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Feasibility of an Emotional Health Curriculum for Elementary School Students in an Underserved Hispanic Community

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Conflict of Interests

The Authors declare that there is no conflict of interest.

Abstract

PROBLEM: Hispanic children have greater mental health challenges but fewer received mental health services than other ethnic groups. A classroom-based Emotional Health Curriculum (EHC) was developed to address mental health disparities in an underserved Hispanic community.

METHODS: A quasi-experimental design with one group pre-and-post intervention was used to test the feasibility of an eight-week EHC for one hundred 3rd and 4th grade children in a dual-immersion Spanish-English elementary school. Limited efficacy was measured by changes in depression and anxiety scores reported by children and teachers. Acceptance was evaluated by a child-reported satisfaction survey and a focus group in which the four teachers shared their experiences. Implementation was measured by participation, retention and fidelity rates.

FINDINGS: The child-reported depression and anxiety and teacher-reported depression were significantly decreased in at-risk children with the effect size ranging from 0.60 to 1.16 (*p*s <0.05). The majority of children (89.7%) enjoyed the EHC and teachers observed that children had acquired skills to manage their emotional distress. The participation, retention and fidelity rates were 98%, 94% and 99.13%, respectively.

CONCLUSIONS: The results provide promising evidence that the EHC has the potential to improve depression and anxiety symptoms in at-risk children.

Introduction

Mental Health Disparities

Studies document that anxiety and depression (i.e. internalizing behaviors) are the most common psychiatric conditions in children (Ahlen, Lenhard, & Ghaderi, 2015; Bennett, et al., 2015) . In US children aged 8 to 15 years, 3.7% had major depression and 0.7% generalized anxiety disorder (Merikangas et al., 2010). Toppelberg, Hollinshead, Collins, and Nieto-Castañon (2013) found the prevalence rate of 4.9% of internalizing problems reported by teachers in a community sample of 5-to-7 year old Hispanic children. Some studies showed that Hispanic children experienced higher depression rates than Whites, African Americans and Asian Americans (Anderson & Mayes, 2010; Joiner, Perez, Wagner, Berenson, & Marquina, 2001; Siegel, Yancey, Aneshensel, & Schuler, 1999). In another study in the U.S., Saluja et al. (2004) reported that 22% of Hispanic youth had depressive symptoms compared with 18% of White, 17% of Asian American, and 15% of Black youth.

Although Hispanic children are at greater risk for mental disorders, Hispanic youth receive fewer and lower quality mental health services than non-Hispanic, White children (Alegria, Vallas, & Pumariega, 2010; Merikangas et al., 2011; Toppelberg, et al., 2013). This type of mental health service gap is especially pronounced for internalizing behaviors because it has been observed that Hispanic children often do not perceive “feeling depressed or afraid” as rationale for treatment (Cummings, Case, Ji, Chae, & Druss, 2014). Research has identified multilevel barriers to mental health services in Hispanic families including financial constraints, transportation issues, lack of mental health services in the neighborhood, limited English language fluency, low health literacy, and persistent stigmas against mental health

(Bear, Finer, Guo, & Lau, 2014; Stewart, Simmons, & Habibpour, 2012; Uebelacker et al., 2012). School-based programs have the potential to reduce these barriers.

