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ORIGINAL PAPER

The Parental Attitudes Toward Psychological Services Inventory: Adaptation and Development of an Attitude Scale

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Abstract The purpose of this paper is to provide psychometric data on the *Parental Attitudes Toward Psychological Services Inventory (PATPSI)*, which is a revised measure to assess parents' attitudes toward outpatient mental health services. Using a sample of adults ($N = 250$), Study 1 supported a 3-factor structure (RMSEA = .05, NNFI = .94, and CFI = .94), adequate internal consistency (ranging from .72 to .92), and test–retest reliability (ranging from .66 to .84). Additionally, results indicated that individuals with previous use of mental health services reported more positive views toward child mental health services. Study 2 provided confirming evidence of the 3-factor structure (NNFI = .94, RMSEA = .08, and the CFI = .95) and adequate reliability (ranging from .70 to .90) using a parent-sample ($N = 260$). Additionally, discriminate validity of the *PATPSI* was supported. Implications for research and clinical practice are discussed.

Keywords Mental health attitudes · Child mental health · Behavioral health utilization · Parental attitudes

Introduction

According to the Surgeon General's Conference on Children's Mental Health (US Public Health Service 2000) a substantial number of children experience emotional, behavioral, and developmental problems that have adverse impacts on their social-emotional functioning. According to the National Institute of Mental Health (2004), 1 in 10 youth suffer from problems severe enough to cause some level of impairment, however, of those only about 20% receive treatment. This has serious implications given that untreated child emotional-behavioral problems are risk factors for developing problems later in life such as suicide, substance abuse, involvement with the correctional system, failure to complete high school, adult psychopathology, and exacerbate health problems (e.g., Fergusson and Horwood 1998; Hinshaw 1992; Hofstra et al. 2003). Considering these findings it is important to improve parental help-seeking to prevent more severe problems in childhood and later in life. Studies have found that variables likely to contribute to parents seeking help for their child include previous experience with mental health services, attitudes toward mental health professionals, stigma, or situational variables (e.g., Dubow et al. 1990; Harrison et al. 2004; McMiller and Weisz 1999; Snowden 2001). However, a barrier to understanding the role of adult attitudes in help-seeking for child services is a lack of psychometrically sound measures of attitudes toward child mental health services.

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Ajzen's Theory of Planned Behavior

In the mental health help-seeking literature, several models exist that posit pathways to service use for youth (e.g., Cauce et al. 2002; Logan and King 2001). Although these models provide a way to understand some variables that influence a parent to seek mental health services, they may neglect an important variable that likely influences parental help-seeking such as attitudes that may preclude or promote help-seeking. As mentioned, attitudes have been found to be one of the strongest predictors of mental health help seeking among adults (e.g., Mackenzie et al. 2006; Smith et al. 2004), so it is likely that successful theories of help seeking for children will need to incorporate parental attitudes.

One theory that holds great potential to provide a better understanding of parental help-seeking is the theory of planned behavior (TPB, Ajzen 1985, 1991). The TPB is an extension of the theory of reasoned action (TRA; Ajzen and Fishbein 1980) which was developed to predict behaviors that were under complete volitional control. According to the TPB, the best predictor of an individual performing a behavior is their intention to do so. The TPB states that an individuals' intention to perform a given behavior is a function of three components: *attitude toward the behavior*, *subjective norm*, and *perceived behavioral control* (see Ajzen 1985, 1991). Meta-analytic studies have found that for a wide variety of behaviors intentions have been predicted by attitudes, subjective norms, and perceived behavioral control with correlations ranging from .45–.60, .34–.42, and .35–.46, respectively (Ajzen and Fishbein 2005). The TPB has been applied to the problem of help-seeking in the adult literature to demonstrate the influence of attitudes on help-seeking intentions. However, it has yet to be applied to help-seeking for children. The focus of this study is to provide initial steps towards applying the TPB to child mental health utilization.

Attitudes and Mental Health Services Utilization

Since the 1970s, researchers have recognized the importance of attitudes on seeking professional help for psychological problems. Fischer and Turner (1970) were the first to develop an attitudinal scale, the *Attitudes Toward Seeking Professional Psychological Help Scale (ATSPPHS)*, using many variables that relate to seeking professional psychological services. The *ATSPPHS* assesses components such as social variables, beliefs about treatment, and the stigma surrounding mental heath care. Much of the adult help-seeking literature has built upon the work of Fischer and Turner (1970). The *ATSPPHS* has become the "gold standard" for studying help-seeking attitudes in adult samples. Research using the *ATSPPHS* has found that more positive attitudes predict intentions to seek help for a variety of psychological concerns (Cepeda-Benito and Short 1998; Vogel and Wester 2003; Vogel et al. 2005). Parental attitudes have been identified as one potential barrier to utilization of child mental health services. However, mental health utilization may also be impacted by external barriers which may include the cost of care, societal stigma, and the availability of services (US Department of Health and Human Services 2001). Additionally, parents may not utilize services based on a preference to seek advice from family members, friends, media "experts," religious leaders, or from self-help books (Harrison et al. 2004). With the current emphasis on improving mental health services for children, there is a need for psychometrically sound measures to assist researchers in better studying the impact of parental attitudes on service utilization.

