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Teacher Attitudes Toward Addressing Mental Health in Schools (TATAMS): Development and Initial Validation of an Attitude Scale

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TEACHER ATTITUDES TOWARD ADDRESSING MENTAL HEALTH IN SCHOOLS (TATAMS): DEVELOPMENT AND INITIAL VALIDATION OF AN ATTITUDE SCALE

A Thesis

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Master of Arts

in

The Department of Psychology

by
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Abstract

The mental health of students continues to be an overlooked topic. Although research surrounding school-based mental health has increased, this increase in research has yet to translate effectively to practice. Past studies have questioned teachers regarding their perceptions of mental health and school-based mental health services. A significant limitation to past research is the absence of a consistent scale used to measure teacher perception. This inconsistency across studies in terms of the measurement tools used (e.g., surveys versus focus groups) limits the ability to compare the findings across research. The purpose of the current study was to develop and establish initial validation for a scale that measured teacher attitudes toward addressing mental health in schools. The scale was developed based on the tripartite attitude construct. Each item was written towards one of the attitude components (e.g., cognition, affect, or behavior). It was hypothesized that three distinct factors would form and measure the three different attitudinal components related to school-based mental health. This hypothesis was not supported. Instead, a two-factor model formed with one primary factor that included a mix of cognitions, affects, and hypothetical/intended behaviors related to school-based mental health (*general attitudes toward addressing mental health in schools*). The secondary factor included items that reflected actual behaviors (*actual behaviors associated with addressing mental health in schools*). Implications for the future of the TATAMS measure are discussed.

Keywords: *scale development, tripartite attitude construct, teachers, school-based mental health*

Teacher Attitudes Toward Addressing Mental Health in Schools (TATAMS): Development and Initial Validation of an Attitude Scale

Approximately one out of five children in the United States has a mental health problem (Centers for Disease Control and Prevention, 2013), but only one-fourth to one-half of youth with a diagnosable mental health problem receive treatment. This treatment gap is particularly pronounced for disorders such as depression and anxiety (Merikangas et al., 2011), where the self-recognition of the child or close observation by a family member is often required to determine that something is wrong, and in turn, seek treatment. Regardless of how it presents, the stigma associated with having a mental health issue can affect every aspect of a child's life. For instance, youth with mental health disorders experience the adverse effects of prejudices, social disapproval, or punitive actions from their community (Corrigan et al., 2014). Stigma can, at times, be overt in the form of negative or derogatory comments; however, other times, stigma is subtler in its form (Corrigan et al., 2014). More covert instances of stigma include parents, teachers, or peers assuming that all youth with mental health issues are aggressive, have poor decision-making skills, or will never perform academically at the rate of their peers (Corrigan et al., 2014).

This stigma attached to mental health can dissuade a child or parent from seeking professional help due to the fear of being labeled (Kern et al., 2017). Unless the family resides in an area where school-based mental health services are available, they are required to seek services through outpatient mental health clinics. The term "outpatient mental health clinics" incorporates a wide range of facilities, including community-based clinics, outpatient hospital mental health clinics, state-run clinics, and private practices (Gallo et al., 2017). Past research has demonstrated various barriers associated with identifying appropriate mental health services (e.g., Bornheimer et al., 2018; Gallo et al., 2017; LeCloux et al., 2016; Reardon et al., 2017).

Some of these barriers include limitations based upon insurance, financial barriers, transportation issues, and extensive waitlists for service (LeCloux et al., 2016).

Gallo et al. (2017) conducted a study that evaluated barriers faced by parents when searching for mental health services for their child. For this study, research assistants posed as mystery shoppers and called numerous outpatient mental health in the New York area. Gallo et al. (2017) found that callers were unable to schedule appointments at approximately 31% of the clinics. Reasons provided by clinics included: maximum client capacity reached, clinic criteria for services not met by the adolescent, or client insurance not accepted. For the clinics that did offer services, 43% required one-step before a psychiatric appointment (e.g., intake interview), 26% required two-steps (e.g., paperwork and an intake appointment), and 31% required three or more steps (e.g., paperwork, an intake appointment, and an outside referral from a primary care physician). Although more than half of the callers were able to schedule an intake for a psychiatry appointment, a majority of the callers were required to complete several steps before they had direct contact with a psychiatrist. These obstacles included multiple call attempts required to schedule an appointment, the completion of administrative paperwork, and mandatory letters of recommendation from other persons familiar with the family dynamics (e.g., schools) (Gallo et al., 2017).

If a parent is persistent enough to find services for their child, other obstacles still maintain, including transportation to the clinic, the expense of co-pay associated with services, and the maximum number of sessions allowed under the client's insurance plan (Bornheimer et al., 2018). With these continued barriers present after a parent and child have found outpatient services, it is not surprising that past studies have demonstrated high drop-out for these facilities (e.g., Gould et al., 1985; Kazdin et al., 1994; Merikangas et al., 2011). Drop-out rates are

particularly problematic for families from a lower socioeconomic status or belonging to an ethnic minority group (Staudt, 2003). For these families, the stressors mentioned above, compounded with the barriers inherent in outpatient services, can ultimately prevent the child from receiving the extended psychological services they may need.

Past research has demonstrated the prevalence of elevated drop-out rates across various outpatient settings (e.g., Gould et al., 1985; Kazdin et al., 1994). In one particular study, Merikangas et al. (2011) used the National Comorbidity Survey-Adolescent Supplement (NCS-A) to assess the lifetime service utilization of adolescents with mental health disorders. The NCS-A was a face-to-face survey of 10,148 adolescents 13- to 18-years-of-age in the United States (US). Among various other factors, Merikangas et al. (2011) analyzed the number of visits the adolescent made to a mental health outpatient facility in their lifetime. Merikangas et al. (2011) coded the number of lifetime visits as frequent (i.e., more than 20 visits), intermediate (6 to 20 visits), and limited (less than six visits). Merikangas et al. (2011) found that most (i.e., 68.4%) adolescents with a mental health disorder had limited service visits (less than six visits). Results also revealed that adolescents with attention-deficit/hyperactivity disorder (ADHD) or conduct disorder (CD) were more likely to receive additional service visits, relative to adolescents with mood disorders. Furthermore, white adolescents were significantly more likely to receive extended services, compared to Hispanic or African American adolescents.

School-Based Mental Health Services (SBMHS)

School-based mental health services (SBMHS) address many of the barriers mentioned above, including financial/insurance limitations, transportation issues, and the stigma associated with mental health services (LeCloux, 2016). For 9 months out of the year, most children spend 6-8 hours each day at school. (Kern et al., 2017). Totaled together, school-aged children spend

approximately 25% of the year in the school setting from the age of 6 to 18. Schools that provide SBMHS utilize this time in the most effective manner through the delivery of mental health services within a tiered system of support (Kern et al., 2017). Similar to the multi-tiered system of support implemented by many schools for academic or behavioral problems, the focus of the mental health interventions within a tiered system is on prevention.

Preventive interventions strive to avoid the worsening of mental health challenges. In contrast, reactionary interventions tend to delay the implementation of services until the symptoms become severe enough to interfere with the student's functioning significantly. This focus on prevention permits schools to provide mental health services to students who may not meet the clinical criteria for outpatient mental health services but display the early signs of mental health difficulties (Kern et al., 2017). Three tiers of support facilitate the accomplishment of this task.

Tier 1 is implemented school-wide and includes universal screening, as well as programs to promote emotional and behavioral health. Without screening practices in place, youth with mental health concerns are typically only detected after numerous office referrals or through the identification of the teacher. Both of these approaches (i.e., office referrals and teacher referrals) have the tendency to miss students with internalizing problems (Kern et al., 2017). For school-based mental health services to be effective, universal mental health screening must be year-round (e.g., beginning of the year, middle of the year, end of the year). This process allows both the identification of students with emerging symptoms, as well as those with more serious mental illnesses (Kern et al., 2017). Tier 2 includes interventions that offer more intensive support and are often delivered in a small group setting (e.g., social skills groups, groups to address coping with grief and loss). Tier 3 interventions are for those students who did not respond to the

services provided within the previous two tiers, and services are typically individualized (Kern et al., 2017).

Schools are also in a position to counteract both overt and covert forms of stigma through the facilitation of environments that fosters mental health supports. This can be accomplished through increasing mental health awareness across all staff and students, promoting student connectedness through a positive school climate, and building a school-wide capacity to address mental health concerns (Kern et al., 2017). This school-wide capacity is especially important as the support of the administration and collaboration across professions is essential to effective implementation of mental health services.

Despite the potential that schools offer in addressing the mental health needs of youth, effective implementation of SBMHS is not the norm. Many barriers continue to exist that prohibit schools from effectively implementing school-wide mental health services. Some of these barriers include limited confidence on the part of the teachers with the implementation of mental health services, a lack of knowledge about youth mental health issues across school staff, limited resources to dedicate to mental health interventions, and a lack of support from administrators (Moon et al., 2017).

Past Research with Teacher and Administrator Perceptions of SBMHS

Effective school-based mental health services require active involvement from all school personnel (e.g., teachers, administrators, counselors, school nurse). Specifically, teachers are a central component of the effective implementation of SBMHS. Roles of teachers within a SBMHS framework can include the implementation of classwide mental health interventions that focus on the promotion of social and emotional development and the referral of students who could require more intensive mental health supports (Moon et al., 2017). Despite the critical role

of teachers in SBMHS, past research on teacher perceptions has demonstrated that teachers often report that they are unprepared to address mental health needs in the classroom (Williams et al., 2007). Much of the previous research on this topic has utilized surveys to gauge teachers' preparedness in addressing mental health, as well as their overall perception of the importance of mental health services.

Walter, Gouze, and Lim (2006) conducted a needs assessment in which they surveyed urban elementary school teachers. The authors' survey addressed four domains: Teachers' beliefs about mental health problems at school and barriers to solving these problems; teacher preference for mental health professional development topics; teachers' knowledge and self-efficacy with mental health issues; and teachers' education and experience as it pertained to mental health issues. Results demonstrated that teachers reported the most concern with students who displayed disruptive behaviors (e.g., getting out of seat, talking out of turn) and expressed a low level of confidence in addressing mental health issues. Teacher responses also suggested a desire to learn more about disruptive behavior disorders and the implementation of behavior plans; however, very few teachers had received formal education on the subject.

In a similar study, Reinke, Stormont, Herman, Puri, and Goel (2011) surveyed early childhood and elementary school teachers across rural, suburban, and urban school districts. In order of highest importance to teachers, the top five mental health concerns identified included: externalizing behavioral problems; hyperactivity and inattention problems; family stressors; social skill deficits; and depression. Overall, teacher responses suggested a limited knowledge and skillset related to addressing their students' mental health needs. For instance, when presented with the statement, "I feel that I have the skills required to meet the mental health needs of children with whom I work," 72% of the teachers responded with "neutral," "disagree,"

or “strongly disagree.” In contrast, 89% of teachers “agreed” or “strongly agreed” with the statement, “I feel that schools should be involved in addressing mental health issues of students.”