School-Based Mental Health Program

Preventing anxiety and depression are a public health priority (World Health Organization [WHO], 2008), as these disorders in childhood have deleterious consequences for academic success, emotional wellbeing and peer relationships throughout childhood and adolescence (Bennett, et al., 2015; Cerdá et al., 2013; Hughes, Lourea-Waddell, & Kendall, 2008). Once these disorders are established they are more likely to persist in adulthood (Patton, et al., 2014). Schools become promising settings to provide mental health wellness programs not only because children spend most of their day there, but also because they are rife with anxiety-provoking academic and social situations (Herzig-Anderson, Colognori, Fox, Stewart, & Masia Warner, 2012). School-based programs also reduce barriers to mental health care through increasing accessibility and decreasing stigma (Bear, et al., 2014; Keeton, Soleimanpour, & Brindis, 2012; Mason-Jones et al., 2012). Juszczak, Melinkovich and Kaplan (2003) found that adolescents were 21 times more likely to seek school-based mental health services than community-based mental health care. Comparing mental health service utilization in adolescents across clinic and school settings, Cummings, Ponce and Mays (2010) showed that Hispanic youth had lower rates of receiving counseling in clinical settings relative to White youth, whereas there were no ethnic differences in counseling service use in school settings.

A growing body of evidence supports the effectiveness of school-based cognitive behavioral therapy (CBT) or mindfulness in preventing depression and anxiety in children and adolescents (Barrett & Turner, 2001; Calear & Christensen, 2010; Gillham et al., 2007; Mendelson et al., 2010; Neil & Christensen, 2009). However, there are very few culturally sensitive CBT or mindfulness interventions focusing on preventing depression and anxiety in underserved Hispanic children. To address the gap of knowledge in prevention and early intervention at a school setting with few mental health resources, our research team created a classroom-based Emotional Health Curriculum (EHC) by integrating previous classroom-based CBT principles and structure, mindfulness skills, and also utilizing a coordinated nursing care implementation approach. Additionally, Hispanic cultural terms and concepts were threaded throughout the EHC to increase the cultural relevance of the intervention implemented in a dual-immersion Spanish-English elementary school.

Theoretical Framework

Cognitive behavioral theory guides the development of EHC as cognitive behavioral therapy (CBT) is the first-line recommended approach to mental health disorders in pediatrics (Forman-Hoffman et al., 2016). This theory emphasizes identifying affective, cognitive and behavioral responses to distressing situations and modifying anxious or depressed experiences by changing maladaptive beliefs and generating positive thoughts (Beck, 2005; Fujii et al., 2013; Kendall & Hedtke, 2006). Acquisition of self-control skills is the key CBT principle, including skills such as identifying negative feelings and restructuring depressed or anxious feelings by generating positive thoughts (Rey, Marin, & Silverman, 2011). Mindfulness refers to the ability to focus moment-to-moment attention on thoughts, feelings,

or perceptions in nonjudgmental and nonreactive ways (Schonert-Reichl et al., 2015). Mindfulness practice was found to promote cognitive and emotional self-regulation of rumination or intrusive thoughts that are common symptoms of internalizing problems (Mendelson et al., 2010; Weijer-Bergsma, Langenberg, Brandsma, Oort, & Bögels, 2014). In order to enhance self-control and self-awareness skills, mindfulness was integrated into the EHC as an additional coping strategy.

A recent meta-analysis showed that professional healthcare providers using a school-based curriculum delivery model had a stronger positive impact overall, compared to those given by classroom teachers (Werner-Seidler, Perry, Calear, Newby, & Christensen, 2017). Given the scarcity of mental healthcare providers in the community of Santa Ana, the EHC was implemented through a coordinated nursing team model (i.e., trained licensed registered nurses who were in a Master of Science (MS) Family Nurse Practitioner program together with trained senior Bachelor of Science in Nursing students under the supervision of University Nursing Professors).

The primary aim of this study was to examine the feasibility of using the EHC as a preventive intervention with 3rd and 4th grade children in a dual-immersion Spanish-English elementary school in terms of limited efficacy, acceptability and implementation. Specifically, the teachers' perspectives and children's self-report were used to assess of the limited efficacy of EHC on depression and anxiety as well as the acceptability of the intervention.

