of MHS by minority youth (MY) &amp; FIS when controlling for youth MH needs        - H2: MY from U.S. families will more likely receive MHS for internalizing problems than MY from immigrant families        - H3: MY from immigrant families compared to youth w/non-immigrant families will be more likely to receive MHS for externalizing problems</p>	<p>- Secondary analysis of longitudinal study (Pattern of Care [POC] study), which examined service use in publicly funded agencies in San Diego County (original sample size N=1,715)        -Interview (parents &amp; child) @ home @ time 1 &amp; time 2.        - Interim telephone interviews @ 6, 12, &amp; 18 mths</p>	<p>-N= 457        -Exclusion criteria: respondents who were non-custodial parent; Did not provide self-report in POC study or baseline &amp; follow-up assess.        -Race/Ethnicity: HA=80.4%, API=19.6%        -Age: 11-18yrs, M=15.6yrs        -Gender: M=69.9%, F=30.1%  <b>Caregiver's Characteristics</b>        -API families had more missing data than HA families        - Immigrant caregiver=64.4% vs. U.S. born caregiver=36.4%        -API caregiver's place of birth: Philippines=30.4%, other S/SEA countries=36.3%, &amp; other Asian countries=7.9%, US=25.5%.        -Families immigrant status:</p>	<p>- Specialty MHS: visits to psychologist, psychiatrist, counselor, community MH clinic, &amp;/or partial hospitalization or day tx prgm. for emotional or behavioral issues         -School-based MHS: school counseling, placement in a special classroom, &amp;/or school for emotional or behavioral issues</p>	<p>-Interviews: youth (age, sex, race/ethnicity, insurance status) &amp; caregiver (immigrant status) characteristics        -DISC-IV: assess for externalizing &amp; internalizing dx        - Child Behavior Checklist (CBCL): assess for internalizing &amp; externalizing based on parent report        - YSR: assess for internalizing &amp; externalizing based on child report        -CIS: assess for f(x) (interpersonal, psychopathology domain, f(x) @ school work, &amp; use for leisure time        -SACA: assess for MHS use        -Study measures</p>	<p>-Race/ethnicity was not assoc. w/ school-based MHS receipt when comparing immigrant vs non-immigrant status</p>
-----------------------------	--	---	--	--	---	--

			immigrants=63.4%, non-immigrants=36.6%		translated in: Span., Camb., Lao, Tagalog, & Viet.	
Gudino, Lau, Yeh, McCabe, & Hough (2009)	-H1: There will be < racial disparities in MHS use for externalizing problems than internalizing problems -H2: stronger assoc. btw internalizing problems & MHS receipt in NHW than minorities, & similar assoc. btw externalizing problem & MHS in NHW & minorities	- Secondary analysis of longitudinal study (Pattern of Care [POC] study), which examined service use in publicly funded agencies in San Diego County (original sample size N=1,715) -Interviews (parent & child) took place @ home @ T1 (baseline) & T2 (2yrs) -Interim tel. phone interview @ 6, 12, & 18 mths	- N=1,108 -Exclusion criteria: incomplete baseline diagnostic interview; 'Special help in a regular classroom' in school-based srv sample -Race/Ethnicity: NHW=38.7%, HA=29.3%, AA=22.7%, API=9.3% -Fewer eligible APIs participated in the study compared to other racial/ethnic grps -Age: 11-18yrs, M=15.2yrs -Gender: M=66.9% (761), F=33.1% - Specialty MHS use: API=25.2%; HA=43.4%; AA=45.8%; NHW=57.1%; Overall=47.6% - SBS use: API=40.0%; HA=54.2%; AA=63.7%; NHW=66.2%; Overall=59.7%	- Specialty MHS: visits to psychologist, psychiatrist, counselor, community MH clinic, &/or partial hospitalization or day tx prgm for emotional or behavioral issues -School-based MHS: school counseling, placement in a special classroom, &/or school for emotional or behavioral issues	-Demographic variables: age, sex, race/ethnicity, & annual income - DISC-IV: assess Internalizing/ Externalizing dx - CBCL & Youth Self-Report (YSR): assess for Internalizing/ externalizing dx -Columbia Impairment Scale (CIS): assess for youth fx @ school based on parent report -SACA: MHS use @ baseline & follow-up (2yr)	-APIs w/ externalizing problems were more likely to receive SBS than APIs w/ non-sig. problems -Internalizing needs were not assoc. w/ increased probability of SBS for APIs -API youths were < likely to receive SBS compared to NHWs (even after accounting for demographic variables, symptom lvl, & youth's impairment) -Externalized needs were only assoc. to API's SBS needs -Hs & APIs w/o clinical sig. problems were < likely to receive SBS than NHWs w/o sig. clinical problems -APIs w/ internalizing problems were < likely to receive SBS than NHWs w/ internalizing problems
McCabe et al. (1999)	Examined representation rates of four ethnic grps & five sector srvs by comparing three diff. census data	Longitudinal study (Pattern of Care [POC] study), which examined service use in publicly funded agencies in San Diego County	- N= 11,515 -Inclusion criteria: sectors that had active youths -Race/Ethnicity: AA=22.0%, A/PIA (Fil., Viet., Lao., Camb., Chin., Kor., Ind., Samo., & Jap.)=5.0%,	-School services for youth w/ SED: Youth designated as having serious emotional disturbance defined by Individuals w/Disabilities Ed.	-MIS databases: proportion of racial/ethnic pop. served by each srv sectors -1996 Census of Pop. & 1996 Housing:	-A/PIAs were underrepresented in SED compared to other racial/ethnic grps

			<p>C=40.0%, L=30.0%, O/Un=3.0% -Age:birth-18yrs -Gender: N/A -Comparison grp: 1996 Census Estimates-Full Census, 1996 Census Estimates at or below 200% of the Poverty Lvl, &amp; 1997 San Diego County Public School Enrollment Census -APIA Public sector involvement: MH=4.5%, &amp; SED=2.2%, ADT=10.8%, JJ=8.8%, CW= 2.5%,</p>	<p>Act law &amp; the CA edu. code -Mental health: youth who received any type of srvs. through county MHS prgm. (e.g. meds. Consult, therapy, psychological assess.) -No other detailed description provided about tx setting</p>	<p>Public Use Microdata Sample -1997 San Diego County Public School Enrollment Census</p>	
<p>Wood, Yeh, Pan, Lambros, McCabe, &amp; Hough (2005)</p>	<p>- Examined racial/ethnic differ. in age when youths were 1st identified for SBS &amp; specialty MHS use</p>	<p>- Secondary analysis of longitudinal study (Pattern of Care [POC] study), which examined service use in publicly funded agencies in San Diego County (original sample size N=1, 715) -Interviews (parent &amp; child) took place @ home@ T1 (baseline) &amp; T2 (2 yrs) -Interim tel. phone interview @ 6, 12, &amp; 18 mths</p>	<p>- N=1,552 -Inclusion criteria: @ least 1 interview completed by youth or caregiver -Exclusion criteria: biracial or "other" youth; Cases that could not be located; Refused or did not have permission to participate -Race/Ethnicity: AA=22.0%, L=31.3%, A/PI=7.0% (Fil.=31.0%, Camb.=20.0%, PI=14.0%, &amp; Viet.=13.0%, &amp; other API grps were mentioned but not specifically identified), NHW=39.8% -Fewer eligible APIs participated in the study compared to other racial/ethnic grps -Age: M=13.9yrs -Gender: M=66.0%, F=34.0% Public sector involvement: MH=53.5%, SED=15.6%,</p>	<p>- Specialty MHS: visits to psychologist, psychiatrist, counselor, community MH clinic, &amp;/or partial hospitalization or day tx prgm for emotional or behavioral issues -School-based MHS: school counseling, placement in a special classroom, &amp;/or school for emotional or behavioral issues</p>	<p>-Interview (demographics- Race/ethnicity &amp; income) -SACA: assess for MH use across different settings -C-GAS: assess for global fx impairment</p>	<p>-APIs, Ls, &amp; AAs were &lt; likely to receive SBS compared to NHWs -APIs &amp; Ls were &lt; likely to receive SBS btw 6-10yrs compared to NHWs -APIs received SBS @ an older age compared to NHWs</p>

ADT=3.5%, JJ=29.5%,  
CW=33.5%

**Caregiver's Characteristics**

Caregiver's Income: 20-24K per/yr  
-Caregiver's edu lvls: no degree=28.4%, high school or voc. training=44.2%, & report any edu.=27.4%  
-Caregiver's relationship to youth: bio. Parent=70.0%, adopt/step=5.3%, close relative= 10.7%; foster=9.0%, non-relative=2.0%, no-caregiver=4.0%

