

DEVELOPMENT OF THE K-2 COPING INVENTORY: A SELF-REPORT MEASURE
OF COPING FOR YOUNGER CHILDREN

AN ABSTRACT

SUBMITTED ON THE NINETEENTH DAY OF APRIL 2023

TO THE DEPARTMENT OF PSYCHOLOGY

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

OF THE SCHOOL OF SCIENCE AND ENGINEERING

OF TULANE UNIVERSITY

FOR THE DEGREE

OF

DOCTOR OF PHILOSOPHY

BY



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APPROVED: _



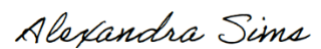
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Abstract

A young child's ability to proactively cope in the face of stressful events has been shown to protect against negative effects on a wide range of future academic and health outcomes, while maladaptive coping strategies may have the opposite effect. Yet, a measure of coping strategies in early childhood that can help identify and promote effective, contextually relevant strategies is almost non-existent. The goal of this study is to develop the K-2 Coping Inventory, a self-report tool for kindergarten to second grade children to identify the types of coping strategies that they use in response to stress. The first aim of the study was to conduct a scoping review of the literature to extract all reported coping strategies used by children under the age of eight. Second, interviews with children were conducted to further inform item selection and validate scoping review findings. Next, findings from the scoping review were systematically integrated with findings from child interviews to develop a final pool of items for inclusion on the new measure. Finally, a factor structure used to conceptualize coping among kindergarten to second grade children in response to stress was postulated for further evaluation. Twenty-four sources met scoping review inclusion criteria, with 28 unique coping strategies extracted following full-text review. Additionally, 24 kindergarten to second grade students (Mean age = 6 years old) completed semi-structured interviews to inform item selection. Integrated findings suggested that the K-2 Coping Inventory include 23-items, with a proposed three-factor structure, including "prosocial," "asocial," and "antisocial" coping domains. The new measure has the potential to be an efficient and reliable screening tool used to better understand coping for younger children.

Keywords: Early Childhood, Coping, Measurement Development

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ACKNOWLEDGMENTS

The past five years have been an incredibly challenging and rewarding journey of learning, perseverance, and growth. I am truly grateful for the unwavering support from my family, friends, mentors, and cohort-mates. This milestone would not be possible without each of you.

To Briana – thank you for being my backbone. You were there to celebrate all my successes and pick me when I needed it most. Your love carried me to the finish line.

To Dr. Baker and my dissertation committee – thank you for your guidance and mentorship. I am a better clinician, advocate, and researcher because of you.

To the children and families who I have the privilege and honor to work with and learn from – thank you. I am continuously in awe of your strength and resilience.

Finally, I dedicate this dissertation, the heart of my PhD journey, to my parents – Pat and Diane Orapallo. Thank you for your wisdom, guidance, and selflessness. Words could never begin to capture how proud I feel to be your son.

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Introduction

The association between exposure to stress and negative health outcomes has long been explored within the stress and coping literature, with a particular focus on how coping strategies may mitigate the impact of stress on long-term adjustment and overall health outcomes for individuals (Frydenberg, 2014). For example, the diathesis-stress model (Monroe & Simons 1991) is one well-known framework that highlights the connection between long-term stress exposure and later psychopathology. The model posits that psychological disorders are a result of the interplay between predisposing vulnerabilities and environmental situations or events that cause undue stress. Coping, defined as multidimensional processes used by individuals in response to stressful situations or events is believed to moderate this relationship (Compas, 1998; Folkman & Lazarus, 1985; Swift et al., 2020). Of note, proactive coping strategies (e.g., asking for help) have shown to decrease the impact of stress whereas maladaptive coping strategies (e.g., avoiding the stressor) may exacerbate the likelihood for poor outcomes (Moreland & Dumas, 2008). While the plethora of research focused on understanding stress and coping is encouraging, it is important to note that much of the literature continues to focus on older youth and adults (Skinner et al., 2003). Unfortunately, coping is a complex and context-dependent construct that is largely under-explored in younger children.

The variety of coping strategies used in response to stress is well-documented for adult populations, and by downward-extension, teens and school-age children (Compas et al., 2017; Lazarus & Folkman, 1984; Skinner et al., 2003). In the adult literature, Folkman & Lazarus (1985) theorize that coping may be conceptualized as problem-

focused, emotional-focused, or support seeking strategies to combat unwanted stress. In the child and adolescent coping literature, Altshuler and colleagues (1995) propose a more nuanced framework based on findings from cognitive interviews, including: behavioral distinction, cognitive distraction, escape, denial, or adaptive coping strategies. Dichotomized dimensions of coping have also been established in children (i.e., problem-focused vs. emotional-focused; Compas et al., 2017). Finally, a recent study focused on identifying coping strategies with racially and ethnically diverse school-age students (i.e., 3rd to 8th grade) using the Self-Report Coping Measure (SRCM; Causey & Dubow, 1992) found that children rely on approach-focused, externalizing, or internalizing coping strategies (Swift et al., 2020). While established using reliable and valid tools and methods (e.g., self-report questionnaires or interviews), the limited breadth of research attempting to extend these existing frameworks to children under the age of eight is noteworthy (Halpern, 2004). This is unsurprising as the experiences of stress and the ways in which young children cope with stress are likely qualitatively different given their cognitive capacity and social-emotional competencies compared to older children or adults (Yeo et al., 2014). More importantly, coping must be viewed from a developmental lens, using bottom-up approaches, rather than attempting to modify existing adult frameworks to capture coping within younger children.

Given that coping plays an integral role in serving as a buffer to mitigate poor health outcomes, there is a clear need to understand how vulnerable populations, especially young children, cope with early exposures of stress (Moreland & Dumas, 2008). Within the limited scope of research focused on coping during early childhood,

few concrete frameworks have been postulated, including Chalmers and colleagues' (2011) productive vs. non-productive model in addition to three-factor frameworks (e.g., active, passive, and relational strategies) (Deans et al., 2010; Yeo et al., 2014). Further, coping competence theory (Blechman et al., 1995; Dumas, 1997) is a model that accounts for the unique developmental and contextual demands experienced during early childhood. The model hypothesizes that coping strategies are employed by young children because of affective (i.e., emotional situations), social (i.e., interpersonal situations), or achievement-related (i.e., goal-directed, skill learning) stressors. Without the higher level of agency and skillset of older youth, younger children will likely rely on antisocial (e.g., tantrum, cry) or asocial (e.g., become withdrawn) means of coping whereas older youth may rely more on prosocial or problem-solving (e.g., try to figure out a solution to the problem) strategies. In coping competence theory, younger children also utilize prosocial coping strategies, but the types of prosocial strategies within this population may look different than older youth. For example, younger children may rely solely on a caregiver to address the stressful situation compared to older youth working collaboratively with adults to alleviate stress (Izard, 1984; Moreland & Dumas, 2008).

Finally, a more recent and targeted framework is offered by Bagdi and colleagues (2006), who suggest younger children utilize a wide range of coping strategies that encompasses cognitive, social, and emotional categories. This model of coping was developed with kindergarten to third grade students and their parents, who were independently asked to quantitatively and qualitatively report on their perceived daily life stressors and coping actions used in response to these events. The three-factor model

includes overarching categories (cognitive, social, and emotional coping) in addition to sub-groups. Cognitive coping was defined as any strategy that involved children thinking about what could be done to make the situation better and included “thinking about the situation” and “wishful thinking” sub-groups. Social coping, or strategies pertaining to a child’s interactions with others, included the following sub-groups: “distraction,” “support seeking,” “discussing feelings,” and “taking initiative.” Finally, emotional coping, defined as reliance on emotions, such as fear, anger, or aggression in response to stress encompassed the following sub-groups: “comfort seeking,” “avoidance, withdrawal, and giving up,” “crying,” “aggressive behaviors,” and “getting back at others.” While not psychometrically validated, this model for coping during early childhood is quite encouraging, as it conceptualizes coping from a developmental framework while considering the varying experiences within a general population of children without confirmed behavioral or mental health diagnoses (Bagdi & Pfister, 2006).