Methods

Design and Setting

A quasi-experimental design with one group pre-and-post intervention was used to examine the limited efficacy of EHC. A limited efficacy refers to the impact of an intervention in a convenience sample with intermediate outcomes and limited statistical power (Bowen et al., 2009). Acceptability describes experiences in targeted individuals or those involved in the programs (Bowen et al., 2009). Children's satisfaction and teachers' experiences were used to describe their acceptance of EHC. Intervention Fidelity Checklist (i.e., how the intervention was consistently delivered), participation and retention rates (i.e., how the children were engaged in the intervention) are indicators of implementation (Bowen et al., 2009). The timeline of this study was designed to align with the school's schedule: children attended the EHC once a week with each session lasting approximately 45 minutes for eight weeks. The research team took 15 minutes to collect the pre-and-post intervention data with the 3rd and 4th grade children during the first and the last sessions. Teachers' data were collected one week before the intervention and one month after the intervention respectively. The study was implemented in the classrooms of a dual-immersion Spanish-English elementary school in the community of Santa Ana, California between January and June, 2016.

Intervention

The classroom-based EHC was composed of eight sessions in which children acquired skills to become aware of emotions, recognize body signals of emotional distress, practice mindfulness to manage distress, understand the impact of both negative and positive self-talk on feelings, and communicate their feelings with friends, teachers and parents as well as show empathy towards friends' distress (See Table 1). Each session had the same format starting with reviewing homework assigned the previous week, then telling a story to introduce a new concept that relates to emotional health, followed by a demonstration of the skill necessary to deal with emotional distress and communication. Children were then divided into small groups of 4–5 children to one nursing student facilitator where they were able to practice the concept or skill.

The EHC was adapted to the Hispanic community by adding cultural metaphors, linguistic elements and social contexts (Castro, Barrera, & Holleran Steiker, 2010; Macklem, 2014). Given that this is a dual-immersion Spanish-English school, 3rd and 4th grade children are fluent in both Spanish and English and also have a shared understanding of Hispanic culture through their class curriculums. A bilingual MD/MPH student facilitated cultural adaption of the EHC through integrating the feedback from reviews of two school teachers. First, Hispanic cultural symbols were built into the teaching materials and rewards. For example, a horse, a symbol of strength and wealth in Mexican culture, was designed as the mascot of the curriculum. Second, Spanish words were included to enhance the children's understanding of the curriculum. Children were taught to identify their emotions with words in both English and Spanish. Third, scenarios specific to the children's school life was captured in role-play and small group activities, such as managing test anxiety and trying out for the school play or band. One scenario recommended by school teachers was the first day of school distress, "On the first day of school, I don't have all of my school supplies." The students were then encouraged to come up with positive thoughts and calming strategies to address their distressed and anxious feelings.

The teacher was present when the EHC was delivered in the classroom and encouraged children to complete the weekly homework related to that session. Each class had the same coordinated nursing team so that the weekly sessions were delivered with consistency in terms of explaining the concepts, facilitating small groups, checking homework and reinforcing positive classroom behaviors. Additionally, the research team had developed an Intervention Fidelity Checklist to further ensure the consistent delivery of EHC. Nursing professors directly supervised every aspect of the implementation procedures in each classroom, and completed the Fidelity Checklist to record the completion of the consistent curriculum and activities.

Procedure

All stages and tools utilized in this study had University IRB approval. The elementary school administrator, designated as the study coordinator, supported recruitment. Parents of 3rd and 4th grade students were informed about the study through a bilingual Spanish/English Parent Newsletter and Parent Study Information Sheet. The information was provided to all parents, so they could decide whether their child would participate in or

withdraw from the study (i.e., allow the individual data to be collected and reported). Parents were notified that their children were expected to attend the EHC as part of their general health class. Also, they were told that it was entirely voluntarily for their child to fill out surveys and questionnaires. No parents withdrew or objected to their children's participation in data collection.

Using a written script, the first author trained the coordinated nursing team to consistently explain the study procedures to the children. Verbal assent was obtained from all children. At baseline demographics and pre-intervention questionnaires were collected and after the intervention, the post- questionnaires and satisfaction surveys were collected. To support children's comprehension of the questionnaires, the trained research assistants read the questions loud and provided additional assistance for those children who had difficulty understanding or filling them out. Children received school supplies as rewards for their participation.