Yeh, Forness, Ho, McCabe, & Hough (2004)	-Examined parental perception of the relationship btw problems seen w/ their children & the relationship of ED identification in Special Ed. for minority children - H1: parental explanatory beliefs at baseline interview would partially mediate the relationship btw ED srvs follow-up & race/ethnicity	- Secondary analysis of longitudinal study (Pattern of Care [POC] study), which examined service use in publicly funded agencies in San Diego County (original sample size N=1,715) -Surveyed primary caregivers & youths at baseline -Surveyed primary caregiver at 2yr follow-up for ED srv use	-N= 1,019 -Inclusion criteria: youths qualified @ 2 yr follow-up; Completed data for all study variables -Race/Ethnicity: NHW=45.0%, AA=22.4%, A/PIA=5.5%, L=27.1% -Fewer A/PIAs participated in study compared to other racial/ethnic grps -Age: 6 -17yrs, M=12.83yrs -Gender: M=66.1%, F=29.1% - Public sector involvement: ADT=4.2%, MH=54.8%, SED=28.8%, JJ=18.2%, CW=32.0%	-Did not provide detailed description of special edu. srvs	-CBCL: assess externalizing & internalizing dx based on parent report -The Beliefs About the Causes of Children Problems-Parent Version: evaluate caregiver's explanatory etiologies for child's problems (physical, personality, relational, familial, trauma, friends, American culture, prejudice, economic problem, spiritual causes, natural disharmony - Management Info. Sys. (MIS) database: use of ED srvs @ time 2	-Similar to Ls, A/PIs were sig. < likely to use ED (emotional disturbance) srv compared to NHWs -Similar to Ls, A/PIs parental explanatory beliefs played a mediating factor btw race/ethnicity & ED srvs follow-up at 2yrs
			<b>Caregiver's Characteristics</b>			
			-Caregiver's edu.: high school grad or lower=68.4% -Median income: \$20, 000-\$29, 999/yr			

-Caregiver's relationship to youth: biological=72.4%, Adopted or stepparent=6.1%, blood relative=11.4%, non-relative foster parent=8.7%, non-relative caregiver=1.6%

Yeh et al. (2002)	- Examined patterns for referral, dx, & types of srv based on race/ethnicity in public outpatient MH care	- Secondary analysis of longitudinal study (Pattern of Care [POC] study), which examined service use in publicly funded agencies in San Diego County (original sample size N=4,176)	<p>-N=3,962</p> <p>-Inclusion/Exclusion criteria: person who race/ethnicity was not determined or did not identify w/ one of the 4 racial/ethnic grps</p> <p>-Race/Ethnicity: NHW=50.1%, AA= 18.0%, APIA=3.1%, L=28.8%</p> <p>-Age: 1-18yrs</p> <p>Gender: M= 61.5%; F=38.5%</p> <p>-Referral sources: CW=23.5%, crisis srvs=2.3%, family=18.2%, JJ=3.2%, med. Facility=3.3%, MH agency=13.7%, school=18.0%, other=6.9%, missing=10.9%</p> <p>- MH Utilization: crisis= 8.2%, SED link.=5.2%; outpatient clinic=41.2%, outpatient institutional srvs=35.0%, case mgt=4.4%</p> <p>- Participants dx: adjustment=12.2%, AD=5.6%, ADHD=17.7%, DBD =15.0%, Impulse control=4.3%, MMD=19.9%, psychotic=1.7%, substance-related=1.4%, &amp; v-code (abuse or neglected)=13.4%</p>	-SD County outpatient MHS	-Service type: crisis, special edu. link. to MH assess., outpatient clinic srv., outpatient Institution srv., case mgt., & intensive case mgt. (wrap around intervention)	-MIS Database (enrollment in county MHS program: youth age, gender, race/ethnicity, referral source, primary dx, type of srv., & GAF score of most recent ep. of care	-APIAs were < likely to receive special edu, linked MH assess srv compared to NHWs
-------------------	---	---	---	---------------------------	---	---	--



---

**Community-Based Mental Health Services (MHS)**


---

Akutsu, Tsuru, & Chu (2010)	<p>-Examined pre-intake attrition of As-A youths by looking at ct demographics, &amp; clinical characteristics</p> <p>-Evaluated intake attendance by looking at procedures to increase ct engagement (ct-therapist, lang. matching), &amp; responsive clinical procedures (assign. of prescreening interviewer as therapist in early stages of tx)</p> <p>-H: Asian ethnic-specific MH prgms., responsive clinical practice procedures would predict higher rates of intake attendances</p>	<p>-Long. Study using secondary data analysis to look at As-A who have been treated for the 1<sup>st</sup> time from AA ethnic specific oriented MH prgms</p> <p>-Prescreening info. gathering done in lang. of ct's choice via phone (90%) &amp; face-to-face (10%) to determine appropriate contact team for intake</p>	<p>-N= 236</p> <p>-Inclusion criteria: Self-identified as As-A; Provided valid info. about demographics, clinical, matching, % serving prgms; Clt assigned to intake at ethnic-specific prgms who were not better referred to other srvs</p> <p>-Race/Ethnicity: E. As-A=54.7% &amp; SEA=45.3%</p> <p>As-A sub-racial grp participants: Chin. =27.1%, Viet. =16.9%, lu Mien=9.3%, Camb.=9.3%, Lao.=8.9%, &amp; Fil.=8.5%, &amp; other As-A grps that were not specifically identified</p> <p>-Age =3-18yrs, M=13.3yrs, &lt;6yrs=5.1%, 7-9yrs=12.7%, 13-15yrs=28.4%, 16-18yrs=34.7%</p> <p>-Gender: M=54.2%, F=45.8%</p> <p>-Primary lang. spoken by participant in an Asian lang. or Asian dialect=51.7%</p> <p>-Common reported probs: behavioral=36.9%, depression=34.7%, &amp; family related=26.7%</p>	As-A ethnic specific oriented MH prgms in N. CA	<p>-MIS at program sites: Clt demographic &amp; clinical info., demographics of prescreening interviewer, srv. agency info, &amp; attendance rate of intake appt (dropout)</p>	<p>-Intake attendees (IA) were younger than intake non-attendees (INA)</p> <p>-IA reported &lt; likely to come for family problems compared to INA</p> <p>-Higher ct-therapist matched rates for IA than INA</p> <p>-Prescreening interviewers @ srv. agency found IA needing more urgent care or appt than INA</p> <p>-Higher rates of IA had therapist who were also their prescreening interviewer</p> <p>-Higher rates of gender &amp; prescreening interviewers matched for IA than INA</p> <p>-Increased in intakes assoc. to ethnic match btw clts &amp; prescreeners, urgent care determination assignment, &amp; assignment of the prescreener interviewers as the intake therapist</p>
Bui & Takeuchi (1992)	<p>-Explored differences seen in minority children &amp; adolescents to W adolescents who entered the community MH system by evaluating utilization of</p>	<p>Long. Study evaluating outpatient srvs at MH facilities in LA County</p>	<p>- N=3,191</p> <p>-Inclusion criteria: cases w/ multiple ep. in data set</p> <p>-Exclusion criteria: children who used inpatient srvs, continuous care, day tx, or emergency srvs. clts w/</p>	<p>-Community outpatient MHS in LA County</p> <p>-Service types included: assessment, collateral, crisis, grps, individual,</p>	<p>Data from LA Dept. of MH:</p> <p>-Utilization: dropout rate, outpatient care lvl of usage, &amp; length of tx</p> <p>-Background info: age,</p>	<p>- As-A were underrepresented in the MH system when compared to LA County MH pop. est</p> <p>-There were no sig. finds btw racial/ethnic grps</p>

<p>outpatient MH care. Specifically examined premature termination, freq. of utilization, &amp; length of stay</p>	<p>missing values for any of the measures          -Race/Ethnicity: AA=(853) 26.7%, As-A=(704) 22.1%, MA=(964) 30.2% , W=(670) 21.0%          -Dropout rates from clinic: AA=18.3%, As-A=19.5%, MA=17.5%, W=18.8%          -As-As were not randomly sampled due to a small clinical pop. sample compared to other ethnic grps          -Age:13-17yrs          M:AA=15.3yrs, As-A=15.3yrs, MA=15.2%; W=15.2yrs          -Gender:          AA F:30.0%, M:70.0%          As-A F=44.0%, M:56.0%          MA F=43.5%, M=56.5%          W F=44.5%, M=55.5%          -Ep. open: AA=1,291, As-A=907, MA=1,249, W=985          -API referral source:          family/relatives=27.6%, social/legal agency=45.9%, school=12.4%, health/MH=14.2%          - API MHS access:          continuous care=0.6%, day tx=1.8%, inpatient=1.2%, outpatient=96.4%          - Income: poverty status=74.6%, non-poverty=25.4%          - API Dx:          adjustment=30.1%, CD=17.0%, affect=8.1%, schizophrenia=3.0%, &amp; other</p>	<p>medical, &amp; miscellaneous)</p>	<p>poverty status, referral source, &amp; psychiatric dx</p>	<p>when looking @ freq. of outpatient use dropout rates (1<sup>st</sup> ep) &amp; length of stay for tx who did not dropout in their 1<sup>st</sup> ep          -As-As had the fewest avg. ep opened per clt compared to other racial/ethnic grps          -As-As were more likely to be dx w/ adjustment D/O &amp; other D/Os (organic brain syndrome, drug problems, cog. impairment, non-psychiatric dx, or deferred dx) than CD          -Similar to MAs, As-As had lower rates of being referred from social agencies &amp; higher rates from school          -When related variables were controlled, As-As tend to stay in tx longer than Ws</p>
--	---	--------------------------------------	--	---