In sum, effective coping strategies play a significant role in mitigating the link between experiences of prolonged stress and negative mental and physical health outcomes (Compas et al., 2017; Wright et al., 2010). While taxonomies of coping within adolescent and adult populations are numerous, downward extensions of these frameworks to younger children are simply inadequate. To fully capture the types of strategies that young children use in stress-provoking situations, it is first necessary to understand younger children in context—including their cognitive capacity, social-emotional competencies, and unique environmental experiences. Then, a model of coping

may be recommended and psychometrically evaluated using guidelines for measure development and evaluation (e.g., confirmatory factor analysis; Hu & Bentler, 1999).

Limitations in the Measurement of Coping in Early Childhood

Of the nearly 100 established inventories, few included the perspectives of younger children in their conceptualization, development, or validation (Skinner et al., 2003). Often, studies that focus on coping responses in early childhood conceptualize dimensions based on models of older youth or adult coping (Yeo et al., 2014). Given that coping strategies are considered age, sex, and experience dependent, a developmentally and culturally appropriate self-report measure to adequately capture the strategies employed by young children remains needed (Compas et al., 2001). One available qualitative tool to assess coping strategies during early childhood is the Vignette Assessment of Preschool Children's Coping Strategies (VAPCCS; Halpern, 2004), which asks young children to respond to stressful vignettes, such as a parent-child conflict situation. Quantitative parent-report measures of coping responses in early childhood, including the Children's Coping Scale-Revised (CCS-R; Deans et al., 2010) and the Children's Competence Scale (Moreland & Dumas, 2008) also exist. The latter is particularly promising as the tool has been psychometrically validated for use with a more ethnically and racially diverse population of youth. However, the objective of the measure is to assess a young child's competencies related to affective, social, and academic stressors (e.g., "my child is kind to younger children") and not specific strategies that are used in response to environmental stress (Moreland & Dumas, 2008).

The increased focus on understanding and measuring coping in younger children is both reassuring and welcomed in moving the field forward. The existing coping measures available for early childhood populations have several strengths inherent to the approaches and methodology used to capture coping strategies of younger children. However, no study is without limitations and future research is needed to address existing gaps. Some of the limitations of existing measures include: use of downward extensions from adult measures of coping (e.g., Children's Coping Strategies Checklist; Ayers et al., 1996); limited psychometric validity and reliability with racially and ethnically diverse children (e.g., VAPCCS; Halpern, 2004; Coping with Stressful Life Events Measure, Children Revised Form; Bagdi & Pfister, 2006); or exist only as parent and teacher report tools (e.g., Children's Coping Scale-Revised; Deans et al., 2010). The current study attempts to continue moving the field forward by building upon the strengths of these existing measures and relying on best-practices for measure development to create an inventory that emphasizes the voices and perspectives of young children to adequately capture their unique experiences of stress and types of coping strategies that are most relevant (Nastasi, 2014; Tay-Lim & Lim, 2013).

A common explanation for the dearth of self-report measures of coping for younger children is the belief that children under the age of eight may not be capable of producing reliable and valid data via self-report (Frydenberg et al., 2011). In that, unlike older youth and adults, younger children are more limited by their cognitive and social-emotional competencies which may reduce the types of coping strategies they use and subsequently report (Compas, 2009; Frydenberg et al., 2011). However, a growing body

of evidence suggests that children as young as 4 years old can identify and intentionally use coping strategies to combat unwanted stress (Berk, 2006; Chalmers et al., 2011). For example, Chalmers and colleagues (2011) found that four-and-five-year-old children were able to identify over thirty unique coping strategies when using developmentally appropriate methods to elicit responses to stressful situations (e.g., adjusted language, images). Further, Bagdi & Pfister (2006) demonstrated that kindergarten to third grade students were able to reliably report on their experiences of everyday life stress and ways of coping with such stress (when compared to parent-report data). It is also noteworthy that several valid and reliable self-report measures exist to assess other psychological constructs in younger children. Measelle and colleagues' (2018) longitudinal study is one prime example that produced reliable self-report data with 4–7-year-old children using the Berkeley Puppet Interview. Results suggested that young children were capable of reporting on their self-perceptions of their school adjustment within academic, behavioral, and social-emotional domains. Thus, the careful consideration of a young child's developmental level and the contextual factors that influence the types of stressors and their subsequent coping strategies are essential to producing reliable and valid self-report data.

A Framework for Measure Development

A multi-phase, inductive (bottom-up) framework for measure development is critical to ensure that the resulting measure is theoretically-sound, developmentally and contextually appropriate, and valid in capturing the full range of coping strategies used by younger children in response to stressful situations. A substantial body of research

continues to underscore the benefits for using approaches inherent to qualitative research within measurement development, including team-based decision making and elevating the perspectives and voices of the population of interest (Braun & Clarke, 2012; Leff et al., 2010; Nastasi et al., 2014). This approach should not only influence target constructs but also the chosen format of the measure as careful attention must be placed on the language demands, cognitive skills, and social-emotional competencies required to complete a self-report measure. For example, “bottom-up” approaches to measurement are better equipped to address the limitation that existing coping measures used with older youth or adults are likely not sensitive to capturing the coping strategies used during early childhood. As young children are active contributors to their own development, it is also timely and relevant that children are asked directly about their own experiences of stress and how they cope with such stressors (Moreland & Dumas, 2008). Thus, youth experiences should inform the items that are selected for the final measure using methodology (i.e., semi-structured interviews) that lends itself to directly gathering perspectives of younger children.

In addition to the growing evidence for engaging and promoting child voices in research as having considerable benefits, it is equally imperative that study designs are crafted to ensure strong validity and reliability of the resulting measure (Bradbury-Jones & Taylor, 2015; Braun and Clarke, 2012). Lincoln & Guba (1985)’s trustworthiness framework is an exemplar model to assess the quality of qualitative research. The framework includes four key components used to ensure confidence in the study design, data collection methods, and interpretations: credibility (i.e., are the perspectives of

participants adequately reflected by the data?), transferability (i.e., are the findings generalizable to other similar contexts or experiences?), dependability (i.e., are the perspectives or experiences reliable and stable over time?), and confirmability (i.e., are the findings object and free from researcher bias?). A non-exhaustive list of strategies to promote adherence to these guidelines involve triangulation of multiple data sources and perspectives, developing comprehensive coding manuals, recognition of biases when reviewing and coding qualitative data, member checking and consensus building, and an audit trail (Guest et al., 2020; Nastasi et al., 2021). The current study was carefully constructed using this framework and was successfully implemented throughout all phases of the project, including item selection and refinement, coding procedures, and systematically identifying categories of coping used by younger children. Together, this model of measure development has tremendous promise in supporting the creation of a coping inventory that is developmentally and contextually relevant and psychometrically sound.