Moon, Williford, and Mendenhall (2017) surveyed teachers and administrators across urban and rural schools. Results indicated that most educators and administrators viewed students’ mental health as an issue that needs to be addressed. Survey responses revealed limited training in dealing with student mental health but that 85% of the respondents indicated a desire to learn more about mental health disorders. The results from Moon et al. (2017) did not demonstrate any significant difference between educators in rural areas versus educators in urban areas.

Three overarching themes were consistent across the above studies. First, each study suggested a paradox between the teachers’ belief that addressing the mental health of students is important and their actual ability to address that need. Second, there was a tendency across surveys for teachers to report more concern with externalizing behaviors as opposed to internalizing behaviors. Third, although teachers and administrators reported limited knowledge related to mental health services, a large percentage of respondents in all studies reported a desire for more information related to mental health services.

The significant barrier to mental health services does not appear to be the innate attitude of teachers to disregard the importance of mental health; instead, it appears to be the systematic emphasis of academics above everything else. The majority of teachers’ professional development focuses on standards-based accountability for academics and leaves the competencies related to school-based mental health services largely unaddressed (Ball et al., 2016). The decision to deemphasize mental health and focus resources solely on academics is in

stark contradiction to the various research studies that have demonstrated the interconnectedness of the two.

Mental Health and Academic Achievement. McLeod and Fettes (2007) found a significant association between children's mental health and academic achievement. The authors utilized the Children of the National Longitudinal Surveys of Youth data set to analyze the trajectories of children with internalizing and externalizing mental health problems from childhood through adolescence. Results demonstrated that children who had mental health difficulties in either childhood or adolescence were more likely to have poorer educational attainment. Moreover, individuals with internalizing problems that emerged in adolescence were less likely to graduate from high school than youth without any mental health disorder. Regardless of when the mental health problems occurred (i.e., childhood or adolescence), the influence on educational attainment was significant. These findings, coupled with past research on the association between a child's mental health and academic achievement, continue to stress the need for improved school mental health services. Likewise, these results exemplify how it should never be a decision between addressing a child's mental health or their academics.

Limitations of Past Research with Teacher Perceptions of SBMHS. Although previous research regarding teacher perceptions of SBMHS (e.g., Moon et al., 2017; Reinke et al., 2011; Walter et al., 2006; Williams et al., 2007) provided valuable insights into teacher perceptions related to school-based mental health services, limited generalizations can be made from these studies. Aside from the overarching themes mentioned above, not much more can be compared across the studies due to the different samples and the different measures used to gauge teacher perceptions. Moreover, the measures used to assess teacher perceptions lacked technical adequacy. The use of measures without established technical adequacy not only

impedes the ability to compare results across studies, but it also makes it difficult to know the exact construct being measured.

Additional studies (e.g., Loades & Mastroiannopoulou, 2010) have assessed teacher knowledge of mental health topics, or their mental health literacy. *Mental health literacy* encompasses an individual's ability to recognize specific disorders, as well as their knowledge of risk factors (Jorm et al., 1997). While this is valuable information to assess, it is the opinion of the current researcher that the knowledge of a given teacher's mental health literacy does not provide much in terms of intervention planning for school-based mental health services. Moreover, within the school-based mental health model, it is not expected for teachers to have an expansive knowledge about mental health issues. Rather, the intention is for teachers to work collaboratively with the mental health professional at their school to identify students in need of additional services.

Attitude Measurement

An alternative way to conceptualize what previous research has referred to as teacher perceptions of school-based mental health services (SBMHS) is to view these reported perceptions as a part of the teachers' overall attitude toward SBMHS. Attitudes can be defined as the good/bad evaluations that individuals have regarding objects in their social world (Fabrigar & Wegener, 2010). In addition, attitudes can be considered mental processes that represent both the actual and potential responses of each individual (Allport, 1935). Past research has often classified a given attitude as composed of three different components: affect, behavior, and cognition (Breckler, 1984). The affective component refers to the emotional response an individual has to an object or stimulus. The behavioral component encompasses both an individual's behavioral intentions and verbal statements regarding behavior concerning the

object or stimulus, as well as their overt actions. The cognitive component includes beliefs, knowledge, perceptions, and thoughts about the object or stimulus.

Within the tripartite model, attitudes can vary in valence (e.g., positive or negative), extremity (i.e., the extent the attitude deviates from neutrality), and strength (i.e., the durability of the attitude). Attitudes can also vary in their underlying bases (e.g., whether the attitude is based more on emotion/affect or cognition) (Petty et al., 2019). Past research on the tripartite model has also found that although the three components are often related, they can, at times, be inconsistent (Breckler, 1984). That is, an individual's self-reported cognitions/thoughts about a given object can differ from their behavior toward the same object or vice versa.

Attitude Scales. To the best knowledge of the researcher for the present study, no validated measures of teacher attitudes toward school-based mental health currently exist. Likewise, the current researcher does not know of any validated measures of teacher attitudes toward mental health in general. That being said, there are various measures of attitudes toward mental health that have, at the least, gone through some validation process.

Wei et al. (2015) conducted a review of a wide range of mental health literacy measures that evaluated knowledge, attitudes, and/or help-seeking. For inclusion in the review, studies had to demonstrate any type of quantitative studies (e.g., randomized control trials [RCTs]; cluster RCTs; quasi-experimental studies; or cross-sectional/survey studies) to evaluate a measurement tool that looked at one, or a combination of, what the authors defined as mental health literacy outcomes: knowledge, stigma/attitudes toward mental disorders, and help-seeking. The studies also had to report on the measures used in the study and report/evaluate the psychometrics of the measures used for inclusion in the review conducted by Wei et al. (2015). There were no limits set on study participants (i.e., the individuals who completed the measures).

For the studies that reported on stigma/attitude measures, 102 studies met the criteria set by Wei et al. (2015) for inclusion in the review. Of those 102 studies, a total of 65 different stigma/attitude measures were used across studies (some studies used the same measurement tools). Table 1 presents the most widely used stigma/attitude measures, as reported by Wei et al. (2015).

Table 1. Stigma/Attitude Measures with Reported Psychometrics

Measures	Developer/Author	Initial Validity
Social Distance	Bogardus, 1925	CS; CR/CV; D; FA
Opinions about Mental Illness	Cohen & Struening, 1962	CS; FA
Community Attitudes towards Mental Illness	Taylor & Dear, 1981	CS; D; FA
Devaluation-Discrimination Tool	Link, 1987	CS
Depression Stigma Scale	Griffiths et al., 2004	CS; CV; D; FA
Attribution Questionnaire	Corrigan et al., 2003	CS; FA
Internalized Stigma of Mental Illness	Ritsher et al., 2003	CS; CC; D; FA; P
Perceived Dangerousness	Link et al., 1987	CS

Note. The above table of attitude measures that have demonstrated some form of psychometric validation is adapted from one presented in Wei et al. (2015). The initial validity column presents the validity levels demonstrated by the initial study when the measure was created. CS = construct validity; CR = criterion validity; CV = convergent validity; D = discriminant validity; FA = factor analysis; CC = concurrent validity; P = predictive validity. For many of these measures, additional validity studies have been conducted after the initial scale development; this table only presents the initial validation.

Wei et al. (2015) reported that a small number of the measures reviewed were validated in any way. Moreover, the authors did not report that any of the measures were developed based on the tripartite attitude model, nor did any of the more widely used scales, listed in Table 1 identify teachers' attitudes toward mental health or student mental health as their intended use. Finally, none of the measures addressed positive mental health, which is an important consideration when using a dual-factor model of mental health (Wang et al., 2011).

Current Study

The purpose of the current study was to develop a scale to measure a given teacher's attitude toward addressing mental health in the school system. The decision was made to measure teacher attitude, rather than other constructs such as mental health literacy, because of the intended final use of the scale. The TATAMS scale was developed to be used both before and during the implementation of school-based mental health services. As mentioned above, school-based mental health services utilize a team-approach to addressing the mental health needs of students. Given this team-approach, it seemed more appropriate to assess teacher's general attitude toward mental health in schools, rather than their knowledge of specific mental health topics. In addition, more research has been conducted evaluating measures of teacher mental health literacy (e.g., Wei et al., 2019; Yamaguchi et al., 2020), whereas limited research has been conducted to evaluate teacher attitudes toward mental health. Finally, there is currently no known tool with technical adequacy to measure teacher attitudes toward mental health in school.

The Teacher Attitudes Toward Addressing Mental Health in Schools (TATAMS) scale was developed based upon the tripartite attitude construct, which postulates that an attitude has three different dimensions: affective, cognitive, and behavioral. Items for the scale were written using a dual-factor model to conceptualize mental health. The dual-factor model of mental health was created in response to criticisms regarding traditional mental health models that were too dependent on one-dimensional and negative indicators of psychopathology. In contrast to the traditional mental health models, the dual-factor model of mental health views mental health as not just the absence of mental illness, but also takes into consideration the presence and promotion of subjective well-being (Wang et al., 2011).

The final version of the scale is intended to be used with teachers in both general and special education classrooms. It is anticipated that teacher responses on the TATAMS will indirectly measure a given teacher's attitudes toward school-based mental health services. These responses could then be utilized by administrators and other school staff to determine the amount of support teachers might need before the implementation of a school-wide mental health program. It is possible that the TATAMS scale could also be used within a more extensive school climate assessment to determine the overall attitudes teachers have towards addressing mental health in schools.

Given the information presented above, the following hypotheses were made for the current study:

1. The latent structure of the TATAMS would identify distinct factors that reflected affective, cognitive, and behavioral dimensions of teacher attitudes toward addressing mental health in the schools.
2. The factors that are identified from the TATAMS items would have adequate psychometric qualities, including robust factor loadings and internal consistency.
3. Teacher responses to the TATAMS items, overall, would be positively correlated with responses to the Community Attitudes toward Mental Illness (CAMI) *benevolence* scale.

Method

Participants

Prior to recruiting participants for this study, the Institutional Review Board (IRB) at Louisiana State University reviewed and approved the following methods and procedures. To recruit participants, the primary researcher emailed teachers that he had previously worked with and requested their participation in the survey. A snowball sampling technique was utilized in that the recruitment material sent to teachers also included a pre-drafted email that the teachers could provide to their administrators. It was the hope of the researcher that administrators would forward the survey and email to the larger listserv for the school. Colleagues of the primary researcher also forwarded the survey and recruitment email to additional teachers and administrators. Eligibility criteria for the study included being at least 18-years-of-age, English-speaking, and a full-time K-12th-grade teacher. Both general and special education teachers were invited to participate. All teachers completed the survey online through Qualtrics survey software. The data collection period lasted approximately two-and-a-half months (i.e., August 26, 2019 – November 15, 2019).

Sample Size

After the data collection period, there were a total of $N=170$ responses. Five responses were removed from the sample because they were not teachers (two administrators and three counselors). The final sample for this study included $N=165$ teachers. It should be noted that this is a smaller sample than originally planned for this study. Initially, the goal was to recruit at least 300 teachers to complete the pilot of the TATAMS. Experts in scale development provide a wide range of recommendations concerning the sample size needed. Generally, the larger the number of items to be factored, the larger the sample size should be (DeVellis, 2017).