			dx=42.0% (organic brain syndrome, drug probs., cog. impairments, non-psychiatric, or deferred dx), & adjustment			
Cumming & Druss (2011)	Refer to SBS section for further details about this study	Refer to SBS section for further details about this study	Refer to SBS section for further details about this study	Refer to SBS section for further details about this study	Refer to SBS section for further details about this study	-As & Hs were < likely to receive MH visits from outpatient settings compared to NHWs -However, there were no sig. differences btw # of outpatient visits when comparing As, Bs, & NHWs who received outpatient srvs
Garland et al. (2005)	Evaluated whether differences occurred when predictive factors (family income, fx impairment, caregiver strain) were controlled for utilization of MHS by high-risk racial grps in public system of care	- Secondary analysis of longitudinal study (Pattern of Care [POC] study), which examined service use in publicly funded agencies in San Diego County (original sample size N=1,715)	- N= 1,256 -Inclusion criteria: completed diagnostic & srvs data from adult & children interviews -Exclusion criteria: identified as biracial or other category; Interviewees who did not speak Eng -Race/Ethnicity: NHW=44.0%, LA=26.0%, AA=22.0%, AA/PI=7.0% -Fewer eligible AA/PIs participated in the study relative to other racial/ethnic grps -Age: M=13.7yrs -Gender: M=66.0%, F=34.0% - API's MHS access: outpatient (specialty=32.8%, other non-specialty srv=19.6%); 24hr care srvs (inpatient =3.6%, residential grp=1.9%); informal srv car (self-help=16.7%,	-Types srv settings: outpatient, inpatient, grp/residential tx, & non-specialty -Outpatient srvs (included specialty outpatient care & non-specialty care) -24hr care srvs(inpatient care & residential tx/grp homes) -"Informal" srvs (self help/peer counselors or alternative healers)	-SACA: assess use of diff. types of MH & substance srvs -DISC-IV: assess psychiatric dx w/n past yr -CGAS: assess global fx impairment -CIS: assess parent & youth-fx impairment -Caregiver Strain Questionnaire: assess parents' perceptions of burden/impact for caring of a child w/ behavioral problems -CES-D: assess caregivers' depressive symptoms -Parental reported info: police contact, parent's edu. lvl, family income, & insurance status	-When controlled for confounding variables, it was predicted that AA/PIs & AAs were half as likely to receive MHS & use outpatient srvs use compared to NHWs -APIs & AAs were < likely to use outpatient srvs when compared to NHWs

			<p>clery=8.6%, alternative healer=1.0)          -API Sector involvement: ADT, MHS, &amp; SED=65.4%; CW &amp; JJ=34.6%</p> <p><b>Caregiver's characteristic</b>          -Caregiver's relationship to youths: biological=72.0%, adoptive or foster parents, stepparents, &amp; a small # of professional caregivers          -API family income: &lt;/\$13,000= 28.3%; &lt;/\$25,000=30.5%; &lt;/\$45,000=20.4% ; &gt;=\$45,000=20.7%          -Any college education: API=22.7%; NHW=41.6%; AA=29.9%; L=10.9%</p>			
Jerrell (1998)	<p>Explored the effects of client-therapist ethnic matching in outpatient MHS w/ regard to length of stay in outpatient srvs &amp; whether there was usage of more intensive srvs (day tx, emergency, &amp; inpatient srvs)</p>	<p>-Cross-sect. retrospective study examining youth who are part of public MH in CA</p>	<p>- N= 4,656 (48.0% of sample were ethnic youths)          -Inclusion criteria: youth having multiple problems (involvement in JJS or ward of SS); Identified ethnic match btw clt-therapist          -Race/Ethnicity: H, A, B          -Age: 13-17yrs          -Gender: F          -Dx: ADHD, psychotic D/Os, CD, dysthymia, symptom/other D/O, major affective D/O, alcohol/drug D/Os, personality D/Os          - MH utilization: emergency srv=205; inpatient srv=102; day tx srv=634</p>	<p>-CA county public MHS (ethnic-specific agencies or srvs provided by ethnic staff in mainstream clinics)          - Tx srvs settings: outpatient tx srvs, day tx srvs, emergency tx srvs, &amp; inpatient srvs          -Special inpatient unit, sub acute residential programs, day tx serviced by residential tx sites, free-standing &amp; school sites, clinic &amp; SB outpatient srvs, crisis srvs, &amp; cases mgt.</p>	<p>-Main system-wide management &amp; billing info. system for agency funded by county public MH authority in CA: srv use data, age, gender ethnicity, type of problems, ethnic match w/client-therapist in outpatient, dx, # of outpatient or day tx for emergency &amp; inpatient</p>	<p>-No sig. differences found in outpatient srvs among ethnic minorities (H, A, B)          - Ethnic minorities who used ethnic similar outpatient often stayed in tx longer than individuals who attended mainstream clinics</p>

Leslie et al. (2000)	-Examined the impact that age, race/ethnicity, gender, maltreatment history, placement setting, & clinical behavioral problems has on foster children usage of MHS	- Secondary analysis of Long. Study funded by NIMH & NCCAN (original sample N=1,078) -Face-to-face interviews w/ caregiver & children @ 6, 12, & 18 months following entry into foster care -Children stayed in study for 18 months or until reunified w/ family	- N=480 -Inclusion criteria: Must not have an open case in local CW sys. 2yrs older from 1 <sup>st</sup> out-of-home interview. 1 <sup>st</sup> interview w/in 1yr of removal; Out-of-home care for 4 mths after entering foster care; Placed in SD county. Data available @ Dept. of SS -Inclusion criteria: did not spent any time in restrictive care -Race/Ethnicity: L=22.5%, AA=27.5%, A/O=5.6%, C=44.2% -Age: 0-16yrs, M=6.1yrs 1-3yrs=31.3%, 4-5yrs=19.2%, 6-11yrs=38.3%, 12-17yrs=11.3% -Gender: F=55.2%, M=44.8% -Type of maltreatment: sexual abuse=14.0%, physical abuse=25.4%, neglect=68.1%, emotional=13.3%	-Foster care children in SD County who received srv from an outpatient MH clinic	-Social Srv Reporting Sys. (SSRS) available by the SD County Children Srvs Bureau: demographics, maltreatment history, & placement of child - CBCL: assess for internalizing & externalizing problems -SD County MH Mgt. Info Sys. (MHMIS) & Medicaid Mgt. Info. Sys. (MMIS): # of outpatient MH visits	- A/Os had the fewest mean # of outpatient visits compared to other racial/ethnic grps
Yeh, Eastman, & Cheung (1994)	Examined the relationship btw ethnic & lang. match on tx outcome based on length of tx, lvl of f(x) at discharge & rate of	- Cross-Sect. Study of youths utilizing outpatient srvs	- N=4,616 -Inclusion criteria: Only 1 <sup>st</sup> time cts -Exclusion criteria: Children or adolescents who utilized emergency srvs or assess.	Outpatient srvs @ LA County MH facilities	-Demographic characteristics: age, ethnicity, gender, Medi-cal eligibility, & dx, admit f(x) at baseline (GAS)	-Ethnic matching was a sig. predictor for lower dropout rate, more total # of session attended, & discharged f(x) score for As-A, MA, & AA