The Current Study

The overall goal of this study was to develop the K-2 Coping Inventory, a self-report inventory of coping strategies used by kindergarten to second grade students in response to stressful situations or events. The study included four aims. The first aim of the study was to conduct a scoping review of the literature to extract all reported coping strategies used by children under the age of eight. Second, interviews with children were conducted to further inform item selection and validate scoping review findings. Next, findings from the scoping review were systematically integrated with findings from child

interviews to develop a final pool of items for inclusion on the new measure. Finally, a factor structure used to conceptualize coping among kindergarten to second grade children in response to stress was postulated for further evaluation. Given the exploratory nature of this study and in line with inductive (bottom-up) qualitative approaches, a priori hypotheses or factor structures were not proposed. Instead, the factor structure was proposed following the completion of the scoping review and interviews with children.

Method

Scoping Review

The first aim was to conduct a scoping review, which is a systematic process involving a review of the literature, used to document reported coping strategies employed by children under the age of eight in response to stress (Arskey & O'Malley, 2005; Peters et al., 2015). The following recommended guidelines were used to complete the review: identify the research question, locate relevant studies using explicit search criteria, review studies for inclusion, graph and analyze the data, summarize, and report findings (Arskey & O'Malley, 2005). Relevant sources were extracted from six EBSCO Research Databases (Health and Psychosocial Instruments, Mental Measurements Yearbook, PsycARTICLES, Psychology and Behavioral Sciences Collection, PsycINFO, ERIC) in addition to Google Scholar. Reference lists of identified articles were reviewed to identify additional sources. Peer reviewed articles, dissertations, and existing coping inventories published between 2005-2022 were assessed. Inclusion criteria consisted of the follow: the identified source reports the demographics of the study sample (i.e., ages), included at least one child in the sample younger than eight-years-old, explicitly

mentioned coping strategies used by children younger than eight, and access to the full text was available. Figure 1 provides the specific procedures that were used for this review.

Child Interviews

Setting and Participants

The second aim of this study was conducted in partnership with a charter school serving kindergarten through 12th grade students in a moderately-sized southeastern city in the United States. Participants for this study included kindergarten to second grade children ($N = 24$). Children were slightly more likely to be male (58%) than female (42%). The average age of participants was 6 years old. Most children identified as White (75%), followed by Black or African American (17%), and mixed race (8%). Four children received special education or related services in addition to their general education curriculum.

Measures

Demographic Questionnaire. Classroom teachers were asked to report on their participating student's age, perceived race/ethnicity, gender, and special education status.

The Early Years Coping Cards (Frydenberg & Deans, 2011). Children were asked to respond to a subset of situational images depicting developmentally typical stressful situations. The five selected images depicted a child getting hurt on the playground, getting in trouble with a teacher at school, having a nightmare, being left out of a game with peers, and being separated from a caregiver at school. The goal of this

semi-structured interview was to elicit coping behaviors young children use in response to stress.

Procedure

To collect contextually and developmentally relevant data, interviews with twenty-four children using the Early Years Coping Cards (Frydenberg & Deans, 2011) were completed. This aligns with suggested sample sizes needed to reach saturation in responses for qualitative interviews (Clarke & Braun, 2013). All children enrolled in participating kindergarten through second grade classrooms were sent home with a written description of the study and caregiver consent form in their backpacks. The percentage of students who returned a signed caregiver consent across all classrooms was 71%. Children who returned a signed caregiver consent form and met study inclusion were eligible to participate. An equal number of students ($n = 8$) per grade were then randomly selected from the larger pool of consented children to participate in the study. Study inclusion criteria consisted of being fluent in English; no students were excluded from participation. Participating students provided verbal assent to participate in the interview.

Interviews were conducted at one time point at the child's school in a one-to-one format with a school psychology doctoral student. Responses were transcribed in vivo by two trained undergraduate research assistants. The Early Years Coping Cards consist of situational images used to elicit types of strategies children use to respond to stressful situations, with five situations selected for the interview. The specific interview procedure was adapted from Chalmers et al. (2011). After a brief introductory period to

explain the task, children were given a practice item to assess cognitive appraisal and understanding. Then, children were shown one card at a time and asked the following open-ended questions for each: “What do you see in this picture?” “Has this ever happened to you?” If yes, children were asked to point to an emotion card that best represented how they felt (e.g., happy, sad, angry) when it happened to them. Children were then asked, “What would you do to make yourself feel better?” Children were only asked to respond to situations that had happened to them and made them feel a negative emotion.

To ensure that culturally relevant stressors and coping strategies are fully captured for this population, children were also given the opportunity to draw a picture showing a time when they felt scared or sad and how they made themselves feel better. The interview lasted 15-20 minutes and occurred during the child’s elective period (e.g., recess). At the conclusion of the interview, children earned a small prize for their participation. University Institutional Review Board reviewed and approved this study protocol.

Data Analytic Plan

Descriptive coding and thematic analysis approaches were employed across study phases, including development of a coding process, data extraction and triangulation, and identifying patterns of overlap between data sources (Braun & Clarke, 2006; Guest et al., 2020; Nastasi et al., 2021). The trustworthiness framework (Lincoln & Guba, 1985) for qualitative analyses was then utilized to ensure the credibility, transferability, dependability, and confirmability of findings. This approach to qualitative inquiry was

selected as it allowed for a systematic yet flexible method in identifying areas of uniqueness and overlap across multiple data sources to inform item selection for the novel measure. Thematic analysis also allowed for a combination of deductive (i.e., scoping review) and inductive (i.e., youth interviews) codes to inform which items were most relevant and meaningful to include on the K-2 Coping Inventory.

Using the procedures outlined for the scoping review above, the following data were extracted from sources that met inclusion criteria: sample characteristics (i.e., demographic information), title of source, reporter (i.e., youth, caregiver, or teacher), and specific coping strategies reported. The research team defined coping strategies as “any behavior, action, or process used in response to a perceived stressful event” (Compas, 1998). Any strategy that met this definition was extracted to generate a comprehensive list of coping strategies relevant to children under the age of eight. The scoping review was completed by two trained undergraduate psychology research assistants. Inter-rater reliability was completed by an advanced-level doctoral candidate in school psychology for 50% of the identified articles to ensure trustworthiness of findings. Frequency counts for each reported coping strategy extracted from the scoping review were also calculated.

The coding process for the child interviews was co-developed by the research team (school psychology doctoral candidate and undergraduate psychology research assistants), which included operationalized definitions of key terms used to inform data extraction and subsequent coding procedures. This definition of coping used for the scoping review remained consistent in coding coping strategies from child interviews. Based on what the research team learned from the scoping review, the team created

several a priori codes for consolidation of coping strategies that served the same function but were worded slightly differently. For example, it was expected children would likely share variations of “asking someone for help” as a coping strategy used in response to stress. Thus, children who mentioned asking another individual (e.g., parent, relative, teacher, friend) for help were consolidated into one strategy given this expectation. Inherent to the iterative process of qualitative inquiry, these codes were revisited and further refined by the research team throughout the process (Nastasi et al., 2021).

Two members of the research team independently coded the child interviews, with the goal to generate a list of unique coping strategies reported by this sample of children. Frequency counts for each reported coping strategy were calculated. The research team met to review each coder’s list of coping strategies and discuss any disagreements until consensus was reached. Percent agreement across coders was calculated prior to consensus team meetings. The team members selected to code the interview transcripts were not present at the interviews to ensure objectivity and prevent bias (i.e., allowing coping strategies to be generated directly from the data itself and not influenced by the coders’ experiences during the interviews). An audit trail was also used during each of the team meetings that involved refinement and consolidation of coping strategies.

