Effectiveness of "Fun FRIENDS" Program in Promoting Social Emotional Competence Among Pakistani School Children

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Candidate of **Doctor of of Philosophy** at the National University of Modern Languages do hereby declare that the thesis "**Effectiveness of "Fun FRIENDS" Program in Promoting Social Emotional Competence Among Pakistani School Children"** submitted by me in partial fulfillment of PhD degree, is my original work, and has not been submitted or published earlier. I also solemnly declare that it shall not, in future, be submitted by me for obtaining any other degree from this or any other university or institution.

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Abstract

Social emotional competence (SEC) refers to the broad range of social, emotional, and behavioral competencies in children. Previous research evidenced that the development of SEC at an early age can improve children's overall wellbeing and reduce behavioral problems (social isolation, aggression, conduct, anxiety, academic and substance abuse problems). Globally, social emotional learning programs have become a fundamental component of education in schools. However, in Pakistan, despite the alarming reports of mental health problems in children and recommendations from experts and policy makers, there is limited support for such school-based interventions. The present study examines the effectiveness of a cognitive behavioral intervention program (Fun FRIENDS) in promoting SEC of Pakistani school children aged 4-8. Fun FRIENDS program has established its efficacy both as a prevention and intervention program for children in different Western cultures and has demonstrated short and long-term effects on better SEC. The present research consists of three studies. Study I is designed for translation and adaptation of outcome measures and pilot testing of these assessment tools. A sample of 78 school children participated in the study. The results indicate moderate to good reliability of all outcome measures for Pakistani children. Study II is designed to examine the estimates of behavioral problems in school children. The sample comprised of 473 school children from Islamabad, Pakistan (Mean age = 6.34, SD=.87) from three different grades kindergarten, 1, and 2, respectively. Results showed that 65% children from 4-6 years and 36.2% children from 6-8 years have borderline and clinical levels of internalizing and externalizing behavioral problems respectively. Girls were found to have more externalizing problems, whereas boys

had more internalizing problems. SEC were negatively associated with both internalizing and externalizing problems. Study III assessed the effectiveness of Fun FRIENDS program in promoting SEC and reducing behavioral problems in Pakistani school children. Randomized control trial (RCT) with pre and post assessment was conducted with 473 children (4-8 years) enrolled in 15 classes of three grades i.e., kindergarten, one and two respectively from four public schools of Islamabad, Pakistan. Seven classrooms (n=244) were randomly allocated to Fun FRIENDS intervention condition and eight classrooms (n=229) to the control condition. Intervention took place during the first term of the academic year (August-October). Pre and post assessments were collected from the children and teachers. Considering the nested data, the study used MANCOVAs, repeated measure MANOVAs, and multilevel models to examine the effects of an intervention on baseline measures. Findings showed significant positive effect of intervention on SEC and behavioral inhibition. Children who received Fun FRIENDS intervention showed improved emotional knowledge and social emotional competencies. However, the intervention was not found effective in reducing behavioral problems of Pakistani school children. The study's findings offer preliminary evidence supporting the evidence of Fun FRIENDS program for Pakistani children. Despite limitations, this study provides promising results and suggestions for further scaled up studies with diverse population and protocols across the country. Discussion and implications are suggested for school-based interventions aimed at promoting SEC within cultural context.

Chapter I

Introduction

Children are the future of this world and various societies invest their maximum resources and potential in bringing up a nation of individuals who are socially, cognitively, and emotionally competent. To thrive in this advanced and competitive age of the world, their physical and mental health must be preserved. Children's mental health development involves identifying current or potential skills gaps and developing programs to fill them. Over the last three decades, the field of developmental psychopathology has advanced significantly. Cicchetti and Toth (2009) defined developmental psychopathology as "*a scientific field whose primary objective is to explain the interaction between normal and abnormal biological, psychological and social development throughout the lifespan*" (Inam et al., 2015). A systematic paradigm has been focusing on exploring human development and adaptation through basic research and empirical approaches to promote positive development and implementing prevention and early intervention strategies (Cicchetti & Toth, 2009; Collins et al., 2011).