Whereas studies provide some evidence of the influence of parental attitudes on help-seeking, few studies have used a psychometrically sound measure to assess parental attitudes. Generally, studies in the child literature involving parental attitudes have relied on either single items or scales with poor internal consistency (e.g., Diala et al. 2000; McKay et al. 2001; Richardson 2001; Starr et al. 2002). Although some methodological limitations exist regarding studies on parental attitudes, some researchers (e.g., Cepeda-Benito and Short 1998; Deitz et al. 2009; Thurston and Phares 2008) have attempted to address these limitations by utilizing the *Attitudes Toward Seeking Professional Psychological Help Scale* (*ATSPPHS*; Fischer and Turner 1970) or the *Attitudes Toward Seeking Professional Psychological Help-Short Form* (*ATSPPH-SF*; Fischer and Farina 1995). According to the authors (Fischer and Turner 1970; Fischer and Farina 1995), these instruments are intended to be unidimensional measures (i.e., measuring global attitudes) which may limit its utility depending on what variables are of interest. For example, the importance of mental health stigma has become increasingly important to understanding utilization of mental health services. Given the *ATSPPH* and *ATSPPH-SF* are unidimensional they do not allow for separation of components that relate to service use.

According to some researchers, mental health stigma or the extent to which individuals are concerned about how they or others negatively perceive those who seek mental health services may impede individuals from seeking services or adhering to treatments (e.g., Corrigan 2004; Cauce et al. 2002; Mukolo et al. 2010). It appears that no multidimensional, psychometrically sound measure currently exists to assess parental attitudes toward seeking outpatient mental health services. One crucial step to improving the child mental health services literature on help-seeking is to develop a measure of parental attitudes toward behavioral health services for children. Building on the help-seeking literature, the *PATPSI* was developed to address this gap in

the literature by providing a psychometrically sound multidimensional measure of parental attitudes. Preliminary studies using the *PATPSI* have found it to be useful in studying parental help-seeking (Turner and Liew 2010).

Psychometric Evaluation

When examining the psychometric properties of either an established or new instrument two important principles should be examined, instrument reliability and validity (Cronbach and Meehl 1955). These instrument properties are important because to get an accurate measurement of a construct, it must be able to detect a "true" score rather than measurement error and measure what it is intended to measure. Switzer et al. (1999) describe two concepts central to psychometric evaluation. The first principle, reliability is described as: (a) the items belong to a scale assessing a single construct, and (b) scales measure a single construct that produces estimates of that construct across multiple measurements. For a more detailed discussion, refer to Switzer et al. (1999). The second principle, validity, is the extent to which an instrument measures what it is intended to measure. Several types of validity exist and have been extensively discussed in the literature. Due to the extent of this paper, you may refer to other sources such as Kline (2000) and Nunnally and Bernstein (1994) for a more thorough discussion. Three broad types of validity are most often central to the literature on measurement development: content, criterion, and construct validity. Instrument validity may be examined by several different methods including: correlating two existing measures of the intended construct, correlating the measure with the intended behaviors, examining group difference based on characteristics that should score differently on the measure, or correlating the measure with measures of constructs which it should not be related (e.g., Cronbach and Meehl 1955; Switzer et al. 1999).

Study 1

Summary of Hypotheses

The purpose of Study 1 was to provide preliminary psychometric data on the *PATPSI*, a measure that was adapted and developed to assess adults' attitudes toward child mental health services. The following hypotheses were tested: (a) the *PATPSI* will demonstrate a theoretically and psychometrically sound 3-factor structure, (b) the *PATPSI* will demonstrate adequate test–retest reliability and internal consistency, and (c) differences will be found on the *PATPSI* for participants with previous use of mental health services versus those with no previous use.

Method

Participants

Participants ($N = 250$; 55% male) were recruited from an Introduction to Psychology courses at a major state university in the southwest United States. The ethnic distribution was 74.4% European-American, 6% African-American, 12.8% Hispanic-American, 5.6% Asian-American, .4% Biracial, and 1.2% self identified as "Other." Participants ranged in age from 18 to 29 years old ($M = 19.20$, SD = 1.16). Sixty-seven percent of the sample was first year college students and 20.4% reported previous use of mental health services. A majority of participants (51%) who reported previous using mental health services sought services from a licensed psychologist. Socioeconomic status was assessed in two ways. Participants reported their parents' highest level of education (mother $M = 16$ years, SD = 1.5; father $M = 16$ years, SD = 1.6) and rated a 5-point Likert-type question on whether they thought they had enough financial resources growing up ($M = 2.2$, SD = .93), where 0 = quite a bit less than others, and 4 = quite a bit more than others. In addition, participants reported whether they had any children and rated the likelihood they would seek services in the future for any mental health concern. Because only two participants reported having children, they were not included in any analyses.

A random sub-sample of 92 participants completed the *PATPSI* 1 week after the initial assessment to assess test–retest reliability. The ethnic distribution was 77.2% European-American, 6.5% African-American, 8.7% Hispanic-American, 6.5% Asian-American, and 1% self identified as "Other." Participants ranged in age from 18 to 27 years old ($M = 19.01$, SD = 1.00). Analyses indicated no significant differences among demographic data between the complete sample and the sub-sample.

Measures and Stimuli

Demographic Questionnaire

A demographic questionnaire developed for the purpose of the study was used to gather information on the gender, age, ethnicity, previous use of mental health services, and family variables.