Some researchers advocate using a set-ratio as a guideline. For instance, Tinsley and Tinsley (1987) suggest around 5 to 10 subjects per item, although they further stated that, once the sample size surpasses 300, the set-ratio becomes less important. In contrast, other researchers recommend alternative sets of guidelines. DeVellis (2017) cited sample size recommendations set by Comrey (1973) that define a sample of 100 being poor, 200 being fair, 300 being good, 500 being very good, and 1,000 being excellent. MacCallum et al. (1999) references additional variations of recommended sample sizes for factor analysis, noting that many of the guidelines are stated in terms of the absolute sample size or recommendations based on the ratio of subjects to item.

Sample Characteristics

Most teachers (82%) identified as female, approximately 17% identified as male, and one teacher identified as “gender diverse.” The majority of teachers (91%) reported that they taught at a public school, 8% reported they taught at a private school, and 1% selected “other” for the type of school. Approximately 53% of the teachers had taught for more than 11 years. Around 77% of teachers taught reported teaching in general education, and 20% of teachers reported teaching in special education. The remaining teachers selected “other” for the question about whether they taught in general or special education, with most writing-in that they taught both. The final demographic question posed to participants before they began the survey was whether or not they had personal experience with a mental health disorder. Approximately 74% responded that they have experience dealing with mental health issues (either personally or knowing a family member/friend); 25% responded that they did not have any experience with a mental health disorder; and one participant selected they would “prefer to not disclose.” All additional percentages regarding demographics can be found in Table 2.

Table 2. Percentages of demographic variables as reported by teachers (N=165)

Variable	<i>n</i>	Percent
Age (years)		
18-20	2	1.2
21-29	41	24.8
30-39	41	24.8
40-49	43	26.1
50-59	29	17.6
60 or older	9	5.5
Gender		
Male	29	17.6
Female	135	81.8
Gender diverse	1	0.6
Ethnicity		
White	137	83
Black or African American	15	9.1
Asian	7	4.2
Multiple Ethnicity/Other	6	3.6
Highest Level of Education		
High school graduate	1	0.6
Associate degree	2	1.2
Bachelor's degree	78	47.3
Master's degree	82	49.7
Doctorate degree	2	1.2
Teaching Experience (years)		
0 to 3 years	24	14.5
3 to 5 years	23	13.9
6 to 10 years	31	18.8
11 to 20 years	53	32.1
> 20 years	34	20.6
Type of School		
Public School	150	90.9
Private School	13	7.9
Other	2	1.2
General or Special Education		
General education	127	77
Special education	33	20
Other	5	3
Personal Experience with Mental Health		
Yes	122	73.9
No	42	25.5
Prefer to Not Disclose	1	0.6

Measures

Teacher Attitudes Toward Addressing Mental Health in Schools (TATAMS)

The 75-item TATAMS scale used a 5-point Likert-type response scale, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Higher scores were intended to represent more positive attitudes toward addressing mental health in schools. An in-depth description of the development of the TATAMS scale is provided in the “Procedures” and “Results” sections below.

Demographic Survey

All participants provided demographic information before being presented with the TATAMS items. The demographic section included questions about age, gender, ethnicity, highest level of education completed, years of teaching experience, whether they taught at a public or private school, where their school was located (i.e., which state in the United States), grade(s) taught, whether they taught in general or special education, and whether they had any experience with a mental health problem (i.e., personal experience or know someone, such as a friend or family member).

Community Attitudes Toward the Mentally Ill (CAMI) – Benevolence Subscale

The Community Attitudes Toward the Mentally Ill (CAMI) (Taylor & Dear, 1981) was administered to establish the construct validity of the TATAMS items further. The CAMI has been used in the past to assess attitudes towards people with mental health problems. A 5-point scale measures the individual’s agreement with a given item ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The 40 CAMI items are grouped into four factors: Authoritarianism, Benevolence, Social Restrictiveness, and Community Mental Health Ideology. For the purpose of the current study, only the Benevolence scale was used to measure the construct validity of the TATAMS items. The Benevolence scale of the CAMI is intended to represent the individual’s

sympathetic view of people with mental illness based on humanistic principles. The reason for only including the Benevolence scale was motivated by the researcher's intention to limit the number of items sent to teachers. Furthermore, out of the four CAMI scales, the Benevolence scale appeared most aligned with the attitude construct that the TATAMS intended to measure. The CAMI has been found to possess relatively good levels of construct validity (*alpha* ranging from 0.68 to 0.88). The reported *alpha* coefficient of the Benevolence scale is 0.76 (Taylor et al., 1979).

For the current study, there were two modifications made to the wording of the CAMI items. First, the phrase “the mentally ill” was changed to “people with mental health problems” for 8 of the CAMI items. Next, one of the CAMI items used the term “mental problems,” which was changed to “mental health problems.” These changes were made to make the items more consistent with the language used in the TATAMS. Moreover, these changes ensured that the CAMI was more consistent with the person-first language promoted in academia (e.g., “the mentally ill” versus “people with mental illness”) (Granello & Gibbs, 2016).

Procedures

Initial Item Generation

Items were generated based on the tripartite attitude construct, which proposes that an attitude is comprised of distinct affective, cognitive, and behavioral components (Breckler, 1984). Prior to the creation of any items, the construct the scale intended to measure (i.e., teacher attitudes toward addressing mental health in schools) was defined. The definition created was then used in all aspects of the expert review process that followed. This definition can be found below on page 19.

After defining the construct, an item pool was created. An extensive review of the literature was used to assist in item creation. Some items were adapted from past questionnaires and surveys administered to teachers regarding topics such as social-emotional learning (e.g., Schultz et al., 2010) and mental health (e.g., Elkornes et al. 2012 & Reinke et al., 2011). Various factsheets and recommendations for school-based mental health services from the National Center for School Mental Health (NCSMH) and the Mental Health Technology Transfer Center Network (MHTTC) were also reviewed to assist in item creation.

Attitude Construct Definition

The scale items are written based upon the tripartite attitude construct, which postulates that an attitude has three different dimensions: **affective**, **cognitive**, and **behavioral**. The **affective** component can vary from pleasurable to un-pleasurable and is said to reflect the emotional underpinnings of an attitude (Findler, 2007). Various **affective components** of a given teacher's attitude towards mental health in the schools can include *stress* related to the implementation of services, *fear* of having a student with a mental health issues in their classroom, *fear* of making the situation worse by talking about mental health issues, and *compassion* (or lack thereof) for those students who suffer from mental health issues.

The **cognitive** component of an attitude can vary from favorable to unfavorable (e.g., supportive versus derogative arguments) and includes an individual's ideas, thoughts, perceptions, or mental conceptualizations of the referent (Findler, 2007). The "referent" in this particular case is the concept of addressing mental health in the school system, which encompasses both the teacher's attitude toward the implementation of school-based mental health services, as well as their attitude toward students who present with mental health issues.

Cognitive components of a teacher's attitude toward mental health in the schools can include ideas, thoughts, or perceptions specifically related to the roles of the teacher (e.g., the idea that dealing with mental health concerns falls outside of the role of the teacher), the perception of mental health issues in general (e.g., the idea that mental health issues do not affect academic performance), and the school's role in addressing mental health concerns (i.e., whether it is an issue that would be addressed more effectively and efficiently by the parents or outside community providers).

Finally, the **behavioral** component of an attitude can vary from favorable and supportive to unfavorable and hostile. The **behavioral component** encompasses the individual's intent or willingness to behave in a certain way toward the referent (Findler, 2007). For the behavioral component, this can include behaviors directly related to mental health services (e.g., screening, progress monitoring, referring who the teachers believe to have mental health issues, as well as the overall promotion of mental health within the school system).

Note. This definition was used to generate items for the TATAMS scale. In both phases of the expert review process, experts were asked to rate each item based upon this definition.

Initial Content Validation

Content validity deals with item sampling adequacy (i.e., the extent to which the items reflect the intended content domain) (DeVellis, 2017). One approach to assess content validity is to have the initial item pool reviewed by experts with knowledge of the domain being measured. For the TATAMS items, the preliminary content validation came in two stages: an initial review by graduate students followed by a more intensive review by both experts in the field of school-based mental health and teachers. Both stages of the review process involved the experts rating the items based upon the definition presented above on page 19.

Graduate Student Review of TATAMS Items. Graduate students in a school psychology program ($n = 4$) reviewed the initial item pool. The graduate students provided feedback through a content validity form delivered through Qualtrics. All reviewers were asked whether to keep or remove each item based upon the defined construct. The graduate students were also asked to provide any suggestions they had for improving the clarity of each item. If the reviewer recommended the removal of the item, they were asked to indicate why they provided that recommendation. The final section of the Qualtrics survey asked the students to provide feedback on the comprehensiveness of the entire measure.

Expert Review of TATAMS Items. The second phase of the expert review involved experts in the field of school-based mental health ($N = 10$). This round of expert review included both content experts ($n = 5$) and lay experts ($n = 5$), which is consistent with the recommendations made by Rubio et al. (2003) on how best to objectify content validity.

The content experts included professionals in academia who had all published or participated in research related to school-based mental health. The lay experts included two teachers in general education, one teacher in special education, one school psychologist, and one

counselor. The content validity form was again delivered through Qualtrics but differed from the previous review phase with the graduate students in a few ways. Before reviewers rated the individual items, they were presented with a definition of school-based mental health services and asked to comment on anything that should be added or removed from the definition. The reviewers were informed that the purpose of the definition was to ensure all teachers completing the scale had a general idea of what “school-based mental health services” conceptualized.

The second phase of review was intended to be more structured than that of the one with the graduate students and was based upon the model recommended by Rubio et al. (2003). Using the theoretical definition provided, the experts rated each item based on the item’s ability to represent the defined construct, the factor on which the item weighed most (i.e., affect, cognition, or behavior), and the clarity of the item. For representativeness, the experts were presented with a scale of 1 to 4 to rate the item’s ability to represent the overall content domain (1 = *not representative*, 2 = *item needs major revisions*, 3 = *item needs minor revisions*, and 4 = *representative*). Regarding the question about the factor, experts were provided four choices: affect, cognition, behavior, or “N/A”. The experts were asked to select one factor to which the item fit with most. If they felt that the item did not fit within any of the factors, they were asked to select “N/A.”

The final question presented to the experts asked for them to report on the comprehensiveness of the measure. In open-response format, experts were asked to list any additional comments related to the measure in the space provided. This question included requesting the experts to note any items or concepts that were omitted from the scale but should be included to adequately measure the theoretical definition of teacher attitudes toward mental health in schools.

After the reviewers completed their forms via Qualtrics, the responses were aggregated and analyzed. The Content Validity Index (CVI) was calculated for each item, as well as for the entire measure. For each item, the CVI is calculated based on expert ratings of the representativeness: the number of experts who rated the item as 3 or 4 is summed and then divided by the total number of experts (Rubio et al., 2003). An example of this calculation is presented in Table 2.