The research team and the elementary school collaboratively developed a comprehensive plan to minimize risks and potential emotional distress, and to clinically screen any children self-identified or observed to be at risk; this plan was part of our approved IRB protocol. Specifically, if a child self-reported distressed feelings, abuse, or risky family/social circumstances any time or exhibited signs of distress, a licensed nurse faculty who supervised the intervention in the classroom each session immediately notified and referred this child to the school administrator who was part of our research team. This designated school administrator functioned as the school's social support coordinator in the study, and was responsible for direct referral to the school counselor and coordination with community mental health services according to individual child's needs.

The four teachers of the 3rd and 4th grade classrooms received a Teacher Study Information Sheet and were asked to fill out an individual assessment for each of their students. Each teacher received $200 in appreciation for their significant time and effort to complete the demographic survey as well as pre- and post-intervention questionnaires (24–26 students in a classroom). At the end of the intervention, the study coordinator invited the four teachers to attend a focus group to share their experiences with the EHC. The bilingual MD/MPH student, trained by the first author, facilitated the focus group using semi-structured interview questions. Beginning with the consent process, all the teachers agreed to be audio-recorded using a digital recorder. Each teacher received a $30 gift card as compensation for their time participating in the focus group.

Participants

Attendance of the 102 3rd and 4th grade children was obligatory as the EHC was included in the required health curriculum classes for eight weeks. Two children dropped from the curriculum due to family crisis necessitating direct school counselor interventions. Of the 100 children, 82 were Hispanic, 13 American Indian or Alaska Native, and four Non-Hispanic Whites. The girl to boy ratio was almost equal with 45.0% girls to 55.0% boys. The average age was 8.71 years old with 50% children being in the 3rd and 50% in the 4th grades. Most of the students (80.0%) lived with both their parents and 83.0% spoke both English and Spanish at home. All four school teachers (3 females and 1 male), who

participated in this study, were Hispanic, bilingual educators. Three of them had master's degrees and had taught at this dual-immersion Spanish-English elementary school for five years or more; the fourth teacher had a bachelor's degree and taught at the school for two years.

Measures

The Revised Child Anxiety and Depression Scale-25 (RCADS-25: Ebesutani et al., 2012) is a child self-reported questionnaire including 10 items to measure major depression symptoms and 15 items to measure general anxiety symptoms on a 4-point scale (0 = never, 1 = sometimes, 2 = often, 3 = always). The RCADS-25 is an instrument with its acceptable content and concurrent validity being obtained in both school-based and clinic-referred samples for children in grades 3–12 in various ethnicity groups including Whites and Hispanics (Ebesutani et al., 2012). The Cronbach's alpha for depression, anxiety, and total problems in this sample ranged from 0.74 to 0.91. According to the RCADS guidelines, children with RCADS-25 total scores equal to or above 65 are considered to be in the borderline/clinical range or at risk; children with total scores lower than 65 are within the normal range.

The Teacher's Report Form (TRF: Achenbach, Dumenci, & Rescorla, 2003) was used by classroom teachers to evaluate their students' internalizing and externalizing behaviors for the past month in children aged 6–18 years. Teachers reported their perceptions of students' depression and anxiety symptoms before and after the EHC. The TRF is a culturally validated assessment in Hispanic populations and consists of 33 items to measure internalizing broad symptoms including depression, anxiety, and somatic complaints rated on a 3-point scale (0 = not true, 1 = somewhat or sometimes true, 2 = very true or often true) (Bird, 1996; Toppelberg et al., 2013). Internalizing behaviors were the focus and thus reported in this study. According to TRF broad symptom standard, children with TRF internalizing symptoms equal to or above 60 are considered to be in the borderline/clinical range or at risk; children with internalizing symptoms lower than 60 are within the normal range. In order to match child RCADS-25 scores (depression, anxiety), we reported TRF depression and anxiety separately. The Cronbach's alpha for depression and anxiety in this sample ranged from 0.77 to 0.85.