Attitudes Toward Child Mental Health

The *Parental Attitudes Toward Psychological Services Inventory (PATPSI)* was used to measure participants' general help-seeking attitudes. The measure consisted of 26 Likert-type items, assessing help-seeking attitudes, help-seeking intentions, and mental health stigma, and is scored on a Likert-type scale from 0 (strongly disagree) to 5 (strongly agree). In this study, the *PATPSI* was developed by adapting the ATSPPHS. Specifically, items were created to address parental attitudes toward mental health services for children. Steps in the adaptation process included extending the Likert-type scale to a 6-point scale and slight wording changes to improve readability and relevance to services for children. For example, the original item, "I would feel uneasy going to a professional because of what some people would think" was changed to "I would not want to take my child to a professional because of what people might think." The second type of change was made to address the fact that children often receive mental health services from a range of professionals. Therefore, the terms psychiatrist and psychologist were replaced with a more generic terms such as professional. The term professional may refer to any individual who has been trained to treat mental health problems. Finally, given the terminology used to describe mental health problems such as mental illness, emotional problems, and emotional difficulties, the term *psychological or behavior problem* was used to create a greater consistency to describe difficulties experienced by children. Adaptation was informed by use of an expert panel, composed of three doctoral level psychologists who specialized in mental health services for children and adolescents. Additionally, before data collection a small sample ($N = 20$) of parents reviewed the measure and provided feedback concerning the length, readability, and importance of the questions.

Case Vignettes

Participants read a case vignette adapted from Weisz (2004) and were instructed to complete the *PATPSI* as if they were the child's parent. Several versions of the vignettes were randomly assigned to each participant altering: (a) the age (6 years vs. 11 years), (b) gender (female vs. male), and (c) nature of the problem (externalizing vs. internalizing). Vignettes described two types of problems: externalizing which described a child that exhibited behavior problems that create difficulties in their external world (e.g., ADHD, ODD), and internalizing which described a child that exhibited emotional problems (e.g., anxiety). The author controlled for consistency among the versions (e.g., reading level, paragraph length) using a web-based readability statistics program (Intervention Central 2008). The total number of words per vignette were 203 and 205, total number of sentences were 10 and 11, and grade level were eighth and ninth, for the externalizing and internalizing vignettes, respectively.

Mental Health Services Utilization

Participants reported whether they personally used mental health services in the past. Responses were coded as "yes" (1) or "no" (0).

Procedure

Data were collected via group administration on the university campus where the participants were enrolled. Following informed consent, all participants initially completed the study measures (described above). Case vignettes were randomly selected each assessment session in an effort to ensure equal number of participants in each version. Participants were informed to complete the *PATPSI* as if they were the parent of the child described in the vignette. A random sub-sample of participants returned 1 week after the initial session to complete the *PATPSI* to assess test–retest reliability, and they read the same vignette used during their initial session. Participants received course research credit for completion of the research packet. This research was approved by the university Institutional Review Board.

Results

Data Analyses

Data analyses were conducted in several steps. First, the factorability of the data was assessed using Kaiser–Meyer–Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity (Kaiser 1974; Bartlett 1954). The KMO values over .80 and significant results ($P < .05$) on Bartlett's test of sphericity suggest that the data is adequate for factor analysis (Kaiser 1974; Bartlett 1954). Since these requirements were met, confirmatory factor analysis (CFA) was conducted to assess the goodness of fit of the hypothesized 3-factor structure. The data were analyzed with LISREL 8.0 using the Maximum Likelihood (ML) method (Jöreskog and Sörbom 2005). Model fit was evaluated using the Tucker–Lewis index or non-normed fit index (NNFI; Bentler 1990), the root mean squared error of approximation (RMSEA; Hu and Bentler 1999), and the comparative fit index (CFI; Bentler 1990).

Following recommendations by Hu and Bentler (1999) a 2-index combination strategy was used. Finally, to examine the internal consistency of the PATPSI, reliability analyses were conducted by examining Cronbach alpha coefficients.

Confirmatory Factor Analysis

The 26 items of the *PATPSI* were submitted to a confirmatory factor analysis to assess the goodness of fit. The results indicated that the chi-square statistic was significant [χ^2 (296, $N = 250$) = 491.25, $P < .0001$], the RMSEA = .051, NNFI = .94, and CFI = .94 suggested good fit of the hypothesized 3-factor model. Following recommendations to use a 2-index combination (Hu and Bentler 1999), the 3-factor model should not be rejected. There were six *PATPSI* items with relatively high modification indexes (range = 7.26–24.69). However, all except two items loaded higher in their intended factors. See Table 1 for standardized factor loadings. Moreover, chi-square difference tests comparing the 1-, 2-, and 3-factor models for the