Nonetheless, there is a general lack of information on the burden of mental diseases, barriers to obtaining mental health care, policy-making, financial resources, and infrastructure for mental health services in low- and middle-income countries (LMICs) (Baxter et al., 2013; Rathod et al., 2017). Pakistan is a developing country and evidence on epidemiological studies on children's mental health is at the evolving stage. A few researchers have reported estimates of children's mental health for different age groups in recent decades in Pakistan (Inam & Zaman, 2015; Malik et al., 2019; Syed et al., 2007).

A child's social, emotional, and academic growth depends on his or her ability to interact positively with others, to better regulate emotions, to feel competent and optimistic about one's own abilities, and to resist from engaging in negative behaviors (Jones & Doolittle, 2017; McClelland et al., 2017; McCoy et al., 2019). Nevertheless, third of preschoolers from low socioeconomic backgrounds (such as LMICs) have low levels of social and emotional competencies (McCoy et al., 2016). Considerable research demonstrated the need of evidence-based school programs and their effectiveness in fostering social and emotional skills in children across different countries (Arcoverde et al., 2020; Gallegos-Guajardo et al., 2020). Although, cross cultural dissemination of school based programs is growing which are showing promising results (Cramer & Castro-Olivo, 2016; Werner-Seidler et al., 2021), limited empirical work has been done to evaluate intervention programs focusing on the development of social and emotional skills in Pakistan. Researchers, however, have highlighted the alarmingly prevalence estimates of the presence of mental health problems in both school children and adolescents (Inam & Zaman, 2014; Malik et al., 2019).

Mental health issues that begin in childhood may persist into adulthood, causing further hardship for the affected person, their loved ones such as family and friends, and the healthcare system as a whole (Tillmann et al., 2018). According to existing literature, children who have externalizing and/or internalizing behavioral issues in early age have the higher risk of mental illnesses in the future (Egger & Angold, 2006; Newman et al., 1998). Therefore, it is crucial to begin early identifications and interventions for these children so that may play a significant role in restoring their healthy growth and development. In recent

literature, epidemiological studies highlighted the pressing need of implementing programs focusing on social and emotional skills development among school children (Inam & Zaman, 2014; Malik et al., 2019). In Pakistan, targeted and culturally adapted intervention programs for emotional development and reducing aggressive tendencies have been used in researches with children (Inam et al., 2015; Mushtaq et al., 2017). However, the present research aimed to determine the effectiveness of an Urdu adaptation of the Fun FRIENDS intervention program in fostering range of social emotional competencies among children from public schools of Islamabad, Pakistan. The children in our program would benefit from learning important life skills like empathy, relationship building, caring for others, and communication, all of which contribute to a child's overall development and wellbeing (Pahl & Barrett, 2007, 2010). Furthermore, the program would promote emotional skills such as identifying, analyzing, and managing emotions, problem-solving, decision-making, and relationship development. This would lead to greater interpersonal relationships, academic success, and psychological well-being for the children (Lynch et al., 2004; Matsumoto & Shimizu, 2016).

Developmental Psychopathology

Early Age Development

Different terms have been used in the literature to describe initial years of development. The first year of a child's life is commonly referred to as the "infant" stage in pediatrics. Many people in the field of mental health use the term "infant" to refer to a person in their first three years of existence. Some academics extend the cutoff age beyond the traditional three years, saying that it should be at least five years old to account for the fact

that so much research and so many treatment programs go beyond that period. We defined "young children" in this study as those between the ages of 4 and 8. Since the beginning of the 21st century, clinicians, researchers, and policymakers around the world have collaborated to improve children's mental health to increase their social and emotional competencies. The widely accepted definition of a child's mental health described by Zeanah and Zeanah as a child characteristic: *"the young child's capacity to experience, regulate, and express emotions, form close and secure relationships, and explore the environment and learn. All of these capacities will be best accomplished within the context of the caregiving environment that includes family, community, and cultural expectations for young children"* (Zeanah & Zeanah, 2001). Additionally, the development of these capabilities is synonymous with healthy social and emotional development. Furthermore, children's mental health can be defined as *"a multidisciplinary professional field of inquiry, practice, and policy concerned with alleviating suffering and enhancing the social and emotional competence of young children"* (Zeanah, 2019).