The children's satisfaction survey was developed by the first author who had training in and experience with instrument development. Prior to administration, the research team and school teachers provided feedback on the survey in terms of content and language use. The survey was composed of two sections including an overall assessment of the EHC and a specific evaluation of each of the eight skills taught during the EHC. For instance, an overall question "Did you enjoy the emotional health classes?" included the responses, "Yes," "A little," and "No." And a specific question "Did you find deep breathing useful?" included the responses, "Useful," "Somewhat useful," and "Not useful." The Cronbach's alpha for this instrument was 0.85. We also included an open-ended question at the end of the survey asking students to provide written feedback or draw a picture reflecting their experiences with the EHC.

Analysis

We used IBM SPSS, version 22.0 (SPSS, Inc., Chicago, IL, USA) to conduct analyses. As recommended by the instrument manuals, the three raw RCADS-25 scores (depression, anxiety and total scores) and the three raw TRF scores (depression, anxiety, and internalizing symptoms) were converted to T scores for analyses. First, descriptive analyses were used to examine characteristics of children and teachers and also to evaluate children's satisfaction. Second, repeated measures analysis of variance (ANOVA) and post hoc paired t-tests were conducted to examine the changes in depression and anxiety before and after the EHC in at-risk children versus normal children. Children's and teachers' assessments were analyzed separately due to differences in scales and few at-risk children overlapped between them. The Cohen's d statistics were used to report effect sizes.

The audio recordings of the teachers' interviews were transcribed verbatim by a nursing student who was trained by the first author to accurately convert speech to a written document. Content analysis was conducted according to constant comparison methods identifying differences and seeking commonalities (Dye, Schatz, Rosenberg, & Coleman, 2000). Three steps were used in the analysis: (1) two researchers independently analyzed two transcripts by identifying line-by-line themes with manual coding; (2) the same two researchers discussed coding to reach consensus about themes; and (3) the same two researchers categorized the themes and summarized the key overarching themes. In order to maintain teachers' voices, codings generated in the analyses were based on teachers' direct language, rather than the researchers' paraphrases (Saldaña, 2009).

Results

Limited efficacy of Emotional Health Curriculum

The repeated measures ANOVA showed that for child-reported depression there was a significant interaction effect between group and time ($F(1, 92) = 12.04$, $p = .001$). The same significant interaction effect was found for child-reported anxiety ($F(1, 92) = 18.32$, $p < .000$). Post hoc paired t-tests found that there were significant decreases in child-reported depression ($t(1, 6) = 3.08$, $p = 0.02$, $d = 1.16$) and anxiety ($t(1, 6) = 3.02$, $p = 0.02$, $d = 1.14$) with a large effect size in children who rated themselves at risk, while depression ($t(1, 86) = 1.09$, $p = 0.28$, $d = 0.12$) and anxiety scores ($t(1, 86) = 0.40$, $p = 0.69$, $d = 0.04$) in children self-rated as normal did not change significantly (see Table 2).

The repeated measures ANOVA showed that for teacher-reported depression there was a significant interaction effect between group and time ($F(1, 98) = 16.53$, $p < .000$). Post hoc paired t-tests found that teacher–reported depression ($t(1, 15) = 2.38$, $p = 0.03$, $d = 0.60$) was significantly decreased with a moderate effect size in children who were rated at risk by teachers, while depression scores ($t(1, 83) = -0.21$, $p = 0.83$, $d = 0.02$) in children who were rated as normal by teachers did not change significantly. The interaction effect for teacher-reported anxiety was marginally significant ($F(1, 98) = 3.38$, $p = .07$), and thus post hoc paired t-tests were not conducted (see Table 2).