#### Caregiver's Characteristics

-Caregiver's involvement: kin only=11.1%; Kin + foster=38.2%; foster only=50.7%

	dropout after 1 session		cases -Race/Ethnicity: AA=26.4%, As-A=19.6%, C=21.6%, MA=32.5% -Age:6-17yrs -Gender: N/A -Primary Dx: PDD, Organic Brain Syndrome, Schizophrenic, Paranoid, Schizophreniform, Schizoaffective, MDD, & Bipolar		-Cultural responsive measures: ethnic & lang. match -Dependent variables: dropout/premature termination, total # of sessions, f(x) lvl at discharge based on GAS	adolescents -There were no sig. differences across children of all racial/ethnic grps w/ ethnicity or lang. matching, rates of dropout, tot. # of sessions, or discharged f(x) scores
Yeh, Takeuchi, & Sue (1994)	-Examined the kind of delivery srvs provided @ Parallel Ctr. (PC) for As-As compared to Mainstream Ctr. (MC) about utilization & tx effectiveness of srvs - H1: Both srvs would have similar clt characteristics - H2: PC would be more successful at matching therapist's ethnicity to clt's ethnicity - H3: As-As who use PC would be more likely to continue tx compared to As-As who use MC -H4: As-As in PC would experience better tx outcome than As-As using MC	- Long. Study examining who used LA MH facilities	-N=912 (PC=489, MC=423) -Inclusion criteria: first-time cts -Exclusion criteria: Assessment cases; Utilized emergency srvs & juvenile detention ctrs -Race/Ethnicity: As-A (Chin., Jap., Kor., Fil., Viet./Indochinese in PC; C in MC -Age: 0-18yrs -Gender: M in MC=64.0%, PC=69.0%; F in MC=36.0%, PC=29.0%	-Four PC in LA county -Did not provide specific details about MH ctrs -PC= Provide srvs specifically to As-A -Thirty-two MC in LA County -MC= did not identify serving ethnic-specific community	-Client Characteristics: age, sex, SES (Medi-Cal), & admin. fx(GAS) -Prgm Characteristics: ethnic match btw therapist & ct -Utilization: dropout & length of tx -Outcome: fx lvl of discharge (GAS)	-No differ. in clt eligibility btw MC vs. PC -More M served at PC -M age of @ MC was sig. higher than PC -As-As had higher admission fx scores @ PC than clts in MC -Higher rates of therapist-clt ethnicity matching @ PC (71% vs 8%) -Lower dropout rates srv utilization at PC than MC (6% vs 28%) -More sessions attended at PC than MC -Higher f(x) scores @ discharge in PC than MC -SEA-As were < likely to benefit from srvs than other As-As
<b>Group Home/Residential treatment</b>						
Garland et al. (2005)	See Community-based MHS for details	See Community-based MHS for details	See Community-based MHS for details	See Community-based MHS for details	See Community-based MHS for details	-No sig. differences in racial grp utilization of resident group

Lu, Landsverk, Ellis-MacLeod, Newton, Ganger, & Johnson (2004)	Examined the correlation btw. background characteristics (e.g. age, gender, race/ethnicity, reason for referral) & case outcome decisions (e.g. case open to srv, out-of-home placement & family unification)	<ul style="list-style-type: none"> <li>-Long. study of children placed in out-of-home care part of the Foster Care MH Project (FCMH)</li> <li>-Data collected by staff on a weekly basis for 18 mths</li> <li>-Eval. of data @ 6 wks to determine if case was opened</li> <li>-Eval. @ 17 mths to determine if reunification occurred</li> </ul>	<ul style="list-style-type: none"> <li>- N=3,963</li> <li>-Inclusion criteria: must be btw 0 -16yrs at referral; Files open w/ CPS at referral; Referred for anything other than sexual or physical abuse, neglect, or caretaker absent; Missing info. (gender, race, or case outcome data); Individuals who live in 2 unidentified county.</li> <li>- Race/ethnicity: Anglo=39.6%, AA=28.1%, H=26.8%, A/O (API, NA, A, O)=5.6%</li> <li>-A/O underrepresented when looking at SANDAG census data</li> <li>- Age: 0-16yrs, coll. in four grp. 0-1yrs, 2-4yrs, 5-10yrs, 11-16yrs</li> <li>-Gender: M=48.2%; F=51.8%</li> <li>-Reasons for referrals: sexual abuse, physical abuse, neglect by caretakers, &amp; others (excluded from analysis)</li> <li>-Youth's placement after referral: out-of-home care=56.0%; foster care=60.7%; relatives=&lt;37.6%; residential facilities=5.7%</li> </ul>	<ul style="list-style-type: none"> <li>- A group home in SD County for children &amp; adolescents suspected of maltreatment</li> </ul>	<ul style="list-style-type: none"> <li>-Referral logs from grp. home: age/gender, race/ethnicity, &amp; reason for referral</li> <li>-SSRS (case outcome): out-of-home placement &amp; open to srv</li> <li>-MSA (Major Statistical Area): census data for SD</li> </ul>	<ul style="list-style-type: none"> <li>-A/Os, Hs, &amp; Anglos participants were underrepresented when compared to community sample</li> <li>-A/Os had lower % of open to srv, placed-out-of-home, or not reunified cases compared to AA &amp; similar % to Hs &amp; Anglos.</li> <li>-A/Os had the lowest proportion of referral for which cases were opened compared to AAs, Anglos, &amp; Hs</li> <li>-Most frq. opened case or not being reunified for A/Os was btw 11-17yrs when compared to Anglos, Hs, &amp; Bs.</li> <li>-A/Os were more likely to be referred for sexual abuse than other types of referral</li> <li>-A/Os often reported their own parents to CPS due to cultural conflict or parent-child power struggles</li> </ul>
--	---	--	---	--	--	---

Pottick, Warner, & Yoder (2005)	<p>Evaluated the # of youths living away from their families at time of admission to specialty MH prgms in the US</p> <p>- Examined sociodemographic &amp; clinical characteristics of youths living away (foster care, grp care settings, correctional settings, &amp; emancipated) from their families &amp; subgroups that may benefit from specific intensive srvs</p> <p>-Described the relationship btw prior living situation of the youth &amp; admission to MHS (specialty MH outpatient or residential)</p> <p>-H1: Youths living away from their families will have more severe clinical profiles than youths living w/ their families</p> <p>-H2: Youths living away from their families will more likely be admitted to residential prgms compared to outpatient prgms</p>	-Cross-sectional study using national representative sample from the Center for MHS	<p>- N= 3, 995</p> <p>-Inclusion criteria: admitted or discharged youths from inpatient, outpatient, &amp; residential prgms. All patients under the care in these prgms on 05/01/97</p> <p>-Exclusion criteria: individuals or grp office-based practices</p> <p>-Race/Ethnicity: NHW=61.4%, NHB=22.6%, H=13.4%, API/ NA=13.4%</p> <p>-Age: 0-5yrs=6.8%, 6-12yrs=50.3%, 13-17yrs=42.9%</p> <p>-Gender: M=63.5%, F=36.5%</p> <p>-MH prgms: outpatient=91.9%, residential care: 5.9%, inpatient: 2.2%</p> <p><b>Caregiver's Characteristic</b></p> <p>-Living situation: With family (bio., step, adoptive)=77.8%, away from family (foster, grp., correctional, emancipated)=22.2%</p>	<p>Examined 1598 MH prgms in US (inpatient, outpatient, or residential) in the US from General Hospital MHS &amp; 1994 Inventory of MH data source</p> <p>-Inpatient: licensed psychiatric hospital or separate psychiatric srvs in a general hospital that provides 24hrs psychiatric care</p> <p>-Outpatient: MH clinic or agency that provides individual &amp; grp therapy, &amp; other MHS</p> <p>-Residential: 24hr srvs where youths live &amp; receive MHS.</p> <p>This can include: independent or larger organization RTC, or prgms operated w/n general or psychiatric hospital, or other MH facilities</p>	-1997 Client/Patient Sample Survey (CPSS): specialty MH prgm involved, living situation, clinical indicators (dx), & sociodemographic characteristics (race/ethnicity & source of payment srvs)	-There were no sig. differences btw racial/ethnic grps & types of living away situation (grp homes, foster care, correctional settings, & emancipation)
---------------------------------	---	---	--	--	---	---

### ***Inpatient Psychiatric Care***

Chabra, Chavez, Harris,	-Identified MH dx that led to acute	-Population-based (Cross-sectional) study	<p>- N=27,595</p> <p>-Inclusion criteria: 1<sup>st</sup> dx</p>	-617 Statewide nonfederal acute care	-CA Health & Welfare Agency Data Ctr &	- A/Os & Ls had lower risks than Ws to be dx w/
-------------------------	-------------------------------------	---	---	--------------------------------------	--	---



& Shah (1999)	<p>hospitalization care</p> <ul style="list-style-type: none"> <li>-Estimated differences seen in the relationship btw race/ethnicity &amp; gender on risk of hospitalization</li> <li>-Evaluated the cost of inpatient psychiatric tx based on hospital days &amp; charges</li> </ul>	<p>examining hospitalization of adolescents in CA</p>	<p>listed in records (dx for hospitalization); Hospital day calculation included up to 1 yr hospitalization.</p> <ul style="list-style-type: none"> <li>-Exclusion criteria: Cases w/ multiple hospitalizations; 11 State hospitals serving severely developmentally disabled &amp; mentally D/Os. MH dx that was not principal concern. Dx: eating D/Os, organic mental D/Os, &amp; tic D/Os. Did not identify w one of the racial/ethnic grps</li> <li>-Race/Ethnicity: W=67.8%, AA=9.2%, L=17.7%, A/O(A, NA/Esk., Other)=3.3%,</li> <li>-Age: 10-19yrs; majority btw 13-16 yrs</li> <li>-Gender: M=51.3%, F=48.7%</li> <li>-Dx: Depressive, substance abuse, adjustment, psychotic, bipolar, disruptive behavior, AD, schizophrenia, &amp; impulse control</li> <li>-Dual dx: 66.0%</li> <li>-Referral types: Admission office or hospital-based outpatient dept. (routine)=80.8%, ER=8.2%, short-term acute care hospital=7.8%, &amp; other (intermediate care facility, skilled nursing facility, other types of facility, home health srvs)=3.2%</li> </ul>	<p>hospitals providing mental illness hospitalizations</p>	<p>CA Office of Statewide Health Planning &amp; Development: CA hospitalization info</p> <ul style="list-style-type: none"> <li>-Intercensal projections for pop. of adolescents 10-19yrs from State of CA</li> <li>Dept. of Finance: risk rates of hospitalization based on gender &amp; race/ethnicity</li> <li>-Medical Care statistics Section of the CA Dept. of Health</li> <li>Srvs: estimate of adolescents eligible for Medi-Cal</li> </ul>	<p>(e.g. mood D/Os or AD) except for Schizophrenia</p> <ul style="list-style-type: none"> <li>-A/Os &amp; Ls had lower risks of being hospitalized in an inpatient whether they received public or private insurance compared to NHWs</li> </ul>
			<p><b>Caregiver's Characteristics</b></p> <ul style="list-style-type: none"> <li>-Insurance type: Medi-</li> </ul>			