Table 2. Example Calculation of Content Validity Index (CVI) for TATAMS Items

Item	Expert Ratings										CVI
(1) All school personnel should be trained to have a basic understanding of common mental health concerns.	3	3	4	3	4	4	4	4	4	3	10/10 = 1.00
(2) Mental health services should be offered immediately after a student is identified as needing more support.	1	4	3	2	4	4	4	4	4	2	7/10 = .70

Davis (1992) stated that, for new measures, for an item to be included in a scale, it must achieve a CVI of .80. However, there are limitations to setting an arbitrary CVI limit for item inclusion. Specifically, there is not a consensus on the number of experts required for the review process, with recommendations ranging from two to 20 experts (Gable & Wolf, 1993; Walz, Strickland, & Lenz, 1991). As the number of reviewers increase, the CVI is likely to decrease because it is more difficult to obtain agreement on the representativeness of an item with 10 experts versus two experts (Rubio et al., 2003).

As mentioned above, the decision to include ten experts (5 content; 5 lay) was based upon the recommendation provided by Rubio et al. (2003). Given that this number of experts is considered towards the higher end of the spectrum (Almanasreh, Moles, & Chen, 2018), the .80

was determined too restrictive for this study. Lynn (1986) recommends a level of agreement above 0.78. Based on this recommendation provided by Lynn (1986), for the example provided in Table 2, the first item was retained, whereas the second item was deleted.

Initial Pilot of TATAMS Items

After changes were made to the TATAMS scale based upon the feedback from the experts, there was a total of 75 TATAMS items (27 cognitive, 23 affective, 25 behavioral). The 75 TATAMS items, as well as the ten items from the CAMI, were distributed to the teachers for the initial pilot. All surveys were completed online via Qualtrics.

The TATAMS items and the CAMI items were randomized in the Qualtrics survey to account for ordering effects. Teachers were first presented with informed consent, then asked to provide demographic information. All survey responses were completed anonymously. After the demographic information, teachers were presented with the definition of school-based mental health supports before proceeding onto rating the items. The full Qualtrics survey that was distributed to the teachers can be found in Appendix A. Data collection lasted from August 26, 2019 – November 15, 2019.

Analytic Strategies

Preliminary Analyses

Data were analyzed using IBM SPSS Statistics 26. It should be noted, all analyses that follow were conducted with lower than desired power. The sample size ($N = 165$) was below that of the original goal of 300 participants. This increases the possibility of making a Type I Error. Given this, the results that follow should be interpreted with caution.

Preliminary analyses were conducted to examine the descriptive qualities of the data set. This preliminary analysis included the inspection of statistical summaries of all variables to

detect any irregular data points. Given the IRB approved the use of “force-response” in the Qualtrics survey, there was no missing data to be addressed. Participant completion time was assessed to ensure the majority of participants completed the TATAMS scale in a reasonable timeframe (i.e., under 30 minutes).

A large number of participants ($n = 74$) began but did not finish the TATAMS scale in Qualtrics. Although these individuals were not included in the final count of teachers ($N = 165$), it possible they could represent a different population than the individuals who completed the TATAMS scale. Out of the 74 participants that did not complete the TATAMS, 64 participants fully completed the demographic information and were therefore able to be compared to the teachers that completed the TATAMS. Chi-square tests revealed no significant differences between teachers who completed the TATAMS ($N = 165$) and teachers that did not ($n = 64$) with regard to their gender, teaching experience, ethnicity, or previous experience with a mental health problem ($ps > .05$).

Primary Analyses

Exploratory Factor Analysis. The first stage of the primary analyses involved an exploratory factor analysis (EFA) of the 75 TATAMS items. There were two primary purposes for conducting this EFA: to determine the factor structure of the TATAMS items and identify items for removal from the measure. Principal axis factoring and oblique rotation were used based upon recommendations provided by Field (2013). Oblique rotation was chosen, rather than orthogonal rotation, due to the interrelated nature of the tripartite attitude construct. Prior to running the EFA, several preliminary indices were examined to ensure the output from the EFA was interpretable. Recommendations provided by Field (2013) include ensuring that the Kaiser-Meyer-Olkin (KMO) sampling adequacy statistic is above .50; the correlation matrix determinant

is > 0 ; the diagonal elements of the anti-image correlation matrix are all above .50; the off-diagonal of the anti-image correlation matrix are all small; Bartlett's Test of Sphericity is significant at $p < .05$; and all communalities are greater than .50. Items were considered for removal if the factor loading was $< .40$; the item loaded on multiple factors $> .40$; the item did not load onto either factor in a theoretically meaningful way; or the communality was $< .50$ (Field, 2013).

For the initial EFA, no restrictions were placed on the number of factors, and the Kaiser-Guttman criterion was used (i.e., eigenvalue > 1.00) in factor-selection. An examination of the scree plot was conducted to determine how many of these factors were worth retaining. The scree plot is a graphical representation of the extracted eigenvalues from the factor solution. In the scree plot, eigenvalues are plotted against factors, and it is typical for the scree plot to be negatively decreasing (i.e., the eigenvalue is highest for the first factor and progressively decreases before reaching small values for the last factors). When examining the scree plot for significant factors, it is recommended to look for the point where a line drawn through the plotted eigenvalues changes slope (Tabachnick & Fidell, 2013).

An additional interpretative method that attempts to address the subjectivity involved in the scree-test is a parallel analysis (Horn, 1965). The parallel analysis procedure involves extracting eigenvalues from randomly generated data sets that correspond to the actual data in terms of sample size and variables (O'Conner, 2000). Randomly generated eigenvalues are then compared to the actual eigenvalues to determine which factors to retain. The rationale behind a parallel analysis is that the magnitude of the eigenvalue for the last retained factor should surpass that of an eigenvalue obtained from random data (DeVellis, 2017).

TATAMS Scale Descriptive Statistics. After determining the final factor solution for the TATAMS, descriptive indices of scores for both the TATAMS and CAMI were evaluated. Indices included: minimum and maximum scale scores; scale median, mean, and standard deviation; and skewness and kurtosis. Skewness refers to the symmetry of the distribution (Tabachnick & Fidell, 2013). A skewed item would be one whose mean is not in the center of the distribution (i.e., a mean rating closer to 1 [*strongly disagree*] or 5 [*strongly agree*]). Kurtosis refers to the peakedness of the distribution. For kurtosis to suggest non-normality, an item could be either too peaked (e.g., short/thick tails) or too flat (e.g., long/thin tails). Ideally, for a distribution to be considered normal, the values of skewness and kurtosis are zero. Following review of descriptive statistics, independent sample t-tests were conducted to determine if there were any significant differences in TATAMS scores across demographic variables.

TATAMS Construct Validity. Construct validity refers to the theoretical relationship of a variable (e.g., a score on a scale) to other variables (DeVellis, 2017). Convergent validity is an aspect of construct validity and pertains to the evidence (i.e., correlation between) measures of similarity of theoretically related constructs. For the current study, the primary researcher was unable to find any validated measures concerning teacher attitudes toward mental health or school-based mental health services to use as a comparison tool. Instead, the Community Attitudes Toward the Mentally Ill (CAMI) (mentioned in the “measures” section above), the 10-item *benevolence scale*, was used to establish initial convergent validity for the TATAMS.

Results

Expert Review

The first phase of item generation resulted in 92 items (31 cognitive, 30 affective, 31 behavioral). Feedback from the graduate students (i.e., the first expert review) resulted in the deletion of 20 items. Items were deleted based on feedback regarding the “vagueness” of the item, as well as the item measuring a different construct than intended. For the latter, it was recognized that a small number of items might measure content knowledge, rather than the intended attitude construct (e.g., “I have a general understanding of how mental health disorders can present in school-aged children). These items were removed from the scale before proceeding onto the next stage of review.

The second phase of the review process included sending the revised list of 72 items to experts in the field of school-based mental health. After calculating the CVI for each of the 72 items, three items were deleted because they had a CVI at, or below, 0.78. Two additional items were deleted based upon recommendations from one or more of the reviewers regarding the clarity of the items. For instance, the item “It is important for schools to develop curricula to teach students about mental health” was deleted due to concerns expressed by one expert that schools should not be expected to develop curricula for mental health services. The other item: “It is important for schools to promote positive well-being for all students,” was deleted based on recommendations from multiple experts that “positive well-being” was too ambiguous.

Following the deletion of the five items, a total of 67 items were retained. The clarity comments provided by the experts were reviewed, and the necessary edits were made. Most of the clarity edits were minor and dealt with grammatical structure (e.g., changing “comfortable emotionally” to “emotionally comfortable”). An edit that occurred across multiple items included

changing the word “disorders” to “problems” or “concerns.” Multiple content experts recommended this change due to the negative connotation of the word “disorders.” The other edit that occurred across multiple items was re-arranging items so that there was less confusion with the factor they weighed on (i.e., affect, cognition, or behavior). For example, the item, “I would be happy to work as a part of a team to improve mental health services” was changed to “I would be willing to work as a part of a team to improve mental health services.” This change helped to make the item more of a behavioral item, rather than an affect and behavioral item.

Next, expert recommendations for the school-based mental health definition were taken into account, and a final definition was created. This final definition is as follows:

The following statements express various opinions about school-based mental health supports (or services). These terms (i.e., school-based mental health supports or school-based mental health services) are intended to encompass all aspects of mental health supports for school-aged children that could be integrated into a given school community.

“Mental health supports” is a broad term that refers to any services that aim to reduce psychological problems and/or promote psychological wellbeing. Some examples of these supports include identifying students with mental health concerns (e.g., school-wide mental health screening); supporting students with mental health concerns (e.g., group-based social skills lessons, individual/group counseling); preventing mental health concerns (e.g., incorporating classroom practices that promote social-emotional wellbeing); and supporting school-staff in the implementation of mental health services (e.g., stress-reduction programs for teachers, professional development in supporting students with mental health problems).

The last changes addressed based on the recommendations provided by the experts dealt with the overall comprehensiveness of the TATAMS measure. One of the content experts noted that the measure had more items focused on tier 1 services, relative to tier 2 and tier 3 services. Five items were added to address this concern.

Primary Analyses

TATAMS Latent Structure

The initial EFA resulted in a 15-factor solution, though not many of the factors made theoretical or logistical sense. Examination of the scree-plot (see Figure 1) suggested a 2- or 3-factor solution, therefore, an EFA was re-run and a three-factor solution was specified. The three-factor solution revealed that the items suggested to load on the third factor also significantly cross-loaded on either the first or second factor. Because of this, the EFA was rerun, specifying a two-factor solution. Relative to the previous solutions, the two-factor solution made the most statistical and theoretical sense. Using the O'Conner (2000) syntax in SPSS, a parallel analysis was executed using 1,000 random data sets, with the specification of 165 cases and 75 variables. The parallel analysis supported the two-factor model.