Table 1 Standardized factor loadings for the PATPSI

Scales	Factor loadings	
	Study 1	Study 2
Help-seeking intentions		
8. If my child were to experience a psychological or behavior problem, I would get professional help if I wanted to	.47	.81
13. I would want to get professional help if my child were worried or upset for a long period of time	.59	.65
17. If I believed my child were having a mental breakdown, my first decision would be to get professional help.	.55	.51
7. If my child were experiencing a serious psychological or behavior problem at this point in my life, I would be confident that I could find relief in professional help	.69	.73
11. It would be relatively easy for me to take my child to see a professional for help	.32	.47
Stigmatization		
15. I would not want to take my child to a professional because what people might think	.81	.93
18. I would feel uneasy going to a professional because of what some people would think	.79	.82
14. I would be uncomfortable seeking professional help for my child because people (friends, family, coworkers, etc.) might find out about it	.73	.80
22. I would be embarrassed if my neighbor saw me going into the office of a professional who deals with mental health concerns	.76	.80
9. Important people in my life would think less of my child if they were to find out that he/she had a psychological or behavior problem	.63	.70
2. I would not want others (friends, family, teachers, etc.) to know if my child had a psychological or behavior problem	.49	.66
21. Had my child received treatment for a psychological or behavior problem, I would feel that it ought to be "kept secret"	.50	.50
5. Having been mentally ill carries with it feelings of shame	.41	.41
Help-seeking attitudes		
25. Seeking professional help is a sign of weakness	.78	.89
23. People should workout their own problems instead of getting professional help	.75	.76
26. Strong willed parents can handle problems without professional help	.76	.81
10. Psychological problems tend to work out by themselves	.61	.58
19. Strong willed individuals can handle emotional or behavior problems without needing professional help	.70	.62
3. To avoid thinking about my child's problems, doing other activities is a good solution	.31	.50
16. There is something admirable in the attitude of people who are willing to cope with their conflicts and fears without seeking professional help	.44	.46
24. There are things that happen in my family I would not discuss with anyone	.18	.37

PATPSI were statistically significant (see Table 2), suggesting that the 3-factor model was a better fit than the 1-, or 2-factor model. Overall, the fit indices, as well as the individual item loadings suggest a good fit.

Reliability

To examine the reliability of the *PATPSI*, Pearson correlation coefficients were calculated. Results indicated the following Pearson correlation coefficients between $Time_1$ and $Time_2$ scores for the *PATPSI* Total scale ($r = .82$) and three subscales as follows: Help-Seeking Attitudes ($r = .77$), Help-Seeking Intentions ($r = .66$), and Stigmatization ($r = .84$). Overall, 1-week test–retest reliability for the *PATPSI* was moderate to high given the sample size (Murphy and Davidshofer 2001). Alpha coefficients for $Time_1$ were as follows: *PATPSI* Total scale (.86), Help-Seeking Attitudes (.73), Help-Seeking Intentions (.72), and Stigmatization (.84) and for $Time_2$ were *PATPSI* Total scale (.88), Help-Seeking Attitudes (.71), Help-Seeking Intentions (.75), and Stigmatization (.92).

Attitudes Toward Child Mental Health

To examine the hypothesis that significant differences would be found for *PATPSI* scores for participants' who report previous use of mental health services than those with no previous use, a between-subjects MANOVA was conducted, with PATPSI subscale scores (Help-Seeking Attitudes, Help-Seeking Intentions, and Stigmatization) as dependent variables. Results indicated significant findings for all *PATPSI* scales and previous service use. Analyses indicated significant differences in Help-Seeking Attitudes for previous service use [F (1, 248) = 12.63, $P = .000$]. Participants with previous mental health services use reported more positive attitudes toward mental health services for children ($M = 33.67$, SD = 1.10) than those who reported no previous use ($M = 29.26$, SD = .56). Analyses indicated significant differences in Help-Seeking Intentions for previous service use [F (1,248) = 15.26, $P = .000$]. Participants with previous mental health services use reported higher intentions to using mental health services for children described in the vignette ($M = 29.86$, SD = .80) than those who reported no previous use ($M = 26.33$, SD = .40). Analyses indicated significant differences in Stigmatization for previous service use [F (1, 248) = 4.54, $P = .034$]. Participants with previous mental health services use reported having fewer stigmatizing views toward mental health services for children ($M = 25.05$, SD = 1.23) than those who reported no previous use ($M = 22.11$, SD = .62). Finally, analyses indicated significant differences in *PATPSI* total scale for previous service use [F (1,248) = 15.14, $P = .000$]. Participants with previous mental health services use reported higher overall attitudes toward child mental health services ($M = 88.59$, SD = 2.49) than those who reported no previous use ($M = 77.71$, SD = 1.26).

Study 1 Brief Discussion

The current study provided information on the psychometric properties of the *PATPSI*. In the current study, the findings supporting the factor structure of the *PATPSI* appear robust using several different fit indices following recommendations of Hu and Bentler (1999). Moreover, the psychometric data of the *PATPSI* suggests good reliability and internal consistency. Although previous studies have noted the importance of parental attitudes on the use of child mental health services, Some have postulated that the lack of a psychometrically sound measure in the study of parental attitudes on child mental health services may have contributed to some inconsistent findings in the literature (Link et al. 2004). The *PATPSI* may be useful for contributing to a better understanding of child mental health utilization.