Next, to accomplish aim 3, coping strategies extracted from the scoping review and those from interviews with children were similarly compared using a two-part process, consisting of an independent review and a consensus-building process (see Figure 3) (Borja et al., 2016; Nastasi et al., 2021). The goal was to identify patterns of

overlap in data sources and to create a final pool of coping strategies to be included on the K-2 Coping Inventory. The coding team for this phase consisted of an advanced-level doctoral candidate in school psychology and a trained undergraduate psychology research assistant. Both team members independently read the finalized lists of coping strategies from the scoping review and those from the interview transcripts to systematically develop a consolidated pool of items that appropriately integrated both data sources. Processes used in previous phases of the project were carried forward to remain consistent (e.g., definition of coping, a priori codes for consolidating similarly worded items that are functionally the same).

After each team member created an item pool, the team members met to discuss their findings. In line with best practices, consensus-building meetings were geared toward resolving discrepancies between coders and ensuring that the research team were adequately capturing youth voices (Nastasi et al., 2000). Percent overlap of coping strategies extracted from the scoping review that were the same as those reported in interviews was calculated. Additional (i.e., unique) strategies only reported from one data source were still included on the measure to ensure transferability and generalizability of the measure to a broader population of children under the age of eight. At the conclusion of this process, a final pool items were selected for the K-2 Coping Inventory. Finally, to accomplish aim 4, the research team assessed two existing models within the literature to evaluate conceptual fit for the new measure (Bagdi et al., 1995; Blechan et al., 1995). The two models were selected as both were developed using similar bottom-up methodology with an explicit focus on understanding coping in early childhood. First,

deductive codes were identified based on the two existing models. Codes for the Coping Competence Theory (Blechman et al., 1995) model included “asocial,” “antisocial,” and “prosocial” coping. Whereas codes for the second model (Bagdi et al., 2006) included “cognitive,” “social,” and “emotional” coping. Operationalized definitions for each code and examples of coping strategies that should be included in each category were derived from the literature (Bagdi et al., 2006; Blechman et al., 1995). Coding was completed as a team, which included an advanced-level doctoral candidate in school psychology and an undergraduate psychology research assistant. In that, each item on the K-2 Coping Inventory was discussed and assigned a code from each of the two models. Any disagreements that arose were discussed between the two coders until consensus was reached. While deductive codes were used during this coding process, the research team was open to new patterns of coping emerging that were not explicitly represented by the two existing models. In this event, the protocol allowed for a third model based on inductive codes to be developed and evaluated against the new measure. For the final step, after coding was complete and the research team met to discuss findings, a factor structure for the K-2 Coping Inventory was selected.

Results

Scoping Review

Table 1 provides a summary of findings from the scoping review. A total of 781 sources were identified using the defined search criteria. Of which, 67 sources were identified as duplicates and were removed. An additional 688 sources were excluded after reviewing the abstracts and determining that inclusion criteria were not met (i.e., focus

not on children under the age of eight or full-text not available for review). This resulted in the full-text review of 26 sources that met inclusion criteria. Two additional papers were removed following this review as the authors did not report any specific coping strategies. Thus, 24 sources were available for data extraction and coding. This review generated a list of 28 unique coping strategies reported by children under the age of eight, their caregivers, or teachers. There was considerable overlap in the types of coping strategies reported across sources, with the most commonly reported strategies listed as follows, “playing with someone or something else instead” ($n = 12$), “pretend it didn’t happen” ($n = 12$), “try to fix the problem” ($n = 11$), “ask someone for help” ($n = 11$), “cry” ($n = 11$), “move on to something else instead” ($n = 10$), and “scream or yell” ($n = 10$). Percent interrater reliability for the subset of papers that were reviewed was 95%. Table 2 reports the full list of consolidated coping strategies identified from the scoping review with frequency counts.

Child Interviews

There was considerable variability in the number of strategies each child was able to generate across the five situational images presented (range: 2-8 coping strategies). Extracted coping strategies were coded for overlap, resulting in a list of 19 unique coping strategies reported by this sample of kindergarten to second grade students. The most commonly reported coping strategies that emerged from interviews included: “did something else I like to do (e.g., played with toys/friends)” ($n = 23$), “got help from a parent/teacher/friend” ($n = 20$), “got myself a band-aid” ($n = 8$), and “hugged my parent/teacher/friend” ($n = 7$). See Table 3 for the full list of consolidated coping

strategies identified from interviews with frequency counts. Frequency counts indicate the number of children who reported the identified strategy in response to any of the five situational images presented. Prior to consensus-building meetings used to create the final list of consolidated items, percent agreement across the two independent coders for child interviews was 92%. Interrater agreement was 100% following consensus-building meetings.

Creation of the K-2 Coping Inventory

A final pool of 23 coping strategies were included on the novel measure. Of which, 13 coping strategies (57%) were mutually reported in the existing literature and from interviews with children, whereas 10 coping strategies (43%) were reported by only one data source. All 23 coping strategies were included to ensure generalizability and transferability of the measure. Deductive codes were mapped onto each item based on conceptual fit with the two available models of coping within the existing literature (i.e., Bagdi et al., 2006; Blechman et al., 1995). Inductive codes for this process were not used as one of the two models appeared to conceptually fit the measure. The research team agreed, based on ease in mapping codes to specific items and clinical expertise, that the “asocial,” “antisocial,” and “prosocial” framework appeared better suited for the K-2 Coping Inventory (Coping Competence Theory; Blechman et al., 1995). The asocial subscale consisted of five items, the antisocial subscale consisted of six items, and the prosocial subscale consisted of twelve items. The model proposed by Bagdi and colleagues (2006) was also promising; however, the research team identified two critical challenges during coding. First, that items were more likely to be captured by two codes

as opposed to having a singular code. Additionally, use of this model would potentially require more time and effort to score for interpretation (i.e., need for reverse coding before generating subscale scores). It is important to note that while promising, the proposed factor structure must be rigorously evaluated and tested to determine adequate fit before any conclusions may be drawn.

Scoring

The K-2 Coping Inventory requires children to self-report how often they use each coping strategy on a three-point Likert scale. “Never” is scored as “0,” “A little bit” is scored as “1” and “a lot” is scored as “2.” Assuming that the proposed factor structure and all items are retained following further evaluation, scores for each of the three subscales (Prosocial, Antisocial, and Asocial) are obtained through mean calculation of subscale items. No items require reverse scoring. This method is preferred over sum scores as it better accounts for missing data as well as variability in the number of items included on each subscale (McNeish & Wolf, 2020). Higher subscale scores are intended to reflect the “type” of preferred coping used by the child during stressful situations. Interpretations should be used at the individual-level to qualitatively understand (as one data source) coping behaviors in kindergarten to second grade students. Subscale scores should not be used to make causal conclusions or used comparatively across individuals or groups of children. The psychometric properties of the measure were not evaluated, so norms to make such interpretations are not yet available.

Discussion

Research addressing the exploration, conceptualization, and measurement of coping has continued to swell over the past decade, with a particular focus towards understanding coping among youth in differing contexts (e.g., Gaylord et al., 2008; Swift et al., 2020). Even so, it is regrettably apparent that existing theoretical models and tools used to assess coping are geared toward older youth and teens (Yeo et al., 2014). The exploration of coping in children under the age of eight is quite limited, with only a handful of peer-reviewed studies extending to this age group. Many of which are limited by their deductive (bottom-down) approaches in trying to adapt frameworks and measures designed for older youth and adult to younger children, without adequately considering developmental competencies (e.g., social-emotional and problem-solving skills of younger children) (Bagdi et al., 2006; Skinner et al., 2003). The current study sought to address this noteworthy gap within the stress and coping literature by specifically and intentionally focusing on understanding coping among younger children using a multi-phase and systematic process. As a result, the study produced the K-2 Coping Inventory, the first quantitative self-report measure of coping for use with kindergarten to second grade students and provided further support for an existing theoretical model of coping for use with younger children.