			Cal=34.9%; fee for service=25.6%; HMO/PHP=29.6%; Other=9.8%; Unknown=0.1%			
Cummings & Druss (2011)	Refer to SBS section for further details about this study	Refer to SBS section for further details about this study	Refer to SBS section for further details about this study	Refer to SBS section for further details about this study	Refer to SBS section for further details about this study	-No racial/ethnic differences in the likelihood of having an inpatient stay
Garland et al. (2005)	Refer to Community-Based MHS section for further details about the study	Refer to Community-Based MHS section for further details about the study	Refer to Community-Based MHS section for further details about the study	Refer to Community-Based MHS section for further details about the study	Refer to Community-Based MHS section for further details about the study	API's were sig. < likely to use inpatient srvs compared to NHWs
Jerrell (1998)	Refer to Community-Based MHS section for further details about the study	Refer to Community-Based MHS section for further details about the study	Refer to Community-Based MHS section for further details about the study	Refer to Community-Based MHS section for further details about the study	Refer to Community-Based MHS section for further details about the study	-No sig. predictors of differences for inpatient utilization
<b>24-Hour Crisis Care</b>						
Garland et al. (2005)	Refer to Community-Based MHS section for further details about the study	Refer to Community-Based MHS section for further details about the study	Refer to Community-Based MHS section for further details about the study	Refer to Community-Based MHS section for further details about the study	Refer to Community-Based MHS section for further details about the study	-No sig. differences in racial/ethnic grp utilization of 24hr CC
Jerrell (1998)	Refer to Community-Based MHS section for further details about the study	Refer to Community-Based MHS section for further details about the study	Refer to Community-Based MHS section for further details about the study	Refer to Community-Based MHS section for further details about the study	Refer to Community-Based MHS section for further details about the study	-No sig. predictors of differences for emergency crisis srvs visits
Snowden, Masland, Fawley, & Wallace (2009)	-Examined ethnic disparities in MH crisis srvs utilization as a mean of entry or reentry to the MHS system - H: Would AAs, Ls, As-As, & NAs be < likely than Cs to receive tx prior to, or @ least 90 days out of tx before receiving crisis srvs?	-Secondary analysis of a long. Study evaluating MHS utilization of foster care-placed children & other studies looking at ethnic disparities utilization of crisis srvs - Secondary analysis of longitudinal studies. (Libby (2004) which examined foster children MHS utilization & Snowden	N= 20, 110, (non foster care=16, 843, foster care=3, 267) -Inclusion criteria: clts who had 90 days w/no srvs before or after crisis visit; Looked @ only 1st crisis visit that occurred w/n 3 mths after fiscal year; Possible multiple data for multiple crisis visit across several yrs -Race/Ethnicity: Non-foster: AA=21.0%, L/H=23.0%, As-A=5.0%, NA=1.0%, C=48.0%, Other=2.0%;	- Foster care & non-foster care in CA who are receiving public-sector MH (outpatient, day tx, case-management, inpatient) tx -Crisis srv: stabilization or intervention - Crisis stabilization= most serious. Service provided in hospital or 24 hr health care facility in order to	-CA Dept. of MH Medicaid prgm (Medi-Cal) paid claims: identified crisis srvs, child's age, gender, ethnicity, disability status (SSI income), primary dx, srv (date, cost, & type), if the clt was placed in foster care w/ a relative, county of residence, & year of observation -CA Dept. of SS: foster care placement	-As-As who were not foster care who received crisis care srv had lower odds of prior MH tx when compared to non-foster care As-As who received crisis care srv Cs - Non-significant findings. Foster care As-As, AAs, Ls, & NAs who received crisis srv had lower odds of prior crisis care tx when compared to Cs counterparts

	et al. (2008) which examined minority youths utilization of crisis care)		Foster: C=46.0%, AA=22.0%, L/H=24.0%, As-A=5.0%, NA=2.0%, Other=1.0% -Gender: Non-foster M=55.0%, F=45.0%; Foster M=48.0%, F=52.0% -Age: 18yrs & younger, Non foster: 0-3yrs=1.0%, 4-5yrs=2.0%, 6-11yrs=29.0%, 12-17yrs=67.0% -Foster: 0-3yrs=1.0%, 4-5yrs=4.0%, 6-11yrs=43.0%, 12-17yrs=52.0% Eligible for SSI-D: Foster=17.0%, Non foster=10.0% -API's MH Utilization: outpatient=47.0%, case management=24.0%; inpatient=3.0%, & day tx=4.0% Dx Foster care/non-foster care: MD, developmental, ADHD, DBD, adjustment, AD, psychotic, substance, other dx	alleviate inpatient care -Crisis intervention=less urgent, community, (assessment, evaluation, collateral care, & therapy)	records	
Snowden, Masland, Libby, Wallace, & Fawley (2008)	-Assessed racial/ethnic disparities in psychiatric emergency - H1: Are minorities more likely to use crisis stabilization & intervention than Ws? -H2: Are their racial disparities in crisis srv utilization freq?	-Long. Study examining specialty MH care for children in CA	-N=351, 174 -Inclusion criteria: Foster care w/or Medi-cal claims from CA dept. of MH; Children who qualified for SSI-D -Race/Ethnicity: W=48.7%, AA=19.8%, L=26.3%, AAPI=4.4%, AI/AN=0.9% -AAPI under sampled in study (4.4% vs. 9.9%) when looking @ 2000 Census -Gender: Male= 59.7%; AAPI=62.1%, W=59.1%, L=59.4%, AI/AN=55.5%	-57 County public specialty MH care in CA -Medi-Cal children's psychiatric emergency srvs: - Crisis stabilization=hospital, most serious. Provide in hospital or 24 hr health care facility in order to alleviate inpatient care -Crisis	-CA Dept. of MHS record: children's age, gender, race/ethnicity, primary dx, type of srv, dates & cost of srvs -CA Dept. of SS foster care placement records	-When covariates were controlled, AAPIs, AAs, & AI/ANs had a > probability of using more intense hospital-based crisis stabilization srvs than Ws -AAPIs, Ls, & AI/ANs who received crisis care made fewer # hospital based crisis stabilization srv visits than Ws -When covariates were controlled, AAPIs & Ls had lower probability of

			Female: 40.3%, AAPI=37.9%, W=40.9%, L=40.6%, AI/AN=44.5% -Age: 0-3yrs=2.4%,4- 5yrs=4.8%, 6-11yrs=35.0%, 12-17yrs=57.8% -6-17yrs=90% -Disabled=11.7% -API's dx: MD=24.5%, Adjustment=15.3%, ADD/ADHD=13.0%, DBD=15.1%, Anxiety=7.8%, Developmental disabled=4.7%, Psychosis=3.7%, Other=6.4%, non or missing=9.4% - Foster care=10.6%	intervention=less urgent, community, (assessment, evaluation, collateral care, & therapy)		using crisis intervention srv than Ws when looking at community- basis crisis interventions -AAPIs & Ls made fewer #'s of community- based crisis intervention srvs visits compared to Ws -Emergency interventions for AAPIs were usually more serious (e.g. suicidal behavior)
Yeh et al. (2002)	Refer to SBS section for further details about the study	Refer to SBS section for further details about the study	Refer to SBS section for further details about the study	Refer to SBS section for further details about the study	Refer to SBS section for further details about the study	No sig. racial/ethnic differences in crisis srv
<b><i>Non-specific Mental Health Services</i></b>						
Banta, James, Haviland, & Andersen (2012)	- Examined racial/ethnic differences in need of MHS for children based on parent's identification -Evaluated racial/ethnic differences in obtaining MHS based on parent's identification	-Cross-sect. pop. based CA, random- digit dialing telephone health survey study -Phone interview adult regarding youth 3x per. (2005, 2007, 2009) -Interviewed done in Eng., Span., Chin., Viet., & Kor.	-Tot. sample N= 17, 705 -Inclusion criteria: cell phones were not included until 2009; Variation in response rate across the sampling -Race/Ethnicity: W=39.6%, L=34.7%; As-A=11.3%, AA=6.7%, Other (AI, AN, PI/O)=7.6% -Age: 5-11 yrs ; 5- 6yrs=28.7%; 7-8 yrs=27.2%; 9-10yrs=29.2%; 11 yrs=15.0% -Gender: F=48.7%; M=51.3% -MH visits: As-A=2.3%, W=9.7%, AA=11.2%,	-No detailed description provided for tx setting	-CA Health Interview Survey (CHIS): (DV) MH visit (Yes/No), (Context measures) location, (Individual predisposing measures) gender & age, Immigration status measures, (Parental measures) marital status, age, & edu, (Individual enabling measures) usual source of care, insurance, & income, (Individual need measures) based on	-As-As had the fewest MH visits compared to Ws, Ls, & AAs -As-As were < likely to report emotional problems compared to Ws, Ls, & AAs -Across all ethnic grps gender, lang. spoken @ home, & child's birth place were not assoc. to MH srvs -Across all ethnic grps, an increased in likelihood of care were positively assoc. to emotional difficulties identified by parents. Most noticeably