Given the *PATPSI* is a new instrument, discriminant validity was also examined by comparing differences between individuals who reported previous use of mental health services versus those with no prior service use. Results indicated that participants with previous mental

Table 2 CFA results comparing the fits of the one-, two-, and three-factor models for the PATPSI ($N = 250$)

Model	χ^2	*df*	RMSEA	NNFI	CFI	$\Delta\chi^2$ (*df*)	*P*
One-factor	1,094.81	299	.10	.85	.87		
Two-factor	645.75	298	.07	.92	.92		
Three-factor	491.25	296	.05	.94	.94		
Two vs. three						154.50 (2)	>.05
One vs. three						603.56 (3)	>.05
One vs. two						499.06 (1)	>.05

RMSEA Root mean square error of approximation, *NNFI* non-formed fit index, *CFI* comparative fit index, *SRMR* standardized root mean residual

health service use reported more positive attitudes toward mental health services for children, higher intentions to utilize child mental health services, and more stigma tolerance (less stigmatizing views), than those with no previous service use. These findings are consistent with the mental health literature in adult populations (e.g., Fischer and Turner 1970; Mackenzie et al. 2006; Vogel et al. 2007) and children (e.g., McKay et al. 2001; Dubow et al. 1990). Although these results are promising, further research was conducted to support the use of the *PATPSI* in a sample of parents (vs. the convenience sample used).

Study 2

Summary of Hypotheses

The purpose of Study 2 was to provide confirming psychometric data on the *PATPSI*, using a sample of parents. The following hypotheses were tested: (a) the *PATPSI* would demonstrate a psychometrically sound factor structure, (b) the *PATPSI* would demonstrate adequate reliability, (c) parents with previous experience utilizing mental health services will report more positive attitudes, higher stigma tolerance, and higher intentions than parents with no previous use, and (d) the *PATPSI* will negatively correlate with parent report of concerns about psychological services.

Method

Participants

Participants in Study 2 consisted of 260 caregivers (93% female) recruited from communities in Texas ($N = 210$; 81%), Louisiana ($N = 9$; 3%), and Mississippi ($N = 41$; 16%). The ethnic distribution of caregivers for Study 2 was 44% European-American, 32% African-American, 15% Hispanic-American, 6% Asian-American and 3% unknown. The ethnic distribution of children (47% female) was 39% European-American, 34% African-American, 15% Hispanic-American, 5% Asian-American and 6% unknown. The mean age for children was 5.11 (SD = 1.45). Seventeen percent of participants reported previous utilization of child mental health services. Of those who reported previously using services, 24% sought services from a psychologist and 76% from other providers (e.g., psychiatrist, social worker, counselor, physician, or school). Information on caregivers own personal mental health service use and the type of service providers used in the past was not obtained. See Table 3 for sample characteristics.

Table 3 Study 2 sample characteristics

Variable	*N* (%) Parent	*N* (%) Child
Gender		
Male	17 (7)	136 (52)
Female	243 (93)	124 (48)
Age (in years)		
M (SD)	34.41 (6.1)	5.11 (1.5)
Ethnicity		
African American	83 (32)	89 (34)
European American	114 (44)	102 (39)
Hispanic American	40 (15)	39 (15)
Asian American	15 (6)	14 (5)
Other	8 (3)	16 (6)
Past service use		
Yes	–	43 (17)
No	–	217 (83)
Parent's education level		
High school or below	83 (32)	–
College education	126 (48)	–
Graduate education	51 (20)	–

Measures

Demographic Questionnaire

A demographic questionnaire was used to gather data on child variables (e.g., gender, age, and ethnicity), and parent variables (i.e., age, ethnicity, and education level). Parents also reported whether they previously used mental health services for their child. Mental health service use responses were coded as "yes" (1) or "no" (0).

Attitudes Toward Child Mental Health

The *Parental Attitudes Toward Psychological Services Inventory (PATPSI)* was used to measure participants' help-seeking attitudes, mental health stigma and help-seeking intentions. The *PATPSI* was previously described in Study 1.

Parental Concerns

The *Thoughts About Psychotherapy Survey* (TAPS; Kushner and Sher 1989) was used to measure individual's concerns about psychological services. The TAPS consists of 25 Likert-scale items scored from 1 (not concerned) to 5 (very concerned). Total scores can range from 19 to 95, with higher numbers indicating greater concerns about professional psychological services. In the present study, the alpha coefficient was .94.

Procedure

Parents and/or guardians were recruited from communities in Texas, Louisiana, and Mississippi. For the study the data were collected from different sites and data collection varied slightly (as described below). Undergraduate research assistants were recruited through the TAMU Psychology Department Undergraduate Research Practicum and received course credit for their time commitment to assisting with the project. The first sample ($N = 101$) was collected as part of Project RAISE, a larger study which examined parenting techniques and child behavior outcomes. Parents who chose to participate returned the consent form to their child's teacher and were then sent a packet of questionnaires. Families were only allowed to participate one time and report on one child, even if more than one child was enrolled in the recruitment site. Parents who returned the questionnaire packet were compensated $10. The second sample ($N = 41$) was collected as part of Project ABC, a laboratory observational study on parent–child interactions. Parents completed a questionnaire packet while waiting for their child to complete a series of tasks. At the end of the sessions, parents and their child received complementary t-shirts for their participation and no other compensation was received. The third sample ($N = 118$) was collected as part of the Children's Mental Health (CMH) project, a study on how parents' make decisions to seek help for children with emotional or behavior problems. Participants were recruited through flyers displayed at Head Start sites and sent home to parents. Participants who expressed interest were then contacted by the researcher or research assistants, and then questionnaires were distributed to participants to be completed. Participants were asked to complete the measures and return the packets within a week. Participants were allowed several methods to return the measure which included: returning in a self-addressed envelope, or returning to the distribution site to be collected by a research assistant. Following informed consent, all participants completed the study measures. Participants' names were entered into a drawing for a $25 Walmart gift card for completing the study measures. This study was approved by the Institutional Review Board at the author's and collaborators' institution.