The item selection process for the new measure began with a scoping review of the existing, yet limited, literature on coping in younger children. The review was valuable to informing potential items (i.e., coping strategies) for inclusion on the K-2 Coping Inventory and in identifying two existing theoretical models of coping for further evaluation that were developed intentionally for younger children rather than adapted

from existing adult models of coping (Bagdi et al., 2006; Blechman et al., 1995). While promising, the existing literature on coping among younger children in relation to the extensive literature focused on older youth and adults was striking. To ensure that coping strategies extracted from the review were comprehensive and generalizable to the broader population of children under the age of eight, semi-structured interviews were completed with kindergarten to second grade students. Children were asked to respond to a series of five situational images that depicted developmentally appropriate stressors, such as getting in trouble by the teacher or having a nightmare. It was encouraging to find significant overlap with the reported strategies from the scoping review with those provided in interviews with youth, adding stronger construct validity for the pool of items included on the K-2 Coping Inventory. Interestingly, two strategies that stemmed from child interviews that were not found in the scoping review were “taking a deep breath” and “hugging a parent/teacher/friend.” Deep breathing is a commonly taught and utilized coping strategy as part of social-emotional learning curriculum and in therapeutic settings (Meyer, 2016). One explanation as to why younger children may not have reported the strategy in prior studies is that this coping strategy is not an innate stress response (i.e., hiding, crying, seeking adult support), but must be taught, modeled, and practiced. Younger children, compared to older youth and adults, may require additional support before relying on this coping strategy and may not report it as often. Additionally, children living in communities with fewer resources may not have access to an effective social-emotional learning curriculum to learn this type of coping strategy.

Data from the scoping review and youth interviews were then examined and synthesized using best practices to qualitative inquiry, such as descriptive coding and thematic analyses (Borja et al., 2016; Braun & Clarke, 2006; Nastasi et al., 2021). The rigor of the methodology used to create the K-2 Coping Inventory was evaluated alongside the trustworthiness framework, which included defining key terms and development of a codebook and coding process (credibility, dependability, transferability), triangulation of multiple data sources (confirmability, transferability), member checks and consensus-building meetings (credibility, dependability, confirmability), and use of an audit trail (dependability) (Guest et al., 2020; Lincoln & Guba, 1985; Nastasi et al., 2021). This inquiry resulted in a 23-item self-report measure of coping that consists of three proposed subscales (prosocial coping, antisocial coping, and asocial coping), in line with the theoretical model inherent to Coping Competence Theory (Blechman et al., 1995). The prosocial coping subscale is comprised of 12 items focused on positive social interactions (e.g., “ask someone for help”), adaptive problem-solving approaches (e.g., “try to fix the problem myself,”) or positive self-regulating strategies (e.g., “take deep breaths”). The antisocial coping subscale consists of six items capturing internal (e.g., “cry”) and external (e.g., “hurt someone on purpose”) emotional reactions in response to stress. Finally, the asocial coping subscale includes five items that center on avoidance-type coping strategies, such as “run away or hide.” To further ensure generalizability of the measure to children under the age of eight in different contexts, a “write-in” item was included to allow children to identify additional coping strategies used that were not included as one of the 23 strategies listed.

In sum, while numerous inventories exist for older youth and adults, there is a dearth of theoretically sound and psychometrically valid self-report tools for use with younger children, especially children under the age of eight (Skinner et al., 2003). Those that exist were either initially developed and evaluated for use with older youth and adults or only exist as parent or teacher report (Ayers et al., 1996; Deans et al., 2010). The current study intentionally focused on younger children and sought to elevate their voices by asking younger children to report on their own experiences of stress and subsequent coping strategies. The K-2 Coping Inventory was developed using best practices to measure development and qualitative research, with systematic processes used to promote validity and reliability of the resulting measure (Nastasi et al., 2021). Thus, while not yet psychometrically evaluated, the K-2 Coping Inventory has tremendous *potential* as an efficient and reliable tool used to identify coping strategies among kindergarten to second grade students.

Implications for Universal Screening and SEL Curriculum

The mental health epidemic continues to rage through existing systems and organizations tasked with supporting the social, emotional, and behavioral development and wellbeing of children and teens (Dineen et al., 2022; Knowles et al., 2022). Existing systems, including schools, have long been under-equipped with the resources needed to adequately screen students who may be at-risk for social-emotional or behavioral concerns. Current estimates suggest that less than half of all public schools are proactively screening to identify children who are at an increased risk for social, emotional, or behavioral challenges (Dineen et al., 2022). While universal screening

tends to happen routinely to assess for academic needs; schools tend to limit screening students for social-emotional or behavioral concerns only after a referral is placed by teachers or school staff. Bruhn and colleagues (2014) suggest that most schools are not screening for emotional or behavioral concerns due of lack of awareness that screeners exist, insufficient financial resources to conduct universal screening, and lack of access to screening tools. The inconsistency in universal screening is problematic more now than ever, especially for younger children. Many of whom spent their first formal schooling experiences behind computer screens, masked, and separated from their peers because of the COVID-19 pandemic. These policies, while necessary to support the physical health and safety of the global population, are shaping up to have detrimental impacts on the social-emotional and behavioral development of younger children as more children are being identified as needing support (Dillmann et al., 2022). It is strikingly clear that district and school leaders must prioritize universal screening and prevention measures (i.e., targeted social-emotional learning curriculum) in response to mounting needs of younger children.

The early schooling years are critical for both academic learning and developing social-emotional competence. During kindergarten through second grade, children begin to learn foundational academic skills, establish routines and rituals, understand social expectations, and become increasingly independent from their caregivers at home. Children are also working to develop friendships and navigate social interactions within a structured setting (Barton et al., 2014). Children typically begin to develop competencies organically in the socially rich school environment and through explicit instruction

provided by teachers implementing Social-Emotional Learning (SEL) curriculum in the classroom. At its core, SEL curriculum is geared toward teaching children specific social-emotional and behavioral regulation strategies. There are numerous evidence-based SEL programs available for schools and districts to implement (e.g., Serna et al., 2007; Walker et al., 1997; Webster-Stratton, 2006). A common component inherent to SEL programming is teaching children proactive coping strategies to mitigate potential negative responses, such as oppositional or aggressive behaviors (Barton et al., 2014). These skills are imperative to student academic success in the classroom and are predictive of a range of outcomes well into adulthood (Christakes & Fowler, 2011). Best practices for SEL curriculum suggest that programs include universal screening practices for all students to identify students who may need more targeted and individualized support in building social-emotional competence as well as to inform the implementation of programming in the classroom (Barton et al., 2014).

The K-2 Coping Inventory is a promising measure that is intended to quickly assess the types of coping strategies younger children use in response to stress, which is a core goal of SEL curriculum (Barton et al., 2014; Webster-Stratton, 2006). While it is important to note that the validity and reliability of the K-2 Coping Inventory as a universal screening tool was not yet assessed, the brief and efficient design and scoring process lends itself well for use in schools as such. The overall goal of the measure, following rigorous psychometric evaluation, is for schools to embed the measure as part of their universal SEL programming. The measure can begin to inform SEL curriculum by building upon the effective strategies children are already identifying and using to

combat unwanted stress. Further, schools will be able to screen and identify children who are predominately using maladaptive strategies to cope with stress as a precursor for additional screening. Again, while conclusions cannot be ascertained using the measure, the K-2 Coping Inventory may be paired with existing validated social-emotional and behavioral screening tools. For example, children who report higher scores on antisocial or asocial subscales should be screened to identify symptoms of depression, anxiety, or oppositional behavior on a validated measure (e.g., Strengths and Difficulties Questionnaire (SDQ): Goodman, 2001).