Acceptability of Emotional Health Curriculum

Children's satisfaction with EHC.—Overall, the majority of the school children (89.7%) enjoyed the EHC and 72.9% reported that the EHC taught them skills to manage stress and worries. Table 3 summarizes children's assessment of each skill taught during the EHC sessions. Approximately two-thirds of the students perceived every skill to be "useful" (62.9% to 88.7%). *Brave Thoughts* (88.7%), *Mindfulness Exercises* (86.6%) and *Deep Breathing* (85.6%) were reported as the most useful skills. Approximately two thirds of the children (62, 63.92%) responded to the open-ended question by sharing their experiences with the EHC. Of these children, the majority (56, 90.32%) expressed positive experiences with the EHC such as "I like that you taught us about our emotions" and "It was the best time I had in school". Six students (9.68%) reported neutral comments such as "the classes were so-so".

Teachers' experience with EHC.—All four teachers noticed a change after the intervention in students' coping skills for managing their emotional distress and interpersonal conflicts with peers and linked the acquisition of these emotional regulation skills with the specific techniques taught in the curriculum. One teacher described her observation: *"The students before had a hard time problem solving their emotions. Like if they were angry or if they were sad or feeling upset for whatever reason, they had a hard time handling it and putting it into perspective in order to move on in the day…but a lot of them are able to now have some strategy like the mindfulness exercises or just breathing…or different things to help them."*

All four teachers reported that the greatest benefit was that this intervention opened a door and created a safe environment for students to communicate their worries, fears and stresses. One male teacher described his observation of how girls benefited from communicating with the Nursing Professors: *"...I know it's hard for them [girls] to communicate with me…and they do need somebody to talk to and I feel that sometimes, myself, coming from a Hispanic family can be a little more conservative and I think having someone to talk to about those issues, somebody [Nursing Professors] that's in the medical field, somebody that's not going to judge, somebody that's going to listen to them...they'll talk to somebody and they'll come back and I don't ask them, but I do notice that they'll come back with a different language…their body language…they feel more comfortable..."*

The teachers endorsed the specific content of the intervention and noted that the delivery model was acceptable; overall, they were positive about how the curriculum was designed and implemented. They emphasized that the cultural adaptation of the intervention made it more relevant for the students. One teacher stated: *"It is very important culturally; it is important to see that aspect, to make connections to it."* All the teachers embraced the coordinated team approach to delivering the curriculum: "*Everybody there brought in so much energy. They came in really prepared... I think the kids were feeding off that energy and feeding off that the presenters had that emotion they cared for what they were doing..."* One female teacher pointed out: "*He [one senior BS nursing student] related to the kids. He's young and had a lot of energy…he always talked a lot about his feelings... I think it is important especially with boys because socially, it's not accepted for boys to cry or express*

their emotions...” the male teacher echoed his colleague’s observation by commenting on the Hispanic cultural perspective of feelings: *“...coming from a Hispanic background it is difficult to talk about emotions and particularly, being male is even more difficult.”*

Implementation of Emotional Health Curriculum

With two children dropping out, 100 remained in the curriculum and were included in the final analysis. Ninety-eight children filled out the baseline questionnaire and 94 children completed both pre-and-post questionnaires. With the use of the Intervention Fidelity Checklist, we found a consistency rate of 99.13%.

Discussion

The primary aim of this study was to examine the limited efficacy, acceptability, and implementation of using the EHC with 3rd and 4th grade children in a dual-immersion Spanish-English school (see Table 4). The key results revealed that following the EHC child-reported depression and anxiety symptoms and teacher-reported depression symptoms were reduced in at-risk children with the effect size ranging from medium to large. These findings with 3rd and 4th grade children were similar to other studies with older at-risk children who significantly benefited from a school-based CBT preventive program (Cardemil, Reivich, Beevers, Seligman, & James, 2007; Iizuka, Barrett, Gillies, Cook, & Miller, 2014; Mazurek Melnyk, Kelly, & Lusk, 2014). Together, these findings suggest that school-based interventions using cognitive behavioral theory had a positive effect on children who demonstrated elevated internalizing symptoms.