Results

Data Analyses

Data analyses for Study 2 were conducted as described. First, item–total correlations for each item of the *PATPSI* were calculated. Of the 26 original items, 21 items remained based on that criterion of item–total correlations below .30 (see "Appendix" for measure). To examine the internal consistency of the PATPSI, reliability analyses were conducted by examining Cronbach alpha coefficients. After examining psychometric properties of the *PATPSI*, analyses were conducted to test major research questions. Descriptive statistics were conducted and the means and standard deviations for the major continuous variables. Major continuous variables were first screened for normality and outliers. None of the major continuous variables were skewed according to the cutoff values of 2 for skewness and 7 for kurtosis (West et al. 1995). Furthermore, no outliers were detected based on the frequencies and distribution of the major continuous variables (Barnett and Lewis 1994).

Factor Structure of PATPSI

The KMO measure of sampling adequacy and Bartlett's test of sphericity suggested that the data were adequate for factor analysis [KMO = .802; χ^2 (210, $N = 260$) = 936.185, $P < .0001$]. The 21 items of the *PATPSI* were submitted to a confirmatory factor analysis (CFA) to assess the goodness of fit of the hypothesized 3-factor structure using LISREL 8.71 statistical software. Results of the CFA using the ML method suggested replication of the hypothesized 3-factor model. Specifically, the chi-square statistic was significant [χ^2 (186, $N = 260$) = 539.34, $P < .0001$], the NNFI = .94, RMSEA = .08, and the CFI = .95, suggesting a good model fit for the 3-factor model. Table 1 displays the standardized factor loadings.

Reliability

To examine the internal consistency of the *PATPSI*, analyses were conducted by examining alpha coefficients. Results indicated that internal consistency for the *PATPSI* total scale and subscales (Help-Seeking Intentions, Help-Seeking Attitudes, and Stigmatization) were .90, .70, .88, and .89, respectively. Overall, internal consistency was moderate to high given the sample size (Murphy and Davidshofer 2001). Given the range of ethnicities represented in the sample, internal consistency was also examined for each ethnic group based on parents' ethnicity. For the PATPSI total, internal consistency was as follows: European-American = .90, African-American = .90, Hispanic-American = .91, and Asian-American = .92. See Table 4 for internal consistency for the *PATPSI* subscales across each group.

To examine test–retest reliability, Pearson correlation coefficients were calculated between test and retest score for the *PATPSI* total scale and subscales. Test–retest reliability was examined. However, only a small number of

Table 4 Internal consistency for the PATPSI subscales by ethnic groups

	Ethnic group			
	European American	African American	Hispanic American	Asian American
Subscale				
PATPSI total	.90	.90	.91	.92
HS intentions	.70	.70	.72	.65
HS attitudes	.91	.86	.85	.84
Stigmatization	.85	.91	.87	.90

HS Help-seeking

participants who received the *PATPSI* for a second administration completed the measure, which resulted in a sample size of 25. Additionally, participants were primarily European American (83%). Results indicated that test–retest reliabilities were as follows: Help-Seeking Attitudes, $r = .56$; Help-Seeking Intentions, $r = .33$; Stigmatization, $r = .76$; and PATPSI total score, $r = .67$.

Correlations Between the PATPSI and Psychological Concerns

To examine the relation between *PATPSI* scores and parents' concerns about psychotherapy, correlation analyses were conducted. Pearson correlation coefficients were calculated between the *PATPSI* scales and the total score on the Thoughts About Psychotherapy Survey (*TAPS*). Results indicated that scores on the *PATPSI* were negatively correlated with the *TAPS* as follows: Help-Seeking Attitudes [$r = -.27$, $P < .01$], Help-Seeking Intentions [$r = -.19$, $P < .05$], Stigmatization [$r = -.54$, $P < .01$], and PATPSI total score [$r = -.47$, $P < .01$]. This suggest that parents with more concerns about psychotherapy have less positive attitudes and less stigma tolerance (more stigmatizing views).

Parental Attitudes Toward Child Mental Health

To examine whether parents with previous experience utilizing child mental services reported more positive attitudes, stigma tolerance, and help-seeking intentions, between-subjects ANOVAs were conducted with the *PATPSI* subscale scores (Help-Seeking Attitudes, Help-Seeking Intentions, and Stigmatization) as the dependant variables and parental report of previous service use as the independent variable. When examining parents' previous use of child mental health services, results indicated a significant difference for stigma [F (1,258), $P < .05$, $\eta_p^2 = .057$], and attitudes [F (1,258), $P < .05$, $\eta_p^2 = .040$]. Participants with previous use of child services reported higher mean Stigmatization scores ($M = 25.91$, SD = 10.33), which correspond to more stigma tolerance toward mental health services for children (i.e., less stigma), than participants with no previous use ($M = 18.63$, SD = 11.14). Additionally, participants with previous use of child services reported higher mean Help-Seeking Attitudes scores ($M = 24.84$, SD = 11.36), which correspond to more positive attitudes toward mental health services for children, than participants with no previous use ($M = 19.04$, SD = 10.50). No significant differences were found for the Help-Seeking Intentions subscale.