Limitations and Future Directions

While there are several noteworthy strengths, including the rigor of the methods used and intentional elevation of youth voices to inform the development of the first self-report measure of coping for younger children, the study is not without limitations. First, the use of a scoping review allowed for an efficient method for screening the available literature to extract reporting coping strategies and theoretical models of coping for the target population. The goals of scoping reviews are to screen a particular literature of interest, clarify working definitions and concepts, and identify potential gaps (Grant & Booth, 2009; Peters et al., 2021). Unlike meta-analyses or systematic literature reviews, the broader, less stringent approach may have resulted in a small number of sources not identified during the review process (Grant & Booth, 2009). It is reassuring that findings from semi-structures interviews with children were largely consistent with those extracted from the literature; however, future research should continue to identify coping

strategies used by younger children with similar backgrounds as well as children from different backgrounds and in varying contexts.

Relatedly, the sample of children who participated in the interviews was predominately White, which closely reflected the sample demographics of studies extracted during the scoping review. Minoritized youth are likely to face more adverse and chronic experiences of stress and may report using different coping strategies in response (Cory et al., 2020; Loomis, 2020). This is problematic as acute or situation-specific stress can have short-term negative effects on functioning while chronic stress exposure without effective coping strategies may result in poorer and longer-lasting negative impacts (Bono et al., 2016). Past research supports the theory that the utilization and effectiveness of coping strategies is contextually-dependent and influenced by unique experiences of stress, including biological and environmental factors, family relationships, and developmental competencies (Garcia-Coll et al., 1996). The current study is a starting point in a long road toward identifying culturally and contextually relevant coping strategies used by younger children, particularly those from racially and ethnically diverse backgrounds. Future work in this area is critical as it may provide further insight into how certain coping strategies may mitigate the pathway between stress and negative outcomes for this population (Bono et al., 2016; Cory et al., 2020).

Finally, though the methods used to develop the K-2 Coping Inventory were robust and adhered to a strict framework to evaluate qualitative inquiry (i.e., trustworthiness framework; Lincoln & Guba, 1985), the inventory and proposed theoretical model of coping were not psychometrically evaluated. In the current form, the

K-2 Coping Inventory may be used to identify coping strategies in response to everyday stress at the individual-level, but comparisons between children should not be made and subscale scores should not be used to determine outcomes. Thus, future studies should quantitatively and rigorously evaluate the validity and reliability of the K-2 Coping Inventory in a larger, more ethnically and racially diverse sample of kindergarten to second grade children. The proposed model should be tested with Confirmatory Factor Analysis and evaluated using recommended benchmarks for goodness-of-fit (Hu & Bentler, 1999). Prior to this evaluation, it would be prudent to complete cognitive interviews with a small sub-sample of children to ensure understanding of instructions and specific items.

Conclusions

As the stress and coping and measurement literature continue to gravitate toward exploring and assessing the needs of younger children, the current study sought to fill a much-needed gap by developing the first self-report measure of coping for kindergarten to second grade children. The K-2 Coping Inventory was developed using best-practices inherent to qualitative inquiry, including interviews with young children, with the goal of capturing the types of coping strategies employed by younger children and to propose a developmentally appropriate model of coping for this age group. Yet, much work remains for researchers, school leaders, teachers, and measure developers in fully understanding the unique impacts of stress and how young children cope in response. It is remarkably apparent that the social, emotional, and behavioral needs of younger children must be a priority for all of us, especially during this cascading mental health epidemic.

Table 1

Summary of Scoping Review Findings

| Author(s) | Title | Reporter(s) – youth, caregiver, teacher | Specific Strategies included |
|-----------------------|---|---|--|
| Bagdi et al., 2006 | Childhood Stressors and Coping Actions: A Comparison of Children and Parents' Perspectives | Youth, Caregivers | <ul style="list-style-type: none"> • Thinking about what can be done to change situation • Reminisce on good memories • Hope • Go play outside • Go get food • Ask aggressor about intentions • Tell aggressor how they feel • Tell parent/teacher Crying • Seek comfort from object • Seek comfort from adult • Praying • Ignoring situation • Hiding somewhere • Screaming • Express anger • Express aggression to others • Stomp feet • Run to room after yelling • Tease another person Do same thing aggressor did to them Complain • Laugh at self |
| Chalmers et al., 2011 | An Exploration into the Coping Strategies of Preschoolers: Implications for Professional Practice | Youth | <ul style="list-style-type: none"> • Play/do something else • Solve problem • Think positive • Calm down • Ignore problem • Seek help from others (parent or teacher) • Do nothing/don't know • Cry/can't feel better • Get angry |

| | | | |
|-------------------------|---|----------------------|---|
| | | | <ul style="list-style-type: none"> • Seek comfort (from person or object/toy) |
| Compas et al., 2014 | Children and adolescents coping with cancer: Self- and parent reports of coping and anxiety/depression | Youth and Caregivers | <ul style="list-style-type: none"> • Problem solving • Emotional expression • Emotional modulation • Cognitive reappraisal • Positive thinking • Acceptance • Distraction • Avoidance • Denial • Wishful thinking |
| Coplan et al., 2007 | Gender differences in the behavioral associates of loneliness and social dissatisfaction in kindergarten | Caregiver | <ul style="list-style-type: none"> • Cries to release his/her own pent-up or frustrated feelings • Hits or yells at the children who are making fun of him/her so they will stop |
| Eisenberg et al., 2019 | Relations of Inhibition and Emotion-Related Parenting to Young Children's Prosocial and Vicariously Induced Distress Behavior | Youth and Caregivers | <ul style="list-style-type: none"> • Direct problem-solving • Talk to adult/parent |
| Frydenberg et al., 2017 | Parents and Children's Coping: Building Resilience and Wellbeing in the Early Years | Caregivers | <ul style="list-style-type: none"> • Physical recreation • Working hard (keeping up with required work despite problem) • Protecting self (image) • Focusing on solving problem • Humoring self • Improving relationships • Seeking relaxing diversions • Not coping • Tension reduction • Wishful thinking • Self-blame • Keeping to self • Ignoring problem • Worrying • Seeking spiritual support • Focusing on positive |

| | | | |
|-----------------------|---|-----------------------------|---|
| | | | <ul style="list-style-type: none"> • Wishful thinking • Seeking relaxing diversions • Seeking social support • Social action • Seeking professional help (teacher/counselor) • Keeping feelings to self |
| Gerstein et al., 2011 | Developmental risk and young children's regulatory strategies: Predicting behavior problems at age five | Youth | <ul style="list-style-type: none"> • Acting to achieve task goal • Using systematic approach to reach end goal • Focus on the frustration object • Actively engaging with substitute toy/activity • Whining • Tantrum/outburst • Crying • Screaming • Throwing objects • Lashing out at persons/objects • Gaze aversion • Escape from situation • Sighing • Thumb-sucking • Rocking • Self-talk |
| Goodwin et al., 2006 | The Role of Child Emotional Responsiveness and Maternal Negative Emotion Expression in Children's Coping Strategy Use | Youth, Caregivers, Teachers | <ul style="list-style-type: none"> • Stay away from problem/situation • Ask adult for help • Yelling • Calling someone a name |
| Halpern, 2004 | The relations of coping and family environment to preschoolers' problem behavior | Youth, Caregivers | <ul style="list-style-type: none"> • Alter the problem • Defend possessions • Negotiation • Request adult assistance • Hiding • Verbal or physical aggression • Play with toys • Get food (instead) |