There were no significant changes in normal children in terms of both child-reported and teacher-reported depression and anxiety. Prior evidence showed that a school-based Mindfulness curriculum generated beneficial effects on self-regulation and prosociality (Schonert-Reichl et al., 2015; Weijer-Bergsma et al., 2014). Broader measures of emotional and social adjustment data should be included in future studies to further investigate the impact of EHC on coping and psychosocial competencies in addition to depression and anxiety symptoms.

Our results indicate that the EHC was well accepted by both children and teachers. The majority of children were satisfied with the EHC. Teachers observed that children openly communicated their emotional distress to them, applied deep breathing and mindfulness exercises to manage their test anxiety, and practiced ways to solve playground social conflicts. Teacher observations were congruent with children self-reported experiences that the skills taught as part of the EHC were useful. Furthermore, teachers highlighted that it was valuable to have the coordinated nursing team deliver this curriculum because often children sought guidance from the school nurses to assist them with their emotional challenges.

The high participation and retention rates suggest that the research team was able to successfully implement the EHC with the 3rd and 4th grade children in this disadvantaged community. The strong fidelity rate implies that the coordinated nursing team consistently implemented the core elements of the curriculum.

Limitations

There are four limitations in this study. First, a pre-experimental design without an attention control group was used. We thus cannot conclude that it is the EHC that reduced the depression and/or anxiety symptoms. Second, depression and anxiety outcomes without psychosocial competency data were collected. It is unclear how the EHC will impact developmental outcomes (e.g., cognitive, social, academic outcomes) in at-risk and normal children, respectively. Third, no follow-up data were collected. Without longitudinal data, it is unknown how long the decreased depression and anxiety in children with clinically evaluated symptoms would be sustainable. Fourth, mental health problems were not evaluated by clinicians. Clinical diagnosis would increase the validity of the results. A future study is needed to replicate the results with a longitudinal randomized clinical trial (RCT). This RCT should include an attention control with cognitive, emotional, social, behavioral and academic outcomes from multiple perspectives including clinicians, children, teachers and parents.

Conclusions

The EHC is an innovative classroom-based curriculum which integrated CBT, mindfulness, Hispanic cultural elements, and a coordinated nursing team delivery approach. Our study provides preliminary evidence supporting that the EHC has potential to improve depression and anxiety symptoms in primarily Hispanic children with elevated internalizing problems. Children and teachers were satisfied with the content of the curriculum and responded well to the coordinated nursing team delivery approach. Our study suggests that it is essential to implement culturally sensitive interventions in dual immersion Spanish-English elementary schools where at-risk children would benefit most. Future research with a more rigorous design is needed to demonstrate that the EHC is a cost-effective early prevention and intervention model to address mental health disparities in underserved Hispanic communities.

The clinical implications are primarily for school nurses who are champions for early mental health programs. The culturally sensitive EHC was developed through collaborating with the school personnel including administrators, teachers and nurses. The implementation of EHC was thus well received by the students. School nurses should actively engage school administrators and teachers when developing a mental health prevention or intervention program. Furthermore, the study suggests that the delivery of EHC in a classroom format to all students and supported by the school nurse provides a feasible approach to reducing mental health stigma and promoting a safe school environment to openly communicate emotional distress. The EHC is thus aligned with the new school health model entitled “Whole School, Whole Community and Whole Child (WSCC)” (Lewallen, Hunt, Potts-Datema, Zaza, & Giles, 2015). The WSCC model emphasizes that it is essential for school nurses to build a healthy social and emotional school environment to foster children’s whole development and academic success (Lewallen, et al., 2015).

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Table 1.