Study 2 Discussion

This is the first known study to develop a measure of adult help-seeking attitudes toward child mental health services. Using a sample of caregivers, results from the study supported the hypothesized 3-factor structure, although the present analyses suggested that 5 of the items used in Study 1 did not correlate well with the other items and were omitted from the measure before factor analysis. Based on suggested cut-offs by Hu and Bentler (1999), the 3-factor model appeared to be a "good" fit for the data with fit indices close to the suggested cut-off. Additionally, when examining the standardized item loading for the sub-scales of the *PATPSI*, loadings indicated a "good". Overall, the fit indices, as well as the individual item loadings suggest adequate fit for the data.

In addition to examining the factor structure of the *PATPSI*, the instrument's internal reliability was examined. First, internal consistency for the subscales and total scale ranged from .70 to .90, which were moderate to high. In general, Cronbach alpha coefficients of .80 are considered desirable (Clark and Watson 1995). Based on those findings, internal consistency for the *PATPSI* in the current study is considered "good". Additionally, internal consistency was examined across ethnic groups and results were similar. This suggests that the *PATPSI* is reliable for use

across different ethnic groups. Taken together, the analyses conducted suggest that *PATPSI* is a reliable measure to use as a research instrument.

Finally, discriminate validity of the *PATPSI* was conducted. Study 2 results were consistent with findings in Study 1. Parents who reported previously using child mental health services reported more positive attitudes and less mental health stigma. Parents with previous child mental health service use also reported higher mean help-seeking intentions scores in this sample, but these were not significantly different between groups. It is possible that other additive variables contribute to help-seeking such as parents' personal mental health service use, cultural expectations, or satisfaction with past service use. Pescosolido et al. (2008), found that parent' recognition of and response to childhood mental disorders is complicated by social and cultural norms that shape expectations of what is acceptable childhood behavior. Therefore, it is possible that those variables could influence parental help-seeking. One unique contribution of the current study was examining the influence of parental stigma on the use of child mental health services which has received less attention in the child literature. This study supported the importance of stigma on mental health service use. One study in the adult literature has found that stigmatizing views and treatment adherences are directly related (Corrigan and Klein 2005). It is possible that this same link exists in the child literature, but this has not been studied. Future studies should explore more directly the causal relationship between mental health stigma and parental help-seeking.

Discussion and Conclusions

Given the importance of studying parental attitudes, one of the aims of these studies was to examine the factor structure and reliability of the *PATPSI*. According to the literature, instrument reliability and validity are essential to be examined when describing the psychometric properties of an established or a new measure (Cronbach and Meehl 1955). In general, the *PATPSI* appears to be a useful measure as a research instrument. CFA fit indices, as well as, the individual item loadings suggested a "good" fit for the data. Additionally, the internal reliability and test–retest reliability of the *PATPSI* were examined. First, internal consistency for the subscales and total scale ranged from moderate to high. In general, Cronbach alpha coefficients of .80 are considered desirable (Clark and Watson 1995), therefore, internal consistency for the *PATPSI* is considered "good". Internal reliability of the PATPSI was found to be similar to findings for the ATSPPHS, which studies have found to range from .83 to .90 (Cepeda-Benito and Short 1998; Fischer and Turner 1970; Vogel and Wester 2003). Finally, test–retest reliability was examined and Pearson correlation coefficients for the *PATPSI* subscales ranged from low to moderate. In the current samples test–retest reliability was variable across subscales. For example, the Stigmatization subscale appeared to be the most stable over time. One potential problem with the test–retest reliability was the differences in the variability across retest administrations. On average, participants completed the measure over a 3-week period (administration ranged from 1 to 6-weeks across studies). Given these findings, it is possible that several variables may have contributed to the low test–retest reliability. For example, it is possible that variables such as stigma and attitudes fluctuate over time. When examining the internal consistency of the *PATPSI* items, they appeared to be within a desirable range suggesting that the items appropriately measure their intended constructs. Additionally, the internal consistency was similar across ethnic groups. Finally, although the *PATPSI* appears to be useful as a research instrument, it may not be applicable for adequately measuring change over time given the test–retest reliability in the current sample. However, given the methodological weaknesses discussed below, temporal stability should be further explored. In the meantime, measuring change over time for research purposes should be done with caution. Additionally, the PATPSI could potentially be used in a clinical setting to gather information during the intake process. Further implications are discussed below.

Strengths and Limitations

The current studies have several strengths and limitations. Whereas the reliability and validity of the PATPSI was generally acceptable, some limitations exist. First, the sample used to examine the factor structure of the PATPSI was composed of participants from three different research sites. This could potentially be seen as a limitation, because validity and reliability of an instrument are context dependent (e.g., population, administration format) and could potentially vary in another context (Switzer et al. 1999). For example, although the CFA sample consisted of multiple sites, the fit indices were still in the adequate range. According to Switzer et al. (1999), because validity and reliability are dependent upon contextual factors validating a measure should be viewed as a process of accumulating evidence over time. Secondly, consistent with the literature the current study included a high frequency of female caregivers. Future studies should seek to include a more equal sample to allow for gender comparison. Studies have consistently shown that females have more positive attitudes toward mental health services than males

(e.g., Fischer and Turner 1970) therefore it will be important to examine these comparisons using the *PATPSI*.