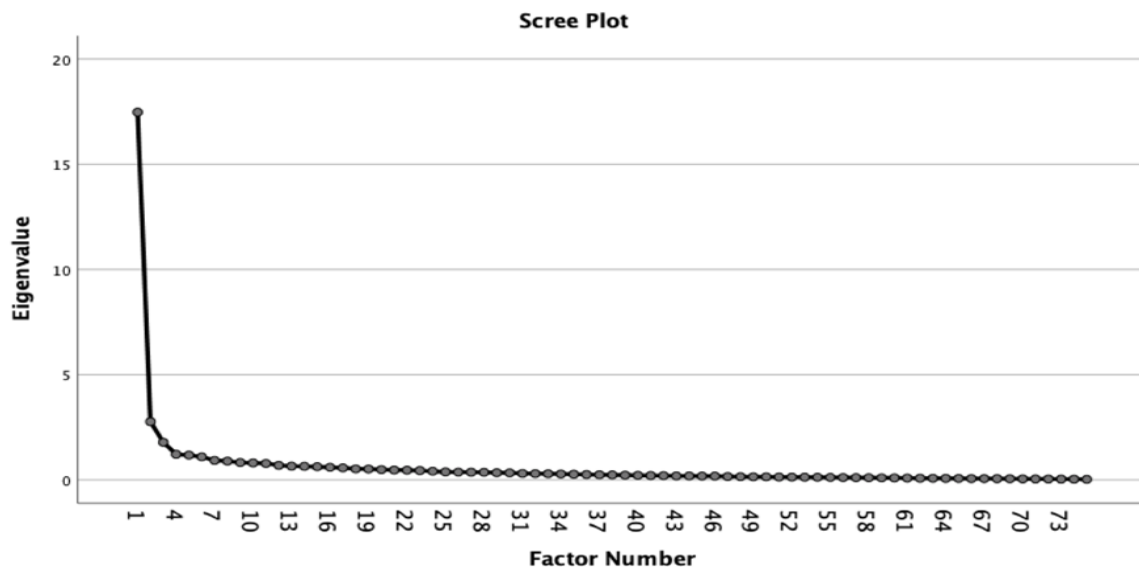


Figure 1. Scree Plot of Initial Exploratory Factor Analysis

The two-factor solution for the TATAMS revealed a Kaiser-Meyer-Olkin (KMO) sampling adequacy statistic of .94 and significant Bartlett's Test of Sphericity ($p < .001$). All

diagonal elements of the anti-image correlation were above .50, and all communalities were greater than .50. The matrix determinant for the two-factor solution was smaller than that recommended by Field (2013), which suggested multicollinearity could be an issue for the analysis. It is possible to correct multicollinearity through the deletion of variables that are highly correlated ($r > .8$). However, upon inspection of the correlation matrix, no variables were found to be correlated above .80. Given the relatively small sample size of this study, it was determined to not make a significant amount of deletions haphazardly in order to adjust for the multicollinearity.

From the 75 revised items used in the initial pilot of the scale, 59 items were retained. After the removal of items from the scale, the EFA was rerun to ensure that the two-factor solution was still appropriate. Table 3 presents the item loadings for the 59-item two-factor solution (14 affective, 22 cognitive, 23 behavioral). The two-factor solution accounted for 48.50% of the variance. Factor 1, *General Attitude Toward Addressing Mental Health in Schools*, included a total of 43 items (14 affective, 22 cognitive, and 16 behavioral) and accounted for 41.44% of the variance. Factor 2, *Actual Behaviors Addressing Mental Health in Schools*, included 16 behavioral items and accounted for 7.10% of the variance. The main difference between the two scales appeared to be the type of behavioral items that loaded on the factors. Intended and hypothetical behaviors (e.g., “I want to learn more about how mental health could impact my students”) loaded onto factor 1. In contrast, reported actual behaviors (e.g., “When available, I seek out professional development opportunities that improve my ability to identify students in need of mental health supports”) loaded onto factor 2.

TATAMS Scale Descriptive Statistics

Table 4 presents the descriptive statistics of the 59 TATAMS items, including skewness and kurtosis values for each item. Analyses indicated that responses to several TATAMS items were substantially non-normally distributed, with a positive skew. Moreover, some items did not have all ranges present (i.e., strongly disagree to strongly agree). Internal consistency for the entire 59-item TATAMS scale was very high (Cronbach's $\alpha = .97$). The internal consistency for the TATAMS factor 1, *General Attitude Toward Addressing Mental Health in Schools*, was also very high (Cronbach's $\alpha = .97$). Factor 2, *Actual Behaviors Addressing Mental Health in Schools*, had an internal consistency of .92. These reliabilities may be considered too high for scale development (Field, 2013) and could suggest the deletion of items is necessary. Once again, it was decided not to delete any additional items because of the lower sample size used in the study.

Demographic-level Differences

On average, special education teachers ($n = 33$) reported higher TATAMS total scores (TATAMS TS) ($M = 254, SE = 4.2$) than general education teachers ($n = 127$) ($M = 239, SE = 2.6$). This difference was found to be significant ($t(158) = -2.78, p = .006$). There were also significant differences between special education teachers and general education teachers for the TATAMS general attitude score (TATAMS GAS) ($t(158) = -2.10, p = .038$) and the TATAMS actual behavior score (TATAMS ABS) ($t(158) = -3.70, p < .0001$). Independent sample t-tests indicated no significant differences for the TATAMS TS between male ($n = 29$) and female ($n = 135$) teachers ($t(162) = 0.88, p = .381$). There were also no significant differences between male and female teachers for the TATAMS GAS ($t(162) = 1.09, p = .276$) or the TATAMS ABS ($t(162) = 0.248, p = .804$). Regarding education level, there were no significant differences

between teachers with a bachelor's degree ($n = 78$) and teachers with a master's degree ($n = 82$) for the TATAMS TS ($t(158) = 0.102, p = .919$) or the TATAMS subscales.

Finally, there is a literature base that suggests knowing someone or having personal experience with a mental health issue is associated with more positive attitudes toward individuals with mental health concerns (e.g., Angermeyer et al., 2004; Corrigan et al., 2003). Given this, it was thought that teachers who reported that they had experience with a mental health issue would have higher TATAMS scale scores than those teachers who did not have any prior experience with a mental health issue. For the current study, this was found to be true. On average, teachers who reported knowing someone, or personally experiencing, a mental health problem ($n = 122$) had higher TATAMS TS ($M = 245, SE = 2.6$) than teachers who did not report past experience with a mental health problem ($n = 42$) ($M = 232, SE = 4.6$). This difference was found to be significant ($t(162) = 2.50, p = .014$). This difference was also found to be significant in the same direction for the TATAMS GAS ($t(162) = 2.57, p = .011$). There was not a significant difference based upon prior experience with mental health problems for the TATAMS ABS ($t(162) = 1.85, p = .067$).

TATAMS Construct Validity.

Using the current sample, Cronbach's alpha was calculated for the CAMI *benevolence scale*. This was done before running any bivariate correlations between the TATAMS and the CAMI to determine if the reliability of the CAMI was consistent with that found by past studies. Given scoring recommendations for the CAMI, five items were reverse scored for the CAMI before calculating the internal consistency. This helped to ensure that there was not a negative correlation between the positively worded (e.g., "more tax money should be spent on the care and treatment of people with mental health problems") and the negatively worded (e.g., "people

with mental health problems are a burden on society”) CAMI items. The internal consistency of the CAMI *benevolence scale* for the current study was similar to that of past studies (Cronbach’s $\alpha = 0.77$).

After reviewing the internal consistency of the CAMI, bivariate correlations were run to look at the following relationships: CAMI scores and TATAMS total score (59-items); CAMI scores and TATAMS *General Attitude Toward Addressing Mental Health in Schools* scores (43-items); and the CAMI scores and TATAMS *Actual Behaviors Addressing Mental Health in Schools* scores (16-items). These bivariate relationships are presented in Table 5.

Discussion

Mental health is an overlooked topic in society as a whole, but this is compounded for youth who are unable to search for, or access, treatment on their own. A range of barriers exist that contribute to as little as one-fourth of youth with a diagnosable mental health disorder receiving treatment. Even for children who are fortunate enough to receive services through outpatient mental health clinics, many will drop-out prematurely or have session limitations placed upon them by their insurance provider.

School-based mental health services (SBMHS) can address many of the barriers associated with outpatient mental health by placing the focus on prevention. When implemented effectively, SBMHS can address both the needs of students with a diagnosable mental health concern, as well as children who might be at-risk for future problems. Unfortunately, SBMHS are far from ubiquitous. Additional barriers exist that prohibit schools from going “all-in” on mental health services. Some of these barriers include limited resources to dedicate to mental health services; a lack of support for the teachers; and limited opportunities to provide professional development to improve school staffs’ knowledge of mental health concerns. In contrast to the many barriers, past research has demonstrated that teachers report the belief that addressing the mental health of students is important and they express an active desire to learn more about the mental health of their students.

Given the essential role teachers have in program-implementation at the school-level, research probing into their perceptions about mental health is vital. Nevertheless, as insightful as past research concerning teacher perceptions have been, generalizations from study-to-study are limited. A significant reason for this limited generalizability is the lack of a validated tool to

measure teacher perceptions or attitudes toward mental health. The current study attempted to address this limitation through scale development.

An attitude scale (i.e., the Teacher Attitudes Toward Addressing Mental Health in Schools [TATAMS]) was developed. Items were piloted with a sample of 165 teachers to establish initial validity and reliability for the TATAMS scale. TATAMS items were written based upon the tripartite attitude construct, that is: an attitude has three different components (cognitive, affective, and behavioral) that are interrelated but also distinct in their own right (Breckler, 1984). It was hypothesized that factor analysis would reveal items written toward a given component would load onto that component, and, in turn, form a scale with three distinct factors. This initial hypothesis did not turn out to be the case. Instead, a 59-item, two-factor solution was found to be the most appropriate.

The two-factor solution revealed that 43 of the TATAMS items formed a primary factor that appeared to represent a *general attitude toward addressing mental health in schools* and included cognitive, affective, and behavioral items. A secondary factor included 16 items and seemed to represent *actual behaviors associated with addressing mental health in schools*. The distinction between which factor the behavioral items loaded onto related to whether they were intended/hypothetical behaviors (factor 1) or actual behaviors (factor 2).

This two-factor model is interesting from both a research and practice standpoint. Although past research has demonstrated validation of the affective, cognitive, and behavioral as distinct components of an attitude, it has also demonstrated that the interrelatedness of the constructs can be inflated when only verbal report measures are used (Breckler, 1984). Moreover, self-reported attitudes or hypothetical behaviors have been shown to differ significantly from actual behaviors (e.g., Baumeister et al., 2007).

From a practical standpoint, this two-factor model could represent the realities of the population studied. Past research regarding teacher perceptions has demonstrated the paradox between a given teacher's desire to learn more about mental health but the expressed inability to address these needs in the school. Therefore, the current finding of the hypothetical behavioral responses (e.g., "I would want to be an active participant in the school-based mental health activities at my school") loading on a different factor than actual behavioral responses (e.g., "I have frequent conversations with my students about the importance of mental health") could be the consequence of the limited resources, support, or training teachers receive in the area of school-based mental health. This interpretation of the current study is supported by the negative correlation between the two factors. That is, teachers that rated higher (e.g., *agree*) on the general attitude toward mental health services typically rated lower (e.g., *disagree*) for the items that sought to measure actual behaviors addressing mental health in schools.