Children's mental health is considered as a strength-based discipline. This implies that clinical professionals and researchers collaborate to determine areas of strengths that may be used to fill in knowledge gaps, enhance competence, and remedy problems. All mental health practitioners could benefit from adopting a strengths-based perspective. But it would seem especially crucial in early childhood counseling, which deals with some of the most fundamental and delicate parts of the children's interaction, such as the parent-child relationship. To provide people hope for a better future in general, the area of infant mental health works to define, build, and maintain healthy developmental pathways for young

children. In the same manner, young children give people hope for a better future in general. Therefore, prevention is always a part of intervention because the child is always evolving and changing, and it's important to pay attention to the child's long-term development along with what's currently taking place. This indicates that there is an emphasis on both easing the present struggle and planning for the future simultaneously, which may be accomplished by paying attention to the major connections that are involved in primary caregiving (Zeanah, 2019). An analysis of a large number of studies revealed that there is no upper limit to one's age at which recovery is no longer a possibility. However, a child's chances of recovering are significantly improved if they are placed in a more nurturing setting as quickly as possible (Zeanah et al., 2011). The earlier the intervention begins, the great are the chances of long-term recovery from mental health problems. Early intervention assists the child in overcoming difficulties, and treatment can also reduce the likelihood of relapse or recidivism.

Social Emotional Development in Children

Social emotional development in children is a critical aspect of overall child development. It refers to the process by which children develop the ability to understand and manage their own emotions, as well as the emotions of others. Children's health and future success depend on this type of development, which happens in the context of their relationships with others. Early childhood is a pivotal time for mental and emotional growth (Durlak et al., 2015) Infants start to create attachments to primary carers, and they acquire a sense of themselves and others as separate beings. Children's later social and emotional growth is built on the trust and reliance they acquire in these first connections as well as on their growing ability to identify and manage their own emotions (Zeanah, 2019). As children

grow and develop, they continue to build on these early foundations. They learn to understand and navigate the social world around them, developing the skills necessary for successful interactions with others. These skills include empathy, perspective-taking, and self-regulation. The development of these skills is influenced by a variety of factors, including genetics, the child's individual temperament, and the quality of their social interactions and relationships. For example, children who have secure attachments with their caregivers are more likely to develop healthy social emotional skills, while children who have experienced neglect or abuse may have more difficulty in this area (Denham, 2006; Durlak et al., 2011; Housman, 2017).

Developmentalists who investigate children's social emotional dimensions argue that establishing emotional and social competencies are interlinked and fundamental to children's social and emotional development (Shaffer & Kipp, 2014). The study of social and emotional development in children has revealed that the ability to understand and manage emotions, known as emotional competence, is essential for children's ability to interact positively with others and achieve their goals in social interactions (Rubin et al., 2007). This concept is closely linked to the idea of emotional intelligence in social psychology, which includes recognizing emotions, thinking about emotions, understanding emotions, and managing emotions (Brackett et al., 2006; Lopes et al., 2004; Ngoc et al., 2020). Developmental psychologists have identified three key elements of emotional competence: the ability to express emotions effectively, the capacity to understand other people's emotions and the factors that influence them, and the ability to regulate one's own emotions (Denham et al., 2003). Children who perform well on emotional understanding activities are more likely to

be evaluated highly in social competence by their teachers and to display the social competence that allow them to develop and maintain positive relationships with their classmates (Denham et al., 2003; Dunn et al., 2002; Rubin et al., 2007). According to numerous research (Bukowski et al., 2018; Eisenberg et al., 2003, 2010; Korucu et al., 2022; Maughan & Cicchetti, 2002), children who have difficulty controlling their emotions—particularly their anger—are frequently shunned by their peers and experience adjustment issues such as excessive impulsivity, poor self-control, inappropriate aggression, anxiousness, depressive symptoms, and social withdrawal.