Implications for Research, Policy, and Practice

The current studies provide important information to clarify the role of parental attitudes, mental health stigma, and child mental health service use. Future studies should build upon these findings to clarify inconsistencies in the literature given some limitations due to sample characteristics and methodological issues. First, given the findings of the psychometric properties of the PATPSI, future studies should examine the psychometric properties of the PATPSI in additional populations (i.e., clinical and community). For example, research could examine whether there are differences in the factor structure across sample demographics (e.g., regions, education level, and gender).

Based on the information in the current study and potential future research, the knowledge gained has important practical implications. First, information could be used to provide beneficial information for developing effective strategies to increase the number of children receiving treatment. For example, studies have examined the effects of a brief psychoeducational intervention on adult medical patients referred for psychotherapy (Alvidrez et al. 2005) and parents referred for behavior parent training (Nock and Kazdin 2005). Results were promising, indicating that a brief psychoeducation intervention was effective in increasing attendance and adherence to treatment. It is possible that interventions through public education and brochures in medical and clinical settings may be effective in changing attitudinal and stigmatizing beliefs, which may improve help-seeking and treatment compliance. In clinical practice, some parents who are referred to treatment may be reluctant to attend due to certain negative views they have about mental health services and the *PATPSI* could potentially be used to assess for attitudinal beliefs to help clinicians address concerns about mental health services. Given disparities in mental health utilization, parents should also be encouraged to explore their individual beliefs about mental health services and considerations should be given to be culturally sensitive.

Although progress has been made in individual's perceptions about mental health services and a substantial proportion of the population recognizes children's mental health disorders, many still do not. Findings from the National Stigma Study-Children (NSS-C; Pescosolido 2009) support the need for general public education about childhood mental disorders and about caregivers' perceptions of mental illness. Considering that children spend a substantial amount of time in the school system, potential education programs could be provided during school events where a large number of parents are present. If these programs are facilitated by qualified mental health professionals, it could be a source of referral for parents and provide opportunities for parents to have their questions answered without the pressure of initiating treatment. If those avenues are somewhat effective, they could at least increase parents' openness to seek services. Given the large number of children not receiving necessary mental health services, this work has the potential to have a significant public health impact. Particularly, if treatment seeking is improved it could help with preventing the developing of future psychopathology and adjustment difficulties for children.

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Appendix

Directions: For each item, indicate whether you *strongly disagree (0)*, *disagree (1)*, *somewhat disagree (2)*, *somewhat agree (3)*, *agree (4)* or *strongly agree (5)*. The term "psychological problems" refer to reasons one might visit a professional. Similar terms include: mental health concerns, emotional problems, mental troubles, and personal difficulties. The term "professional" refers to individuals who have been trained to deal with mental health problems (e.g., psychologist, psychiatrist, social workers, and physicians).

0	1	2	3	4	5
strongly disagree					strongly agree

		Strongly disagree					Strongly agree
1.	I would not want others (friends, family, teachers, etc.) to know if my child had a psychological or behavior problem.	0	1	2	3	4	5
2.	To avoid thinking about my child's problems, doing other activities is a good solution.	0	1	2	3	4	5
3.	Having been mentally ill carries with it feelings of shame.	0	1	2	3	4	5
4.	If my child were experiencing a serious psychological or behavior problem at this point in my life, I would be confident that I could find relief in professional help.	0	1	2	3	4	5
5.	If my child were to experience a psychological or behavior problem, I would get professional help if I wanted to.	0	1	2	3	4	5
6.	Important people in my life would think less of my child if they were to find out that he/she had a psychological or behavior problem.	0	1	2	3	4	5
7.	Psychological problems tend to work out by themselves.	0	1	2	3	4	5
8.	It would be relatively easy for me to take my child to see a professional for help.	0	1	2	3	4	5
9.	I would want to get professional help if my child were worried or upset for a long period of time.	0	1	2	3	4	5
10.	I would be uncomfortable seeking professional help for my child because people (friends, family, coworkers, etc.) might find out about it.	0	1	2	3	4	5
11.	I would not want to take my child to a professional because what people might think.	0	1	2	3	4	5
12.	There is something admirable in the attitude of people who are willing to cope with their conflicts and fears without seeking professional help.	0	1	2	3	4	5
13.	If I believed my child were having a mental breakdown, my first decision would be to get professional help.	0	1	2	3	4	5
14.	I would feel uneasy going to a professional because of what some people would think.	0	1	2	3	4	5
15.	Strong willed individuals can handle emotional or behavior problems without needing professional help.	0	1	2	3	4	5
16.	Had my child received treatment for a psychological or behavior problem, I would feel that it should be "kept secret".	0	1	2	3	4	5
17.	I would be embarrassed if my neighbor saw me going into the office of a professional who deals with mental health concerns.	0	1	2	3	4	5
18.	People should work out their own problems instead of getting professional help.	0	1	2	3	4	5
19.	There are things that happen in my family I would not discuss with anyone.	0	1	2	3	4	5
20.	Seeking professional help is a sign of weakness.	0	1	2	3	4	5
21.	Strong willed parents can handle problems without professional help.	0	1	2	3	4	5

Note: Please contact the author for scoring information.

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