The second and third hypotheses for the current study dealt with the overall psychometric properties for the TATAMS. For the second, it was hypothesized that the TATAMS factors would demonstrate robust factor loadings and internal consistency. Both of these were achieved with the two-factor model. That being said, the internal consistencies were higher than those recommended by most with knowledge of scale development. Some items should be considered for deletion in future research.

The third hypothesis was that the teacher responses to the TATAMS items would be positively correlated with their responses to the 10-item Community Attitudes Toward Mental Illness *benevolence scale*. This hypothesis was also confirmed, but in differing levels of magnitude depending on the TATAMS scale. The TATAMS general attitude score demonstrated the most substantial positive correlation with the CAMI *Benevolence* scores. However, when the

TATAMS *Actual Behavior* score was incorporated into the calculation, the positive correlation with the CAMI was lower.

Implications

Though this study did not confirm the distinct nature of the tripartite attitude construct, the results demonstrated the initial validation of a scale intended to measure teacher attitudes toward addressing mental health in schools. Moreover, the scale created appears to separate intended/hypothetical behaviors from actual behaviors. These findings have both research and practice implications. For research, the primary implication is to determine whether or not this factor structure is replicated with a larger and more diverse sample. If the factor structure holds up with a different sample, and the TATAMS measure continues to demonstrate reasonable reliability and validity, then there are numerous implications for practice.

For one, the ability to differentiate between intended/hypothetical behaviors and actual behaviors is essential for determining the readiness of a given teacher population for the implementation of school-based mental health services. For instance, administrators could use the TATAMS measure to gauge teachers' general attitude before the implementation of a school-based mental health program. Lower scores on the general attitude toward addressing mental health in school subscale would suggest that teachers could benefit from some extra supports prior to, and during, the initial implementation. Scores on the actual behavior subscale of the TATAMS could provide useful throughout implementation in the monitoring of teachers' ability to implement the school-based mental health services with fidelity.

Understandably, these are all just conjectural uses of the TATAMS measure. More research needs to be conducted to establish the TATAMS as a reliable and valid measure. Future research should examine the predictive validity of the TATAMS and gauge its ability to

differentiate between teachers who have a positive attitude toward school-based mental health services and those that have more neutral or negative attitude toward school-based mental health services.

Limitations

A few limitations exist that should be addressed. For one, the sample size was small relative to the number of TATAMS items. Though there are a range of recommended minimum sample sizes when conducting a factor analysis (e.g., Tinsley & Tinsley, 1987; Comrey, 1973), there is some agreement that 300 participants are the bare minimum for a study of this size (DeVellis, 2017). Given that the minimum goal of 300 participants was not obtained, the results should be interpreted with caution. Moreover, the sampling procedure used in this study (i.e., snowball sampling) is susceptible to bias. It is possible that the individuals who took the time to complete the TATAMS and forward it to other teachers had more positive attitudes toward mental health than those that did not complete the TATAMS. This response bias in turn likely contributed to the positively skewed item responses and resulted in some items not eliciting the entire range of responses. Future research should utilize a random sampling procedure to counteract this sampling bias. Similarly, the sample used in the current study was one of limited diversity. The majority of respondents reported that they were White, female, and/or taught in a public school. Moreover, most of the teachers reported that they had experience with, or know of someone with, a mental health issue. Future research should address additional variables about the participants including previous training with a mental health professional and past experiences with school-based mental health services.

An additional consideration for future research is the length of the TATAMS scales and the number of cognitive, affective, and behavioral items included within them. The final 59-item

TATAMS included 14 affective items, 22 cognitive items, and 32 behavioral items, which could suggest the affective attitude component is underrepresented in the TATAMS measure.

Moreover, the two separate scales: The *General Attitude Toward Addressing Mental Health in Schools*, included a total of 43 items and the *Actual Behaviors Addressing Mental Health in Schools*, included 16 behavioral items. This discrepancy in subscale length could affect the true hypothetical construct measured and should be addressed by future research. Furthermore, although the CAMI *Benevolence* scale provided some initial validity for the TATAMS scale, additional convergent and divergent validation measures should be explored.

Conclusion

Validity and reliability are not properties of the measurement tool itself; rather they are properties of the tool in the context of its use (DeVellis, 2017). Therefore, although this study demonstrated some initial reliability and validity for the TATAMS scale, the scale development process is never truly over. Future research needs to continue to build upon the TATAMS development presented in this study and confirm or deny the results presented above. A measurement tool like the TATAMS could prove to be very beneficial within the overarching goal of improving school-based mental health services for all students.

Table 3. Factor Loadings for the Exploratory Factor Analysis Two-Factor Solution (59-items)

Items	Factor	
	1	2
Schools should offer mental health supports to students who present with intensive mental health needs.	.83	.19
It is satisfying to hear when school-based mental health is prioritized at the whole-school level.	.83	.14
It is encouraging when administrators make school-based mental health a priority.	.78	-.01
Mental health services should be available to students in both general and special education.	.77	.15
Schools should participate in a stigma reduction campaign to combat the negative ideas that people have about mental health.	.77	.14
Schools should offer mental health supports to students who present with mild or emerging mental health needs.	.76	.06
SBMHS are an essential component to delivering comprehensive mental health supports to young people.	.74	.08
I am interested to learn additional EB supports that I can use with students who are determined to be at-risk for MH problems.	.74	.02
More funding for schools should be utilized to help support the mental health needs of students.	.74	.08
I get upset when school-based mental health services do not address the needs of all students.	.73	.02
I want to advocate for policy changes that could improve school-based mental health services.	.72	-.06
I am encouraged when I hear of professional development opportunities related to mental health.	.70	-.17
Providing mental health services in schools is essential to student success in the classroom.	.69	-.05
I want to learn more about how mental health could impact my students.	.68	-.09
Early treatment of mental health challenges leads to better outcomes for students.	.65	.10
Professional development opportunities for teachers that focus on the basics of mental health should be widely available.	.65	-.14
I would be enthusiastic about increasing the mental health supports at my school to address the needs of all students.	.65	-.02
I am disappointed when student mental health is not addressed in the schools.	.64	-.03
Schools can play a significant role in decreasing the stigma that surrounds mental health services.	.64	.03
Access to mental health supports should be equal across all students.	.64	.05
Schools should have the capacity to address both mental health and academics effectively.	.64	.04
Schools should be involved in raising awareness about mental health concerns.	.63	.02
School-based mental health services are important to a student's academic success.	.63	.02

(table cont'd.)

Table 3. Factor Loadings for the Exploratory Factor Analysis Two-Factor Solution (59-items)

Items	Factor	
	1	2
Schools should be involved in supporting the MH of all students.	.62	.00
I get excited if I hear about school-based mental health services mentioned in the media (e.g.....).	.62	-.11
It frustrates me when the mental health of my students is ignored.	.61	-.07
I would want to be an active participant in the school-based mental health activities at my school.	.59	-.25
All school personnel should be trained to have a basic understanding of common mental health problems.	.59	-.11
The early id of students who are at-risk for MH problems is an important step in the promotion of MH within the school.	.59	-.09
The social-emotional development of my students is as important as their academic development.	.58	-.05
It is part of my role as a teacher to support the mental health of my students.	.58	-.12
Screening for mental health problems in schools is essential to understanding the needs of our students.	.57	-.09
I feel inspired when I hear of school-based mental health services implemented at other schools.	.57	-.16
I am frustrated when mental health is not addressed in the schools.	.57	-.16
I would be willing to work as a part of a team (e.g., with the school counselor) to improve MH services at my school.	.53	-.25
I would be enthusiastic if my principal asked me to begin teaching lessons related to mental health.	.53	-.29
Everyone at the school has a role to play in the promotion of mental health.	.52	-.14
I am concerned when schools ignore the mental health of their students.	.51	-.05
I would be open to completing brief rating forms to screen all my students for mental health concerns.	.50	-.18
I am passionate about using my role as a teacher to decrease the stigma surrounding mental health services.	.49	-.37
I am interested in leading classroom lessons about general MH topics (e.g., mindfulness skills, emotion regulation techniques).	.48	-.29
The monitoring of the mental health of students is an important role of a teacher.	.47	-.18
Teachers play an important role in school-based mental health services.	.41	-.27

(table cont'd.)

Table 3. Factor Loadings for the Exploratory Factor Analysis Two-Factor Solution (59-items)

Items	Factor	
	1	2
In my classroom, there are opportunities for students to learn and practice emotion regulation techniques.	.11	-.82
I try to help make sure that the families of my students are aware of the available mental health supports in the community.	.06	-.82
I try to ensure that the families of my students are knowledgeable of the school supports for students with MH concerns.	.13	-.82
I use some form of data collection (e.g....) to monitor the mental health of my students.	.11	-.71
I attempt to incorporate the topic of MH into my classroom activities (e.g....).	.14	-.64
I have frequent conversations with my students about the importance of mental health.	.27	-.54
When available, I seek out PD opportunities that improve my ability to identify students in need of mental health supports.	.06	-.53
I am effectively able to identify students in need of additional mental health supports.	.14	-.53
I strive to build a strong family-school partnership in order to support the mental health needs of my students.	.36	-.53
I look for opportunities where I can learn more about mental health (e.g., in-person professional development, online webinars).	.26	-.49
I make it a point in my classroom to reduce the stigma surrounding mental health supports.	.13	-.48
I am comfortable discussing a student's mental health with their family.	.04	-.44
I consult with the MH professional at my school to ensure that any MH supports that I provide in the classroom are effective.	.23	-.41
I play an important role in the identification of students who could benefit from additional mental health services.	.24	-.41
In my classroom, I find ways to support the positive social-emotional development of my students.	.32	-.41
If one of my students is identified as being at-risk for a MH problem, I look for supports to help them succeed (e.g., CICO).	.32	-.41

Note. Factor loadings > .40 are in boldface. Factor 1 = General Attitude Toward Addressing Mental Health in Schools. Factor 2 = Actual Behaviors Associated with Addressing Mental Health in Schools. ID = identification; MH = mental health; CICO = check-in/check-out; EB = evidence-based; PD = professional development. Some items have been shortened from their original form to fit this table.