			<p>L=6.2%, Other=7.8%</p> <p>-Insurance: Medicaid=27.2%, Private=57.8%, Other payer= 15.1%</p> <p>-Need factor: None=73.9%, minor=18.7%, definite or severe=7.4%</p> <p>-Emotional difficulties: API=5.5%, Other=9.7%, W=8.5%, AA=7.5%, L=6.0%</p> <p>-Participant's immigration status: US born= 93.0%, Non-US born= 7.0%</p> <p><b>Caregiver's Characteristics</b></p> <p>-Marital Status of Caregiver: Married=75.8%, Single=24.2%</p> <p>-Parent's age: &lt;30=10.2%, 30-40=42.4%, 40-50=37.7%, 50&lt;=9.7%</p> <p>-Parent's edu lvl: Completed HS=41.5%, Some college=44.9%, Grad. School=13.6%</p> <p>-Family Income: 0-99%, FPL=21.0%, 100-299% FPL=34.9%, 300-599% FPL=28.6%, 600% &amp; FPL=15.5%</p>	parent's identification of child's difficulties	<p>for APIs.</p> <p>-As-As &amp; Ls living in rural areas were &lt; likely to receive MHS</p> <p>-As-As w/ minor problems had lower proportion of MH visits compared to Ws, Ls, &amp; AAs</p> <p>-As-As had more predicted severities of symptoms than actual symptoms observed compared to Ws, Ls, &amp; AAs.</p>	
Javier, Lahiff, Ferrer, & Huffman (2010)	-Evaluated measures & predictive factors of depressive symptoms & use of counseling for Fil. & NHW adolescents -H: Fils are more likely to report depressive symptoms & < likely to report utilization of	Cross-sect. pop. based CA, random-digit dialing telephone health survey study -Phone interview adult regarding youth 3x btw 2 yrs -Interviewed done in Eng., Span., Chin., Viet., & Kor.	-Tot. sample N=4,421 (F=217; NHW=4,204) -Inclusion criteria: randomly selected 1 adult & child/adolescent household per telephone interview -Exclusion criteria: Fil. who spoke in Tagalog. Cell phone users. -Race/Ethnicity:	-No detailed description provided for tx setting	-CA. Health Interview Survey (CHIS): parent's immigration status, edu. lvl., annual income, employment status, & insurance status  -8-item ver. Of Ctr. For Epidemiologic	-Fils were more likely than NHWs to report depressive symptoms -No differences btw Fils & NHWs for utilization of counseling -Fil. ethnicity, F gender, increasing age, living in single parent household, household income

counseling srv than  
NHWs

NHW=95.1% & Fil.=4.9%  
-Fil's age: 12yrs=5.9%,  
13yrs=18.8%, 14yrs=23.1%,  
15yrs=17.2%, 16yrs=21.2%,  
17yrs=13.8%  
-NHW's age: 12yrs=14.1%,  
13yrs=15.1%, 14yrs=18.2%,  
15yrs=18.0%, 16yrs=17.0%,  
17yrs=16.9%  
-Gender: (Fil). M=53.9%,  
F=46.1%; (NHW)  
M=51.0%, F=49.0%  
-Depressive symptoms:  
Fil=29.0% (Yes), 69.8%  
(No); NHW=17.9% (Yes);  
82.1%  
- Insurance: (Fil)  
insured=88.5%,  
uninsured/discontinuous=11.  
5%; (NHW) insured: 94.2%,  
Uninsured/discontinuous=5.  
8%

#### Caregiver's Characteristics

-Family immigration status:  
(Fil) Immigrant = 87.6%;  
nonimmigrant=12.4%;  
(NHW) Immigration=17.3%,  
nonimmigrant=82.7%  
-Parents edu lvl.: (Fil) <  
than college degree=33.4%,  
college degree or  
higher=66.3%  
(NHW) <  
than college degree=44.6%,  
college degree or  
higher=55.4%  
-Parent employment status:  
(Fil) employed=86.2%, not  
employed=13.8%; (NHW)  
employed=76.4%, not

Studies Depression  
Scale (CES-D8):  
identify depressive  
symptoms &  
counseling usage

<300% FBL, & parent  
edu. < than a college  
degree were assoc. w/  
sign lvl of depressive  
symptoms  
-Fil Ms w/ family income  
>/- 300% & parents  
w/more than a college  
degree were sig. < likely  
to report counseling than  
their W counterparts.  
-Fil F w/family income  
<300% FPL & parental  
edu. < than a college  
degree were sig.> likely  
to report using  
counseling than W  
counterparts.

employed=23.6%  
 -Household income: (Fil)  
 <300% FPL=47.6%, >/=  
 300% FPL=52.4%; (NHW)  
 <300% FPL=32.4%, >/=  
 300% FPL=67.1%  
 -Family structure: (Fil)  
 single=22.8%, two=77.2%;  
 (NHW) single=27.9%,  
 two=72.1%

Lau, Lin, & Flore (2012)	Studied racial/ethnic disparities in U.S adolescents' srvc use, access to care, & medial/oral health status	-Cross sec. study using secondary analysis of National Survey of Children's Health which is a random-digit dial household telephone survey -Survey was also translated in Span.	-Tot. sample N= 48, 742 -Exclusion: data missing for any of the identified variables -Race/Ethnicity: API (808)= 1.7%, W (34, 767)=71.3%, L(5181)=10.6%, AA(4697)=9.6%, AI/AN(666)=1.3% Multiracial=3.3% -Age: 10-17 yrs; M: API=13.4yrs, W=13.5yrs, L=13.4yrs, AA=13.4yrs, AI/AN=13.5yrs, Multiracial=13.4yrs -Gender (Male): API=56.8%, W=51.3%, L=50.8%, AA=49.6%, AI/AN=48.5%, Multiracial=49.5%; (Female) -Depression/anxiety: API=2.2%, W=7.4%, L=5.4%, AA=5.0%, AI/AN=10.0%, MR=7.5% -Emotional & behavior problems needing tx or counseling: API=4.7%, W=8.7%, L=9.1%, AA=9.2%, AI/AN=11.1%, MR=10.1% -Received MH in last: API=4.0%, W=10.7%,	-No specific details about tx settings	-National Survey of Children's Health: sociodemographic characteristics reported by parent (adolescent's age, race/ethnicity, gender, primary lang. spoken, # of people in the household, employment status, edu. lvl., poverty status, & BMI (height & weight) -40 health & healthcare measures (physical, emotional, behavior health indicators)	-AA & API adolescents had double the odds of not receiving MHS in the past yr
--------------------------	---	--	---	--	---	---

---

L=7.7%, AA=7.3%,  
AI/AN=12.3%, MR=12.4%

**Caregiver's Characteristics**

-Caregiver's edu lvl:

< high school grad.

API=1.3%, W=2.3%;

L=28.6%, AA=8.0%,

AI/AN=9.7%, Multiracial

(MR)=5.1%

-High school grad.