Content of the emotional health curriculum

Session	Focus
Emotional awareness	Use words to describe different emotions in both English and Spanish
Body signals	Recognize behavioral and physiological reactions to positive and negative emotions
Negative self- talk	Identify negative thoughts and their relation to emotions
Brave thoughts	Generate positive thoughts to replace negative self-talk
Deep breathing	Breath in with their belly rather than their chest and breathing out slowly through their mouth
Mindfulness exercises	Integrate emotion awareness, body signals, and deep breathing techniques to non-judgmentally and non-reactively respond to emotional distress
Action steps	Calmly facing challenging situations by practicing mindfulness and breaking them into manageable steps
Steps to friendship	Communicate feelings to a friend and empathetically respond to a peer's feelings

Table 2.

Changes in child-reported and teacher-reported depression and anxiety

[a]RCADS	**At-Risk Group (*n* = 7)**		**Normal Group (*n* = 87)**				
	Pre-intervention (*M*±*SD*)	**Post-intervention (*M*±*SD*)**	**Pre-intervention (*M*±*SD*)**	**Post-intervention (*M*±*SD*)**	**P (Time)**	**P (Group)**	**P (T × G)**
Depression	65.69 ± 6.11	53.28 ± 10.93	45.52 ± 7.95	44.56 ± 10.63	< 0.000	<0.000	0.001
Anxiety	66.23 ± 3.98	52.42 ± 10.24	46.70 ± 7.76	46.37 ± 9.85	< 0.000	<0.000	<0.000
[b]TRF	At-Risk Group (*n* = 16)		Normal Group (*n* = 84)				
	Pre-intervention (*M*±*SD*)	Post-intervention (*M*±*SD*)	Pre-intervention (*M*±*SD*)	Post-intervention (*M*±*SD*)	P (Time)	P (Group)	P (T × G)
Depression	69.50 ± 9.75	65.00 ± 8.49	52.42 ± 3.72	52.49 ± 3.75	< 0.000	<0.000	<0.000
Anxiety	62.75 ± 5.78	61.56 ± 8.46	52.31 ± 3.41	53.39 ± 4.50	0.93	<0.000	0.07

Note.

[a]RCADS, Revised Child Anxiety Depression Scales-25.

[b]TRF, Teacher Report Form.

Table 3.

Child assessment of each session of emotional health curriculum ($N = 97$)

Emotional Health Skills	Not Useful	Somewhat Useful	Useful
Emotional awareness	2 (2.1%)	16 (16.5%)	79 (81.4%)
Body signals	3 (3.1%)	19 (19.6%)	75 (77.3%)
Negative self- talk	3 (3.1%)	29 (29.9%)	65 (67.0%)
Brave thoughts	1 (1.0%)	10 (10.3%)	86 (88.7%)
Deep breathing	5 (5.1%)	9 (9.3%)	83 (85.6%)
Mindfulness exercises	2 (2.1%)	11 (11.3%)	84 (86.6%)
Action steps	7 (7.2%)	29 (29.9%)	61 (62.9%)
Steps to friendship	6 (6.2%)	21 (21.6%)	70 (72.2%)

Table 4.

Summary of feasibility outcomes

Feasibility	Indicators	Results
Limited efficacy	•Change in child-reported depression/ anxiety in children with elevated symptoms •Change in teacher-reported depression/ anxiety in children with elevated symptoms	•Significant decreases in child-reported depression and anxiety symptoms in at-risk children •Significant decreases in teacher-reported depression in at-risk children
Acceptability	•Child satisfaction •Teacher's experiences with the EHC	•89.7% children enjoyed the EHC •Four teachers observed that children acquired coping skills to manage their emotional distress after attending the EHC, and perceived the coordinated nursing care delivery approach empowered these children
Implementation	•Participation •Retention •Fidelity	•98% children completed pre-intervention questionnaire •94% children completed both pre-and-post questionnaires •Coordinated nursing team maintained 99.13% fidelity rate