Table 4. Descriptive Statistics for TATAMS Final 59-items

Item	Mean	SD	Skewness	Kurtosis
All school personnel should be trained to have a basic understanding of common MH problems.	4.47	0.57	-0.70	0.67
Providing mental health services in schools is essential to student success in the classroom.	4.31	0.67	-0.70	0.47
I try to ensure that the families of my students are knowledgeable of the school supports for students with MH concerns.	3.73	0.89	-0.45	-0.18
Access to mental health supports should be equal across all students.	4.52	0.58	-0.94	0.95
I would be enthusiastic if my principal asked me to begin teaching lessons related to mental health.	3.65	1.05	-0.37	-0.56
I am effectively able to identify students in need of additional mental health supports.	3.45	0.97	-0.41	-0.34
The early id. of students who are at-risk for MH problems is important in the promotion of MH within the school.	4.49	0.55	-0.41	-0.96
Screening for mental health problems in schools is essential to understanding the needs of our students.	4.25	0.68	-0.94	2.43
I am passionate about using my role as a teacher to decrease the stigma surrounding mental health services.	3.99	0.86	-0.69	0.31
Schools should be involved in raising awareness about mental health concerns.	4.25	0.72	-1.02	2.11
I feel inspired when I hear of school-based mental health services implemented at other schools.	4.04	0.76	-0.31	-0.56
SBMH services are an essential component to delivering comprehensive mental health supports to young people.	4.28	0.71	-1.09	2.41
When available, I seek out PD opportunities that improve my ability to id. students in need of mental health supports.	3.50	1.00	-0.18	-0.89
Schools should be involved in supporting the mental health of all students.	4.47	0.61	-0.69	-0.48
I get upset when school-based mental health services do not address the needs of all students.	4.20	0.74	-0.43	-0.77
School-based mental health services are important to a student's academic success.	4.42	0.62	-0.74	0.39
I would want to be an active participant in the school-based mental health activities at my school.	3.93	0.87	-0.77	0.69
It frustrates me when the mental health of my students is ignored.	4.36	0.64	-0.77	0.85
I am disappointed when student mental health is not addressed in the schools.	4.22	0.76	-0.82	0.94
I would be enthusiastic about increasing the mental health supports at my school to address the needs of all students.	4.28	0.74	-1.14	2.30
I want to advocate for policy changes that could improve school-based mental health services.	3.79	0.91	-0.26	-0.57
It is encouraging when administrators make school-based mental health a priority.	4.38	0.64	-0.52	-0.64
The social-emotional development of my students is as important as their academic development.	4.57	0.58	-1.15	1.40
Mental health services should be available to students in both general and special education.	4.61	0.51	-0.71	-0.89

(table cont'd.)

Table 4. Descriptive Statistics for TATAMS Final 59-items

Item	Mean	SD	Skewness	Kurtosis
I make it a point in my classroom to reduce the stigma surrounding mental health supports.	4.00	0.83	-0.70	0.48
I am frustrated when mental health is not addressed in the schools.	4.00	0.88	-0.75	0.52
I am encouraged when I hear of professional development opportunities related to mental health.	4.07	0.75	-0.29	-0.66
I would be willing to work as a part of a team (e.g....) to improve mental health services at my school.	4.02	0.90	-0.75	0.12
Schools should have the capacity to address both mental health and academics effectively.	4.24	0.78	-1.23	2.19
It is satisfying to hear when school-based mental health is prioritized at the whole-school level.	4.30	0.66	-0.66	0.58
Professional development opportunities for teachers that focus on the basics of MH should be widely available.	4.31	0.66	-0.82	1.22
Schools can play a significant role in decreasing the stigma that surrounds mental health services.	4.27	0.69	-1.09	2.85
In my classroom, I find ways to support the positive social-emotional development of my students	4.30	0.63	-0.34	-0.66
I strive to build a strong family-school partnership in order to support the mental health needs of my students.	4.09	0.80	-0.53	-0.35
I would be open to completing brief rating forms to screen all my students for mental health concerns.	3.92	0.98	-0.88	0.34
I attempt to incorporate the topic of mental health into my classroom activities (e.g....)	3.67	1.01	-0.39	-0.78
More funding for schools should be utilized to help support the mental health needs of students.	4.23	0.80	-1.16	2.12
I am concerned when schools ignore the mental health of their students.	4.34	0.76	-1.67	4.94
I play an important role in the identification of students who could benefit from additional mental health services.	3.88	0.93	-0.82	0.35
Schools should offer mental health supports to students who present with mild or emerging mental health needs.	4.39	0.64	-0.86	1.00
Schools should offer mental health supports to students who present with intensive mental health needs.	4.36	0.68	-0.82	0.49
I try to help make sure that the families of my students are aware of the available MH supports in the community.	3.58	0.96	-0.18	-0.73
I look for opportunities where I can learn more about MH (e.g., in-person professional development, online webinars).	3.59	0.96	-0.17	-0.91
It is part of my role as a teacher to support the mental health of my students.	4.42	0.63	-0.75	0.34
In my classroom, there are opportunities for students to learn and practice emotion regulation techniques.	3.79	0.91	-0.85	0.45
I am interested in leading classroom lessons about general MH topics (e.g., mindfulness skills).	3.82	0.97	-0.62	-0.17
I use some form of data collection (e.g....) to monitor the mental health of my students.	3.25	1.11	-0.13	-0.98
Everyone at the school has a role to play in the promotion of mental health.	4.40	0.65	-0.90	0.92

(table cont'd.)

Table 4. Descriptive Statistics for TATAMS Final 59-items

Item	Mean	SD	Skewness	Kurtosis
I am comfortable discussing a student's mental health with their family.	3.58	1.03	-0.53	-0.46
Teachers play an important role in school-based mental health services.	4.22	0.71	-0.76	0.78
Schools should participate in a stigma reduction campaign to combat the negative ideas that people have about MH.	4.11	0.74	-0.63	0.38
I want to learn more about how mental health could impact my students.	4.18	0.67	-0.71	1.23
Early treatment of mental health challenges leads to better outcomes for students.	4.53	0.57	-0.71	-0.50
The monitoring of the mental health of students is an important role of a teacher.	4.08	0.81	-0.93	1.21
I have frequent conversations with my students about the importance of mental health.	3.08	1.03	0.15	-0.74
I consult with the MH professional at my school (e.g....) to ensure that any MH supports that I provide are effective.	3.78	0.88	-0.79	0.53
I get excited if I hear about school-based MH services mentioned in the media (e.g., on the news, on social networks).	3.95	0.83	-0.48	-0.24
If one of my students is identified as being at-risk for a MH problem, I look for supports that I can implement.	4.27	0.70	-0.76	0.56
I am interested to learn EB supports that I can use with students who are determined to be at-risk for MH problems.	4.20	0.73	-0.80	0.75

Note. SD = standard deviation; MH = mental health; CICO = check-in/check-out; EB = evidence-based; PD = professional development. Some items have been shortened from their original form to fit into this table.

Table 5. Correlation Matrix for CAMI and TATAMS Scale Scores

	TATAMS TS	TATAMS GAS	TATAMS ABS	CAMI BS
TATAMS TS	-			
TATAMS GAS	.97**	-		
TATAMS ABS	.87**	.72**	-	
CAMI BS	.57**	.65**	.29**	-

Note. TATAMS TS = Teacher Attitudes Toward Addressing Mental Health Total Score; TATAMS GAS = Teacher Attitudes Toward Addressing Mental Health General Attitude Score; TATAMS ABS = Teacher Attitude Toward Addressing Mental Health Actual Behavior Score; CAMI BS = Community Attitudes Toward the Mentally Ill Benevolence Score. ** $p < .01$.

Table 6. Scale Descriptive Statistics for the TATAMS and CAMI

Scale	Items	Min, Max	Median	Mean	SD	Skew.	Kurt.
TATAMS TS	59	148, 295	242	241.4	29.4	- 0.35	- 0.16
TATAMS GAS	43	121, 215	183	181.8	21.3	- 0.46	- 0.10
TATAMS ABS	16	26, 80	60	59.5	9.9	- 0.31	- 0.07
CAMI - BS	10	25, 50	42	41.6	4.9	-0.47	0.06

Note. TATAMS TS = Teacher Attitudes Toward Addressing Mental Health Total Score; TATAMS GAS = Teacher Attitudes Toward Addressing Mental Health General Attitude Score; TATAMS ABS = Teacher Attitude Toward Addressing Mental Health Actual Behavior Score; CAMI BS = Community Attitudes Toward the Mentally Ill Benevolence Score. Skew. = Skewness; Kurt. = Kurtosis. The TATAMS TS encompasses both the TATAMS GAS and the TATAMS ABS.

Appendix A. IRB Approval



ACTION ON EXEMPTION APPROVAL REQUEST

To: Jacob DeBoer
Psychology

From: Dennis Landin
Chair, Institutional Review Board

Date: August 13, 2019

Re: IRB# E11715

Title: Teacher Attitudes Toward Addressing Mental Health in Schools: Development and Initial Validation of an Attitude Scale

Institutional Review Board
Dr. Dennis Landin, Chair
130 David Boyd Hall
Baton Rouge, LA 70803
P: 225.578.8692
F: 225.578.5983
irb@lsu.edu
lsu.edu/research

New Protocol/Modification/Continuation: New Protocol

Review Date: 8/13/2019

Approved X **Disapproved**

Approval Date: 8/13/2019 **Approval Expiration Date:** 8/12/2022

Exemption Category/Paragraph: 2a

Signed Consent Waived?: Yes

Re-review frequency: (three years unless otherwise stated)

LSU Proposal Number (if applicable):

By: Dennis Landin, Chairman

A handwritten signature in cursive script, appearing to read "D. Landin", is written over a horizontal line.

PRINCIPAL INVESTIGATOR: PLEASE READ THE FOLLOWING –

Continuing approval is **CONDITIONAL** on:

1. Adherence to the approved protocol, familiarity with, and adherence to the ethical standards of the Belmont Report, and LSU's Assurance of Compliance with DHHS regulations for the protection of human subjects*
2. Prior approval of a change in protocol, including revision of the consent documents or an increase in the number of subjects over that approved.
3. Obtaining renewed approval (or submittal of a termination report), prior to the approval expiration date, upon request by the IRB office (irrespective of when the project actually begins); notification of project termination.
4. Retention of documentation of informed consent and study records for at least 3 years after the study ends.
5. Continuing attention to the physical and psychological well-being and informed consent of the individual participants, including notification of new information that might affect consent.
6. A prompt report to the IRB of any adverse event affecting a participant potentially arising from the study.
7. Notification of the IRB of a serious compliance failure.
8. **SPECIAL NOTE: When emailing more than one recipient, make sure you use bcc. Approvals will automatically be closed by the IRB on the expiration date unless the PI requests a continuation.**

* All investigators and support staff have access to copies of the Belmont Report, LSU's Assurance with DHHS, DHHS (45 CFR 46) and FDA regulations governing use of human subjects, and other relevant documents in print in this office or on our World Wide Web site at <http://www.lsu.edu/irb>

Appendix B. TATAMS Pilot (incl. CAMI and Demographic Questionnaire)

Q1 Informed Consent

Study Title: Teacher Attitudes Toward Addressing Mental Health in Schools: Development and Initial Validation of an Attitude Scale

Purpose of the Study: The purpose of this research project is to develop an attitude scale. This attitude scale will be used with K-12th-grade teachers to determine their general attitude towards school-based mental health services. Data from this research project will help to establish the initial validation of the scale items.

Study Procedures: This study will involve one data collection period (i.e., the completion of the scale items online). You will first be asked to supply some demographic information (e.g., years spent teaching, grade(s) taught) and then will be presented with the scale items. The scale consists of different statements related to attitudes of an individual towards general school-based mental health services. The time to complete the scale should take approximately 30-45 minutes (duration may vary by participant).

Subject Inclusion: Must be a full-time K – 12th grade regular or special education teacher.

Number of Subjects: Maximum of 500

Risks: There are no known risks involved in participating in this research study other than those encountered in typical or normal day-to-day life. The length of time required to complete the attitude measure may be of slight inconvenience to you.

Benefits: Findings from this study may extend to the creation of an attitude scale that could be used in future research projects and practices related to attitudes toward school-based mental health services.