API=8.3%, W=24.5%,

L=33.0%, AA=35.4%,

AI/AN=33.2%, MR=21.8%

-Some college API=90.3%;

W=73.3%, L=38.4%,

AA=56.6%, AI/AN=57.1%,

MR=73.1%

-Primary Lang. not Eng.:

API=39.2%, W=0.7%,

L=56.9%, AA=0.7%,

AI/AN=6.6%, MR=0.3%

- # of child. in household: 1

child API=28.1%,

W=25.4%, L=15.6%,

AA=23.6%, AI/AN=18.2%,

MR=30.4%

-2 child. API=61.1%,

W=40.4%, L=30.2%,

AA=33.3%, AI/AN=34.4%,

MR=30.4%

-3 child. API=21.5%,

W=23.3%, L=31.0%,

AA=24.4%, AI/AN=28.2%,

MR=20.8%

->3 child. API=11.7%,

W=11.0%, L=23.2%,

AA=18.6%, AI/AN=19.2%,

MR=7.7%

-# of adult in household: 1

adult API= 9.5% ,



---

W=13.1%, L=15.8%,  
 AA=33.3%, AI/AN=20.1%,  
 MR=21.7%  
 -2 adults API=61.1%,  
 W=65.6%; L=53.5%, AA=  
 46.4%, AI/AN=53.3%,  
 MR=55.9%  
 ->2 adults API=29.4%,  
 W=21.3%, L=30.6%,  
 AA=20.3%, AI/AN=26.6%,  
 MR=22.4%  
 -% of fed. poverty threshold:  
 <100 API=9.0%, W=7.6%,  
 L=33.4%, AA=26.2%,  
 AI/AN=29.8%, MR=14.2%  
 -100-199% API=17.9%,  
 W=17.1%, L=26.4%,  
 AA=28.7%, AI/AN=32.9%,  
 MR=21.4%,  
 -200-299% API=12.2%,  
 W=18.3%, L=11.7%,  
 AA=13.3%, AI/AN=14.5%,  
 MR=14.1%  
 -300-399% API=17.8%,  
 W=17.9%, L=6.3%,  
 AA=9.7%, AI/AN=9.3%,  
 MR=12.2%  
 >/- 400 API=35.2%,  
 W=31.7%, L=9.1%,  
 AA=12.5%, AI/AN=8.2%,  
 MR=29.3%  
 -Unknown API=8.0%,  
 W=7.4%, L=13.2%,  
 AA=9.8%, AI/AN=5.3%,  
 MR=8.8%

---

McCabe et al. (1999)	Refer to School-based Mental Health Services for further details about this study	Refer to School-based Mental Health Services for further details about this study	Refer to School-based Mental Health Services for further details about this study	Refer to School- based Mental Health Services for further details about this study	Refer to School-based Mental Health Services for further details about this study	-A/PIA's underrepresented in MH sectors compared to AAs, Cs, & Ls.
-------------------------	--	--	--	--	--	---

---

***Non-Specialty Mental Health Services***


---

Garland et al. (2005)	Refer to Community-Based MHS section for further details about this study	Refer to Community-Based MHS section for further details about this study	Refer to Community-Based MHS section for further details about this study	Refer to Community-Based MHS section for further details about this study	Refer to Community-Based MHS section for further details about this study	-No sig. racial/ethnic grp differences in utilization rate of informal & non-specialty srvs
-----------------------	---	---	---	---	---	---

---

***Mixed Mental Health Service Treatment***


---

Cummings & Druss (2011)	Refer to SBS section for further details about this study	Refer to SBS section for further details about this study	Refer to SBS section for further details about this study	Refer to SBS section for further details about this study	Refer to SBS section for further details about this study	- As, Bs, & Hs were sig. < likely to receive any MDE tx or from a MH professional compared to NHWs even when controlled for demographics & health status - As, Bs, & Hs had lower family income & were < likely to have private insurance compared to NHWs
Cumming, Ponce, & May (2010)	Refer to SBS section for further details about this study	Refer to SBS section for further details about this study	Refer to SBS section for further details about this study	Refer to SBS section for further details about this study	Refer to SBS section for further details about this study	- AAPIs were sig. < likely to receive clinical counseling for reported high depressive symptoms & S/T's compared to Ws -No sig. finding of clinical counseling use for AAPIs w/high delinquent behaviors -Lang. played a sig. role in clinical counseling use for AAPIs w/ S/T's
Garland et al. (2005)	Refer to Community-Based MHS section for further details about this study	Refer to Community-Based MHS section for further details about this study	Refer to Community-Based MHS section for further details about this study	Refer to Community-Based MHS section for further details about this study	Refer to Community-Based MHS section for further details about this study	-AA/PIs had the lowest rate of utilization for MHS compared to NHWs, AAs, & Ls -When controlled for confounding variables AA/PIs & AAs were 0.5 likely to receive MHS compared to NHWs

Gudino, Lau, & Hough (2008)	Refer to SBS section for further details about this study	Refer to SBS section for further details about this study	Refer to SBS section for further details about this study	Refer to SBS section for further details about this study	Refer to SBS section for further details about this study	-APIs were < likely to receive specialty MHS compared to HAs
Gudino, Lau, Yeh, McCabe, & Hough (2009)	Refer to SBS section for further details about this study	Refer to SBS section for further details about this study	Refer to SBS section for further details about this study	Refer to SBS section for further details about this study	Refer to SBS section for further details about this study	- No sig. assoc. btw need classification (no need, internalized, externalized, co-morbid) & specialty MHS for APIs when compared to NHWs, AAs, & HAs who reported the converse. -APIs w/ internalized or externalized needs were < likely to received specialty MHS compared to HAs w/internalized or externalized needs -APIs & Hs were < likely to receive specialty srvs compared to NHWs (even after accounting for demographic variables, symptom lvl, & youth impairment) -Race/ethnicity did not moderate the assoc. btw parent-reported internalizing symptoms & specialty MHS receipt -Hs, APIs, & NHWs had a negative assoc. w/ externalizing symptoms & predicted probability of specialty srvs by parents -APIs, Hs, & AAs w/ externalized/co-morbid problems were more likely to receive follow-up srv than APIs, Hs, &

						AAs w/o clinical problems -NHWs w/ no sig. problems were more likely to receive specialty care than APIs w/o sig. problems
Ho, Yeh, McCabe, & Hough (2007)	-Examined the relationship btw MH use, race/ethnicity, & parental acculturation lvl when controlling for variables that may influence MHS -H: Parental acculturation towards American culture or culture of origin may be a partial mediating factor when controlling for participants age, gender, symptomology, parent's edu., family income & parent's gender	- Secondary analysis of longitudinal study (Pattern of Care [POC] study), which examined service use in publicly funded agencies in San Diego County (original sample size N=1,715) -Interviews were conducted in Eng, Span., & Asian Lang. (Camb., Lao, Viet., & Tagalog	- N=1,364 -Inclusion criteria: completed variables for all data -Race: AA=20.3%; AA/PI=7.1% (Fil.=38.1%, PI=18.6%, Camb.=16.5%, Lao.=9.3%, Jap.=5.6%, Viet.=4.1%, Chin.=3.1%, Kor.=3.1%, E. Indian=2.1%); L=28.5%; NHW=44.1% -Age: 6-17yrs; M=14.1yrs -Gender: M=66.6%, F=33.4%; (AA) M=63.5%, F=35.5%; (A/PI) M=73.2%, F=26.8%; (L) M=66.2%, F=33.8%; (NHW) M=67.1%, F=32.9% -Public Sector Involvement: MH=52.6%, SED=24.8%, ADT=9.7%; JJ=28.3%, CW=25.4% -Youth's immigration status: Country of birth -Not U.S.=7.1%, (AA)=7.3%, (A/PI)=5.4%, (L)=7.8%, (NHW)=7.0% -U.S.=92.9%, (AA)=92.7%, (A/PI)=94.6%, (L)=92.2%, (NHW)=93.0%	-Specialty MHS w/n SD -No further detail info about tx was provided	-CBCL (Span. & Eng.): assess internalizing & externalizing behavior problems by parent report -Interview questionnaire: non-clinical characteristics -PAN Acculturation Scale: assess biculturalism & acculturation across minority & non-minority adults & children -SACA: assess use of diff. types of MH & substance srvs	-AA/Pis & Ls were sig. < likely to use MHS @ 2yr-follow-up when compared to NHWs -AA/Pis & Ls caregivers were sig. < likely to endorse acculturation to American culture & more likely to endorse culture of origin when compared to NHWs caregivers -Endorse of Culture of origin by API & L caregivers @ baseline was a partial mediator btw race/ethnicity & MHS for APIs & L youths @ follow-up evaluation. Youths were < likely to use MHS
			<b>Caregiver's Characteristics</b> Parent's gender: (AA)			

			<p>M=5.8%, F=92.4%;  (A/PI)M=21.6%, F=78.6%;  (L) M=6.2%, F=93.8% ;  (NHW) M=9.5%, F=90.5%  -Primary caregiver's  immigration status: Country  of birth  Not U.S.=24.9%,  (AA)=3.6%, (A/PI)=69.1%,  (L)=59.5%, (NHW)=5.2%  U.S.=75.1%, (AA)=96.4%,  (A/PI)=30.9%, (L)=40.5%,  (NHW)=94.8%  -Primary caregiver's edu. lvl:  HS or lower= 68.5%  (AA)=67.5%, (A/PI)=74.2%,  (L)=84.3%, (NHW)=57.8%  Higher than HS=31.5%  (AA)=32.5%, (A/PI)=27.8%,  (L)=15.7%, (NHW)=42.2%  -Household income:  \$20,000-\$29,999.  -Primary caregiver's  relationship to participant:  bio =75.9%; Adopt/step.=  9.8%; non-relative  foster=7.5%, other non-  relative caregiver srv=1.5%</p>			
Richardson, DiGiuseppe, Garrison, & Christakis (2003)	<p>-Examined dx prevalence of depressive D/O in Medicaid pop. statewide -Determined whether disparity exist btw race/ethnicity &amp; diagnosis &amp; tx of depressive D/O in the sampled Medicaid pop. -H1: Minority youth are &lt; likely to be dx w</p>	<p>-Cross Sect. Study looking at Medicaid Claims (original sample N=192, 441)</p>	<p>-Tot. sample N= 1, 459 -Inclusion Criteria: Dx w/ a "new" depressive D/O (individual who have not had a dx for 6 mths &amp; have not filled an antidepressive meds. Prescription) -Exclusion Criteria: Bipolar Dx during the study per; Did not identify racial/ethnic grp. -Race/ethnicity: W=60.0%, H=15.0%, B=7.0%, NA=3.0%, A/PI=6.0%,</p>	<p>-Specialty MHS who accepts Medicaid located in Washington -Specialty MHS: evaluation &amp; mgt. by a psychiatrist &amp; psychiatrist; psychotherapy or psychiatric assess. by an MH provider (outpatient &amp; inpatient)</p>	<p>-Washington State Medicaid Claims Data: ethnicity/race, sex, subject age, MHS visit, dx, &amp; insurance -Rural Urban Commuting Area coding system developed for the WA Area in conjunct. w/ the Federal Office of Rural Health Policy &amp; the Dept. of</p>	<p>After controlling for age, sex, &amp; type of residency, there were no differences btw APIs, Bs, Ws on MH visits -APIs &amp; Hs were more likely to be enrolled in specialty MHS based on low income status compared to Ws -APIs &amp; Bs were more likely to live in urban settings</p>