| | | | |
|-----------------------|--|-----------------------------|---|
| | | | <ul style="list-style-type: none"> • Suggest there is no problem • Do nothing • Cry • Expressing feelings • Shrugging shoulders |
| Hampel, 2007 | Brief Report: Coping Among Austrian Children and Adolescents | Youth | <ul style="list-style-type: none"> • Resignation • Self-criticism • Rumination • Aggression • Avoidance/passive avoidance • Distraction • Seeking social support • Relaxation • Emotional ventilation • Minimization of problem • Situational control • Give positive self-instruction |
| Harrison et al., 2014 | Stress, Coping, and Wellbeing in Kindergarten: Children's Perspectives on Personal, Interpersonal and Institutional Challenges of School | Youth, Caregivers, Teachers | <ul style="list-style-type: none"> • Direct problem solving • Seeking support of teacher, adult, peer, sibling • Do not take initiative to deal with situation • No activity to help situation improve • Focus on negative emotions • Focus on negative outcomes • Be happy with the way things are • Go play • Cry at school • Play somewhere else instead • Be overwhelmed (get sick) • Doing something themselves • Relinquish control • Refer to features of classroom/school routine • Referred to teacher's expectations of behavior • Not coping |

| | | | |
|-----------------------|--|----------------------|---|
| Kiernan et al., 2017 | The Relationship Between Parent-Reported Coping, Stress, and Mental Health in a Preschool Population | Caregivers | <ul style="list-style-type: none"> • Playing • Chatting to friends • Trying to help others • Hoping • Asking teacher/adult for help • Crying • Screaming • Fighting • Getting angry with others • Staying away from others • Blaming self • Worrying • Getting mad with self • Keeping feelings to self • Doing nothing • Give up |
| Lessing et al., 2019 | Developmental conditions of accommodative coping in childhood: The role of executive functions | Youth, Caregivers | <ul style="list-style-type: none"> • Cognitive reappraisal • Readjusting one's aspirations • Goal-disengagement • Change strategy • Intensify efforts • Generate relieving interpretations • Identify positive aspects in adverse experiences • Reframing |
| McCabe et al., 2011 | Empirically valid strategies to improve social and emotional competence of preschool children | Caregivers | <ul style="list-style-type: none"> • Sensorimotor organization • Reactive behavior • Self-initiated behavior |
| Mishara et al., 2006 | Effectiveness of a Mental Health Promotion Program to Improve Coping Skills in Young Children: Zippy's Friends | Youth | <ul style="list-style-type: none"> • Talk to a friend, parent, teacher, or someone else • Hit someone • Get mad |
| Moreland et al., 2008 | Evaluating Child Coping Competence: Theory and Measurement | Caregivers, Teachers | <ul style="list-style-type: none"> • Using own resources to resolve problem • Asking more knowledgeable person for help |

| | | | |
|--------------------------|--|-----------------------------|---|
| | | | <ul style="list-style-type: none"> • Acting aggressively • Deny responsibility • Withdraw from situation • Withdraw from others |
| Pang et al., 2018 | Improving Coping Skills and Promoting Social and Emotional Competence in Pre-Schoolers: A Pilot Study on COPE-R Program | Youth, Caregivers, Teachers | <ul style="list-style-type: none"> • Crying • Screaming • Giving up • Trying to help others |
| Pfefferbaum et al., 2016 | Review of Coping in Children Exposed to Mass Trauma: Measurement Tools, Coping Styles, and Clinical Implications | Youth | <ul style="list-style-type: none"> • Seeking information • Attempting to change situation somehow • Expressing emotions • Seeking support • Avoiding anything related to event • Problem solving • Seeking support • Withdrawal • Denial • Changing events (increasing sense of personal control) • Regulating own emotions (increasing sense of control) • Acceptance • Cognitive restructuring |
| Pfefferbaum et al., 2013 | Research Methods in Child Disaster Studies: A Review of Studies Generated by the September 11, 2001, Terrorist Attacks; the 2004 Indian Ocean Tsunami; and Hurricane Katrina | Youth | <ul style="list-style-type: none"> • Distraction • Social withdrawal • Cognitive restructuring • Self-criticism • Blaming others • Problem solving • Emotional regulation • Wishful thinking • Social support • Resignation |
| Ratcliff et al., 2021 | Longitudinal changes in young children's strategy use for emotion regulation | Youth | <ul style="list-style-type: none"> • Gaze aversion • Self-soothing • Thumb sucking • Bids for adult attention |

| | | | |
|--------------------------|--|-----------------|---|
| | | | <ul style="list-style-type: none"> • Verbally seeking attention/support • Redirecting attention |
| Veijalainen et al., 2019 | Children's Self-Regulation and Coping Strategies in a Frustrated Context in Early Education | Youth | <ul style="list-style-type: none"> • Try again • I just keep going • I will try it again but differently • I will ask an adult to help me • Doing something else • Going to play • Doing nothing • Crying • Getting angry • Yelling |
| Vikan et al., 2013 | Young Brazilian and Norwegian Children's Concepts of Strategies and Goals for Emotion Regulation | Youth | <ul style="list-style-type: none"> • Talk to adult for comfort • Seek revenge • Being near others • Play (dolls, sports, etc.) • Play with someone • Engage in other activities • Think about something else • Forget it • Fantasize about something else • Watch film/video • Listen to music • Change stimulus that caused emotion • Ask for forgiveness • Ask aggressor to stop • Retreating/hiding • Running away • Stop having the emotion • Be glad instead • Stop showing/expressing emotion • Stay calm |
| Wu et al., 2020 | Early childhood social-emotional learning based on the Cope-Resilience program: Impact of teacher experience | Youth, Teachers | <ul style="list-style-type: none"> • Cry • Screaming • Get a teacher/grown-up to help |

| | | | |
|---------------------|---|------------|--|
| Yeo et al., 2014 | Coping with Stress Among Preschool Children and Associations with Anxiety Level and Controllability of Situations | Caregivers | <ul style="list-style-type: none">• Be happy with the way things are• Hoping• Play and forget about problem• Chat to friends• Notice what others are doing• Trying to help others• Get teacher or grown-up to help• Worrying• Crying• Screaming• Keeping away from others• Getting mad with self• Blaming self• Doing nothing• Giving up• Keeping feelings to self• Do not let others know how they feel |
|---------------------|---|------------|--|

Table 2

Frequency of Reported Coping Strategies from Scoping Review

| Strategy Reported | Frequency |
|---|-----------|
| Play with someone or something else instead | 12 |
| Pretend it didn't happen | 12 |
| Try to fix the problem | 11 |
| Ask someone for help | 11 |
| Cry | 11 |
| Move on to something else instead | 10 |
| Scream or yell | 10 |
| Take it out on other children or adults | 7 |
| Changing my thoughts about it | 7 |
| Blame myself for what happened | 6 |
| Think happy thoughts | 6 |
| Keep to myself | 5 |
| Do nothing about it | 5 |
| Hide or run away from it | 5 |
| Try to calm down | 5 |
| Get angry | 5 |
| Talk to other people about it | 4 |
| Hurt someone else on purpose | 4 |
| Worry about what will happen | 4 |
| Hope that it just gets better | 3 |
| Just keep going | 3 |
| Try to protect myself | 2 |
| Get something to eat or drink | 2 |
| Try to make myself laugh | 2 |
| Pray | 2 |
| Complain about it | 1 |
| Get sick | 1 |
| Listen to music | 1 |

Note. Frequency count represents the number of extracted articles that reported related coping strategy.