Investigators: The following investigators are available for questions about this study:

Jacob DeBoer, M.S., NCSP, jdeboe1@lsu.edu, (540) 505-0683

Frank Gresham, Ph.D., gresham@lsu.edu, (225) 578-4663

Right to Refuse: Participation is voluntary. Subjects may choose not to participate or withdraw from the study at any time without penalty or loss of any benefit to which they might otherwise be entitled.

Privacy: Results of this study may be published, but no names or identifying information will be included in the publication. If you have any questions at any time about the study or its procedures, you may contact the principal investigators or co-investigators. If you have any

questions about subjects' rights or other concerns, you can contact Dennis Landin, Chairman, LSU Institutional Review Board, (225) 578-8692, irb@lsu.edu, www.lsu.edu/irb.

I agree to participate in the study described above and acknowledge the researchers' obligation to provide me with a copy of this consent form if signed by me.

ELECTRONIC CONSENT: Please select your choice below. You may print a copy of this consent form for your records. Clicking on the "Agree" button indicates that:

You have read the above information.

You voluntarily agree to participate.

You are 18 years of age or older.

- ☐ Agree (i.e., I consent to begin the study)
- ☐ Disagree (i.e., I do not consent, I do not wish to participate)

Q1 Which category below includes your age?

- ☐ 18-20
 - ☐ 21-29
 - ☐ 30-39
 - ☐ 40-49
 - ☐ 50-59
 - ☐ 60 or older
-

Q2 Please indicate your gender:

- ☐ Male
 - ☐ Female
 - ☐ Gender diverse/Genderqueer/Gender non-conforming
 - ☐ Other (*Please Specify*) _____
 - ☐ Prefer to not respond
-

Q3 Which ethnicity best describes you?

- ☐ White
 - ☐ Black or African American
 - ☐ American Indian or Alaska Native
 - ☐ Asian
 - ☐ Native Hawaiian or Pacific Islander
 - ☐ Multiple Ethnicity/Other (*Please Specify*) _____
-

Q4 What is your highest level of education *completed*?

- ☐ High school graduate
 - ☐ Associate's degree
 - ☐ Bachelor's degree
 - ☐ Master's degree
 - ☐ Law Degree
 - ☐ Doctorate degree
 - ☐ Medical degree
-

Q98 Do you teach full-time?

- ☐ Yes
 - ☐ No
-

Q5 How many years of teaching experience do you have?

- ☐ 0 to 3 years
 - ☐ 3 to 5 years
 - ☐ 6 to 10 years
 - ☐ 11 to 20 years
 - ☐ > 20 years
-

Q6 Where is your school located?

▼ Alabama ... Wyoming

Q7 What grade(s) do you *currently* teach? (you may select more than one answer)

☐ Kindergarten

☐ 1st Grade

☐ 2nd Grade

☐ 3rd Grade

☐ 4th Grade

☐ 5th Grade

☐ 6th Grade

☐ 7th Grade

☐ 8th Grade

☐ 9th Grade

☐ 10th Grade

☐ 11th Grade

☐ 12th Grade

Q10 Do you primarily teach in general or special education?

- ☐ General education
- ☐ Special education
-

Q8 Not counting students that you have taught, have you been directly affected by a mental health problem (i.e., do you have personal experience with a mental health problem or know someone, such as a friend or family member, who has experience with a mental health problem)?

- ☐ Yes
- ☐ No
- ☐ Prefer to Not Disclose

End of Block: Demographic Information

Start of Block: TATAMS Instructions/Definition

Q11

The following statements express various opinions about **school-based mental health supports (or services)**. These terms are intended to encompass all aspects of mental health supports for school-aged children that could be integrated into a given school community.

Mental health supports is a broad term that refers to any services that aim to reduce psychological problems *and/or* promote psychological well-being. Some examples of these supports include identifying students with mental health concerns (e.g., school-wide mental health screening); supporting students with mental health concerns (e.g., group-based social skills lessons, individual/group counseling); preventing mental health concerns (e.g., incorporating classroom practices that promote social-emotional well-being); and supporting school staff in the implementation of these services (e.g., stress-reduction programs for teachers, professional development focused on mental health topics).

For each statement, please select the response that most accurately describes your level of agreement. Some items may seem similar to ones that you have previously answered, but please be sure to answer all of them.

End of Block: TATAMS Instructions/Definition

Start of Block: TATAMS Items

Q13 All school personnel should be trained to have a basic understanding of common mental health problems.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q14 Providing mental health services in schools is essential to student success in the classroom.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q15 I try to ensure that the families of my students are knowledgeable of the school supports for students with mental health concerns.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

Q16 Access to mental health supports should be equal across all students.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q17 I am happy when students receive the mental health services they need.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q18 I would be enthusiastic if my principal asked me to begin teaching lessons related to mental health.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q19 I am effectively able to identify students in need of additional mental health supports.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q20 Teachers play an important role in connecting students to mental health services.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q21 The early identification of students who are at-risk for mental health problems is an important step in the promotion of mental health within the school.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q22 Screening for mental health problems in schools is essential to understanding the needs of our students.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q23 I am passionate about using my role as a teacher to decrease the stigma surrounding mental health services.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q24 Schools should be involved in raising awareness about mental health concerns.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q25 I am disappointed when school leaders ignore the mental health of students.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q26 I feel inspired when I hear of school-based mental health services implemented at other schools.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q27 School-based mental health services are an essential component to delivering comprehensive mental health supports to young people.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q28 When available, I seek out professional development opportunities that improve my ability to identify students in need of mental health supports.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q29 Schools should be involved in supporting the mental health of all students.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q30 I get upset when school-based mental health services do not address the needs of all students.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

Q31 School-based mental health services are important to a student's academic success.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q32 I would want to be an active participant in the school-based mental health activities at my school.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q33 I empathize with students who experience mental health problems.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q34 If my administrators supported a school-wide mental health program, then I would implement it.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q35 It frustrates me when the mental health of my students is ignored.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q36 I am disappointed when student mental health is not addressed in the schools.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q37 Internalizing mental health problems, such as anxiety or depression, can significantly affect a child's academic performance.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q38 I would be disappointed if my administrators did not support school-wide mental health services.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q39 Teachers should be involved in the process of screening students for mental health concerns.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q40 I would be enthusiastic about increasing the mental health supports at my school to address the needs of all students.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q41 I would be disappointed if one of my colleagues did not support the implementation of school-based mental health services.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q42 I want to advocate for policy changes that could improve school-based mental health services.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q43 It is encouraging when administrators make school-based mental health a priority.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q44 When I think of the needs of my students, I consider their academic competence, as well as their emotional well-being.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

Q45 The social-emotional development of my students is as important as their academic development.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q46 Mental health services should be available to students in both general and special education.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q47 I make it a point in my classroom to reduce the stigma surrounding mental health supports.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q48 Externalizing mental health problems, such as hyperactivity or aggression, can significantly affect a child's academic performance.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q49 I am frustrated when mental health is not addressed in the schools.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q50 I am encouraged when I hear of professional development opportunities related to mental health.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q51 I would be willing to work as a part of a team (e.g., with the school counselor, school psychologist, school nurse, administrators, and other teachers) to improve mental health services at my school.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q52 Schools should have the capacity to address both mental health and academics effectively.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q53 It is satisfying to hear when school-based mental health is prioritized at the whole-school level.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q54 Professional development opportunities for teachers that focus on the basics of mental health should be widely available.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

Q55 Schools can play a significant role in decreasing the stigma that surrounds mental health services.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q56 In my classroom, I support the positive social-emotional development of my students.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q57 I strive to build a strong family-school partnership in order to support the mental health needs of my students.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q58 I would be open to completing brief rating forms to screen all my students for mental health concerns.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q59 I attempt to incorporate the topic of mental health into my classroom activities (e.g., whole-class lessons on social-emotional learning, practicing self-regulation strategies as a group).

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q60 More funding for schools should be utilized to help support the mental health needs of students.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q61 I am concerned when schools ignore the mental health of their students.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

Q62 I play an important role in the identification of students who could benefit from additional mental health services.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q63 Schools should offer mental health supports to students who present with mild or emerging mental health needs.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q64 Schools should offer mental health supports to students who present with intensive mental health needs.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q65 I try to help make sure that the families of my students are aware of the available mental health supports in the community.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q66 I look for opportunities where I can learn more about mental health (e.g., in-person professional development, online webinars).

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q67 The school system plays an integral role in ensuring the mental health of its students.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q68 It is part of my role as a teacher to support the mental health of my students.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q69 It is part of my job to ensure that students feel emotionally comfortable at school.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q70 In my classroom, there are opportunities for students to learn and practice emotional regulation techniques.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q71 I am interested in leading classroom lessons about general mental health topics (e.g., mindfulness skills, emotion regulation techniques)

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q72 I use some form of data collection (e.g., brief behavior rating scales, individualized morning check-ins, individualized afternoon check-outs) to monitor the mental health of my students.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q73 Everyone at the school has a role to play in the promotion of mental health.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

Q74 I am comfortable discussing a student's mental health with their family.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q75 Teachers play an important role in school-based mental health services.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q76 Schools should participate in a stigma reduction campaign to combat the negative ideas that people have about mental health.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q77 I want to learn more about how mental health could impact my students.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q78 Early treatment of mental health challenges leads to better outcomes for students.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q79 The monitoring of the mental health of students is an important role of a teacher.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q80 I have frequent conversations with my students about the importance of mental health.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q81 I consult with the mental health professional at my school (e.g., school counselor, school psychologist) to ensure that any mental health supports that I provide in the classroom are effective.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q82 I get excited if I hear about school-based mental health services mentioned in the media (e.g., on the news, on social networks).

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q83 If one of my students is identified as being at-risk for a mental health problem, I look for different supports that I can implement in the classroom to help them succeed (e.g., check-

in/check-out; daily behavior report cards; positive reinforcement for appropriate behavior; scheduled breaks).

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q84 If I hear that one of my students is at-risk for worsening mental health problems, I am eager to learn additional ways to support the student in my classroom.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q85 I am interested to learn additional evidence-based supports that I can use with students who are determined to be at-risk for mental health problems.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q86 In my classroom, I am sensitive to the specific needs of the students who struggle with mental health problems.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q87 I would be upset with one of my colleagues if they refused to talk about mental health in their classroom.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q88 More tax money should be spent on the care and treatment of people with mental health problems.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q89 People with mental health problems are a burden on society.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

Q90 People with mental health problems have for too long been the subject of ridicule.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q91 Increased spending on mental health services is a waste of tax dollars.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q92 We need to adopt a far more tolerant attitude toward people with mental health problems in our society.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q93 There are sufficient existing services for people with mental health problems.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q94 Our mental hospitals seem more like prisons than like places where people with mental health problems can be cared for.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

Q95 People with mental health problems do not deserve our sympathy.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q96 We have the responsibility to provide the best possible care for people with mental health problems.

- ☐ Strongly Disagree
 - ☐ Disagree
 - ☐ Neutral
 - ☐ Agree
 - ☐ Strongly Agree
-

Q97 It is best to avoid anyone who has mental health problems.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

End of Block: TATAMS Items

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Vita

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