	depressive D/O & if dx they are < likely to receive MHS & receive antidepressant meds		O=22.0%, UN=2.0% -Age: 5-18yrs -Gender: N/A -Resident Setting: Rural=75.0%, Urban=25.0% -Medicaid eligibility: Low income=93.0%, Disabled=4.0%, Foster Care=3.0%, Other=0.2%		Agriculture's Economic Research Srv: type of residency (rural or urban) -Temporary Assistance for Needy Families; State Children's Health Insurance Program; or WA-specific expanded financial eligibility criteria: income lvl	-APIs were older than Ws in the study sample. Majority of APIs were btw 15-18 yrs-old -Hs, Bs, & APIs were < likely to be dx w/ depressive D/O compared to Ws
Wood, Yeh, Pan, Lambros, McCabe, & Hough (2008)	Refer to SBS section for further details about this study.	Refer to SBS section for further details about this study.	Refer to SBS section for further details about this study.	Refer to SBS section for further details about this study.	Refer to SBS section for further details about this study.	APIs & Hs received specialty MHS at an older age compared to NHWs
Yeh et al. (2002)	Refer to SBS for further details of study	Refer to SBS for further details of study	Refer to SBS for further details of study	Refer to SBS for further details of study	Refer to SBS for further details of study	-APIAs were more likely to have had referrals from CW compared to NHW -APIAs were not included in the analysis for difference seen btw children & adolescents -APIAs were more likely to have a v-code dx & < likely to have a ADHD dx compared to NHWs - No sig. racial /ethnic differences case mgt. or intensive case mgt. srv -APIA entered MHS @ a lower rate compared to NHWs, AAs, & Ls, -Entry to MHS for APIAs were usually involuntary
Yeh, McCabe, Hough, Dupuis, & Hazen (2003)	Examined cultural beliefs & practical issues that affects MHS use & different barriers	- Secondary analysis of longitudinal study (Pattern of Care [POC] study), which	-N= 1, 388 -Inclusion/Exclusion criteria: Identified as having a need (failure to receive specialty	Specialty Services: srv involving psychologist/psychiatrist/other MH	-DISC: assess psychiatric dx w/n past yr	-APIs, Ls & AAs were < likely to receive MHS in the past year when compared to NHWs

	<p>that faced racial/ethnic grps based on parent's endorsements</p> <p>-H1: AA, API, &amp; L youths would have higher unmet MHS needs when compared to NHWs</p> <p>-H2: Minority parents of youths would identify &gt; #s of barriers to MHS than NHW parents</p> <p>-H3: When controlling for variables that may influenced MHS, there will still be &gt; barriers identified by minority parents than NHW parents</p> <p>-H4: Identified barriers by parents will be assoc. to unmet MHS needs</p>	<p>examined service use in publicly funded agencies in San Diego County (original sample size N=1,715)</p>	<p>MHS in the past yr). Youths in the JJ who were adjudicated delinquent, &amp; CW who were court-ordered dependents</p> <p>-Race/Ethnicity: AA=20.2%, A/PIA=8.1%, L=27.8%, NHW=43.9%</p> <p>-Age: 6-17yrs; <i>M</i>=14.3yrs</p> <p>-Gender: M=68.0%, F=32.0%</p> <p>-Public Sector involvement: MH=56.9%, SED=26.4%, ADT=10.8%, JJ=29.7%, CW=23.1%</p> <p><b>Caregiver's Characteristics</b></p> <p>-Household median income: \$19,000-\$19,999 per/yr</p> <p>-Primary caregiver's edu. lvl: high school diploma or lower lvl ed.=60.8%</p> <p>-Primary Cargiver's relationship to youth: Bio.=73.2%; Adopt./step.=5.1%; blood relative: 9.2%; Foster=6.7%; other non-relative =6.7%; Unknown =4.1%</p>	<p>provider, community MH clinics, day tx, psychological hospitalization, or psychiatric unit in hospital</p>	<p>-CBCL: assess for internalizing &amp; externalizing MH need by parent report</p> <p>-YSR: assess for internalizing &amp; externalizing MH needs by child report</p> <p>-C-GAS: assess global fx impairment by parent &amp; child report</p> <p>-CIS: assess for youth fx impairment</p> <p>-SACA: assess use of diff. types of MH &amp; substance srvs</p> <p>-CES-D: assess MDD or dysthymia, reporting of S/Is w/ intent in the past yr, &amp; delinquent behaviors</p> <p>-PAN: assess biculturalism &amp; acculturation across minority &amp; non-minority adults &amp; children</p>	<p>-API parents were &lt; likely to report barriers (content &amp; helpfulness of srvs, provider characteristics, economic/financial constraints, &amp; accessibility)</p> <p>- API &amp; L caregivers were more likely to report barriers regarding lang. when compared to NHWs</p> <p>-No sig. differences across all caregiver racial/ethnic grps when examining the relationship btw perceived barriers vs. unmet need</p>
<p>Yeh, McCabe, Hough, Lau, Fakhry, &amp; Garland (2005)</p>	<p>-Examined the relationship btw specialty MHS use &amp; parental beliefs for their children's problems</p> <p>-Determined whether parental beliefs regarding children's problems were assoc. w/ MHS use at 2yr follow-up</p> <p>-Determined whether</p>	<p>- Secondary analysis of longitudinal study (Pattern of Care [POC] study), which examined service use in publicly funded agencies in San Diego County (original sample size N=1,715)</p> <p>-Data collected at baseline &amp; 2 yr follow-up by in-person</p>	<p>- N=1,337</p> <p>-Inclusion criteria: completed data for studied variables</p> <p>-Race/ethnicity: AA=20.3%, APIA=6.8%, L=28.8%, NHW=44.1%</p> <p>-Fewer APIAs participated in study compared to other racial/ethnic grps</p> <p>-Age:6-11 yrs; <i>M</i>=14.1yrs</p> <p>-Gender: M=66.9%,</p>	<p>Specialty Services: srv involving psychologist/psychiatrist/other MH provider, community MH clinics, day tx, psychological hospitalization, or psychiatric unit in hospital</p>	<p>-CBCL: assess for internalizing &amp; externalizing MH needs</p> <p>-Beliefs About the Cause of Child Problems-Parent Version: evaluate explanatory etiologies for children problem</p> <p>-SACA: assess usage of diff. types of MHS</p>	<p>-APIAs &amp; Ls were &lt; likely to use MHS at 2yr follow-up compared to NHWs</p> <p>-Parental beliefs was a mediator btw race/ethnicity &amp; MHS at 2 yr follow-up</p> <p>-Ls &amp; APIAs caregivers were &lt; likely to endorse affinity to American culture &amp; more likely to</p>

---

<p>parental explanatory etiologies mediated relationship btw race/ethnicity &amp; MHS</p> <p>-H1: Bio-psychological beliefs would be assoc. w/ increased MHS use at 2 yr follow-up</p> <p>-H2: Sociological, spiritual or nature disharmony foundations would be assoc. w/ decreased MHS use @ 2 yrs follow-up</p> <p>-H3: Parental's beliefs would be a partial mediator btw race/ethnicity &amp; MHS use @ 2yr follow-up</p>	survey	<p>F=33.1%</p> <p>-Public Sector Involvement: MH=52.7%, SED=25.1%, ADT=9.3%, JJ=28.4%, CW=25.1%</p> <p><b>Caregiver's Characteristic</b></p> <p>-Caregiver median Income:\$19,000-\$19,999</p> <p>-Caregiver's edu. lvl: High school diploma or lower lvl edu=68.3%</p> <p>-Caregiver's relationship to participant: Bio parents=76.1%, adopt./step.=5.2%, blood relative=9.9%, nonrelative foster parents=7.3%, nonrelative caregiver=1.5%, unknown relationship: 0.07%</p>	<p>endorse to alternative (culture of origin) culture</p>
--	--------	--	---