Table 3

Frequency of Reported Coping Strategies from Child Interviews

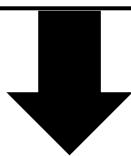
| Strategy Reported | Frequency |
|--|-----------|
| Did something else like to do (e.g., played with toys/friends) | 23 |
| Help from parent/teacher/friend | 20 |
| Got self band-aid | 8 |
| Hugged parent/teacher/friend | 7 |
| Cried | 6 |
| Did nothing | 6 |
| Take deep breaths | 5 |
| Got back up and kept going | 5 |
| Tried to fix the problem | 5 |
| Ran away | 4 |
| Thought happy thoughts | 4 |
| Avoid it | 4 |
| Put on headphones | 3 |
| Sat alone/hide | 3 |
| Tell myself it will be okay | 2 |
| Ate popsicle | 2 |
| Go to safe space | 2 |
| Laughed | 1 |
| Pulled hair over face | 1 |

Note. Frequency counts indicate the number of children who reported the identified strategy in response to any of the situational image cards (Max = 24).

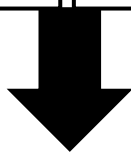
Figure 1

*Scoping Review Procedures***Step 1: Identify the Research Question**

- 1.) What are common coping strategies reported by young children in response to stress?

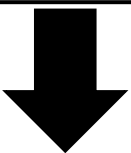
**Step 2: Locate sources using explicit search criteria (2005-2022)**

| <u>DATA SOURCES</u> | <u>SEARCH TERMS</u> |
|--|---|
| Peer-reviewed publications Dissertations Existing measures and tools | “Early Childhood Coping” “Coping Measures” “Measurement of Coping” “Early Childhood Coping Strategies” |

**Step 3: Assess for Inclusion Criteria**

Data sources will be included if:

- (a) Report demographics of sample (age, sex, race/ethnicity)
- (b) Sample includes early childhood populations (2nd grade and younger)
- (c) Identifies coping strategies used in response to stress

**Steps 4/5: Extract Data, Synthesize, and Summarize**

Extracted data from sources will be recorded in Excel spreadsheet:

- (e) Sample size
- (f) Demographics (e.g., mean age, sex, race/ethnicity)
- (g) Source Type
- (h) List of coping strategies

Figure 2

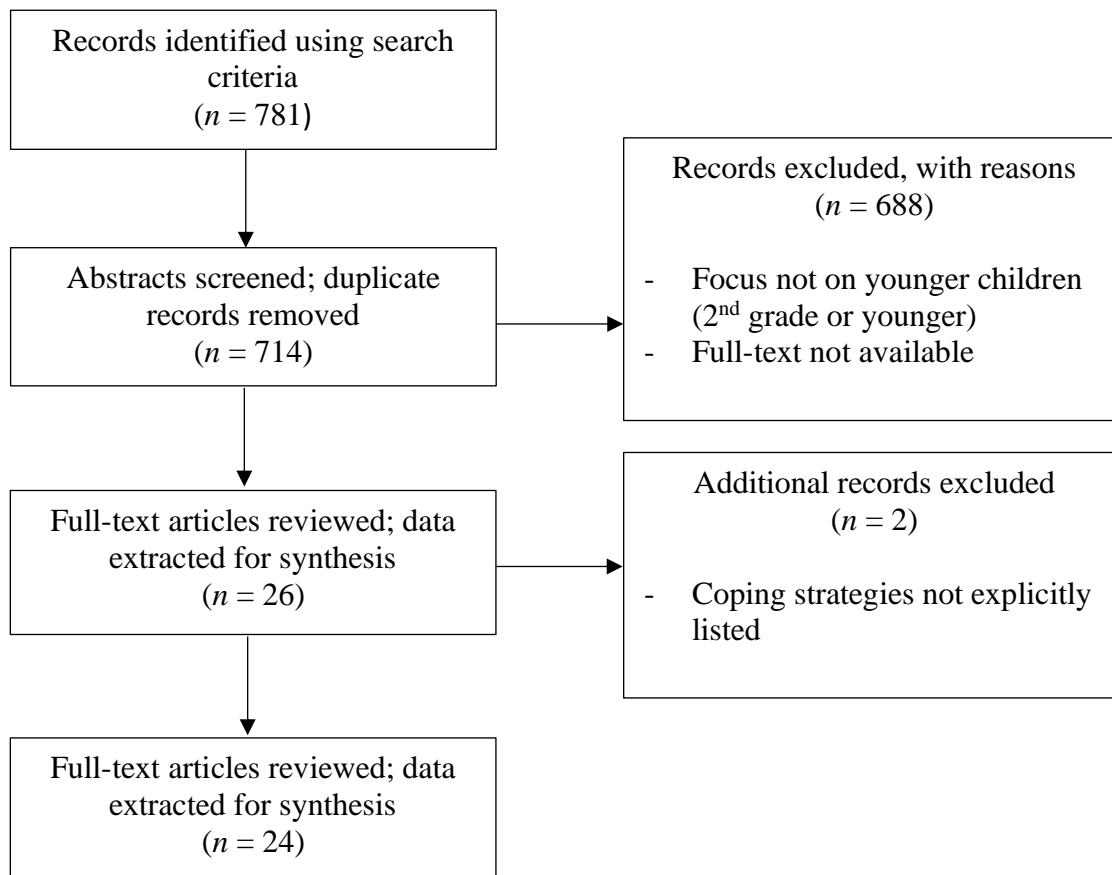
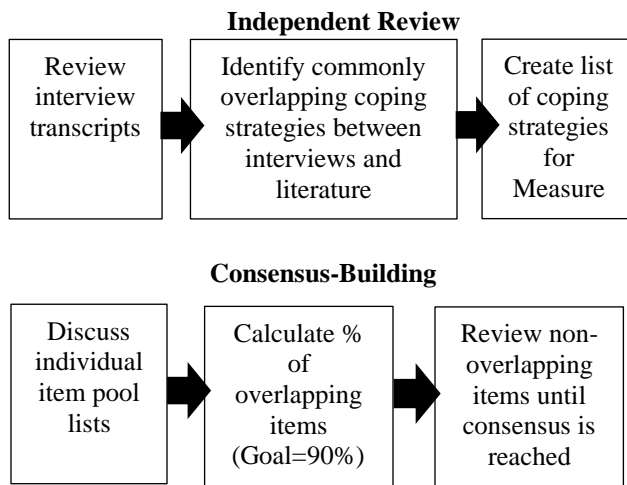
Scoping Review Consort Diagram

Figure 3

Item Pool Selection Process

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doi:10.1111/ajpy.12047

Biography

Andrew Orapallo was born in Philadelphia, Pennsylvania. He graduated from Holy Family University in 2016 with a Bachelor of Arts in Psychology, with a minor in Childhood Studies. Following this, Mr. Orapallo spent two years working as a Clinical Research Coordinator at Children’s Hospital of Philadelphia focused on the implementation of evidence-based mental health programs in schools. In 2018, Mr. Orapallo moved to New Orleans, Louisiana, in pursuit of a Ph.D. in School Psychology at Tulane University. He earned his Master of Science in Psychology in 2020. His thesis was entitled, “Examining the Effectiveness of the ARC Training Framework in the Head Start Trauma Smart Program: Preschool Staff Satisfaction, Knowledge, and Attitudes.” Mr. Orapallo completed his predoctoral internship in Integrated Behavioral Health at Children’s Hospital of Philadelphia, where he was also a Leadership Education in Neurodevelopmental Disabilities (LEND) fellow. He will graduate with his PhD in School Psychology in 2023