Components of emotional competence include the ability to identify and name emotions, to control one's own emotions, and to empathize with those who are experiencing those feelings. Social skills include showing care towards others, positive engagement with teachers and peers, taking turns, seeking help and problem solving (Denham, 2006; Rose-Krasnor, 1997). Neurobiological studies evidenced that enhancing social emotional competencies at early age not only improve the executive functions, learning process and stress response but changes in brain structure and function as well, particularly for children from low-income families (Blair & Raver, 2014; Espinet et al., 2013). These aspects of social emotional competencies are strongly associated, in a longitudinal study of children aged five year olds, authors showed that poor emotional regulation (such as exuberance, anger and fear) predicted internalizing and externalizing problems and low levels of prosocial behavior and social competence (Rydell et al., 2003). Moreover, a recent meta-analysis of 150 studies revealed that self-regulation in early childhood, between the ages of 4 and 8, is positively correlated with social competence and academic performance and negatively correlated with

internalizing and externalizing problems, such as depression and anxiety, substance abuse, aggressive and criminal behaviors in adolescence (Robson et al., 2020).

Denham and coworkers (Denham et al., 2003) desired to understand more about the factors influencing children's social development in preschool, so they undertook a longitudinal study on the topic of emotional competence. The findings suggest that the abilities of emotional competence gained between the ages of 3 and 4 become stable and continue to have an impact, as they contributed to both age 3–4 and kindergarten social competence. The study also found that the patterns of latent variable contributions to emotional competence differed depending on whether the preschoolers were boys or girls, how young or old they were, or any combination of these factors. The ability to show one's emotions, particularly one's pleasant emotions, was also discovered to play a significant role in social competence. Thus, it may be inferred that children who display cheerful emotions are more likely to make a favorable impression on their preschool teachers and peers and to thrive in their interactions with them. Moreover, the study discovered that dealing with unpleasant emotions makes successful interaction substantially more difficult throughout the lifespan, whereas optimistic people are like "interaction magnets". These results expand our understanding of the emotional underpinnings of young children's social competence and suggest directions for future research and preventive strategies aimed at preschoolers of varying ages and genders (Shaffer & Kipp, 2014).

Emotional Development in Children

The capacity to recognize and analyze the important expression of others improves steadily throughout childhood. By the age of four or five, children can accurately identify and

decode emotions such as happiness, sadness, or anger through person's body language (Boone & Cunningham, 1998). Furthermore, they are starting to realize that an individual's present emotional state (particularly negative emotions) might be the result of the person's thinking about previous events rather than current circumstances (Lagattuta & Wellman, 2001). Infants can distinguish between smiles and other sorts of facial expressions around six months of age. In one study of 7 month olds, for example, the newborns displayed the ability to identify smiling faces from those displaying anger or a neutral expression (Kestenbaum & Nelson, 1990).

Evolutionary explanations of emotional development suggest that it is crucial for children to detect and react to other people's disgusting emotions in order to avoid sources of transmission and contamination in their surroundings (Izard, 1994). This would be a form of social referencing that would help children avoid getting sick from coming into contact with or eating potentially harmful things. This data demonstrates that youngsters can identify the typical "disgust expression" at an early age. Children are less likely to be able to describe the 'disgust face' than other emotional expressions, despite the evolutionary benefits of being sensitive to the disgusted emotions of others (Hay, 2019).

Many young children, in fact, conflate disgust with other feelings, the most common of which is rage (Gagnon et al., 2010). Matching exercises are more effective than labelling ones for children aged 5–6 (Vicari et al., 2000). Children are more likely to recognize the repulsive expression if they are exposed to it in the context of a story (Nelson et al., 2013). According to the differentiation concept proposed by Bridges (1932), disgust develops from the more general experience of pain. Consistent with this theory, it's important to highlight

how young children's ability to identify the emotions conveyed by other people's faces develops in a predictable sequence, beginning with the ability to identify distress and expanding to include the identification of specific negative emotions. Available cross-cultural literature suggests that young toddlers see the disgust face and understand it as a sign of worry or sadness, rather than the pure emotion of disgust (Widen & Russell, 2013).

Even 5-year-olds are perceptive enough to see when others are happy (Boone & Cunningham, 1998). However, they are not nearly as adept at identifying negative mood cues (De Sonneville et al., 2002). They may not be able to tell the difference between positive and negative expressions on people's faces, or they may confuse one bad expression with another. For instance, it appears that issues in recognizing fury in particular emerge around the middle years of childhood (Montirosso et al., 2010; Widen & Russell, 2013). When assessing a child's ability to perceive emotion, it is important to consider not only the child's perceptual abilities but also their understanding of emotion words (Vicari et al., 2000).

It has been shown in experimental investigations of children's reactions to facial expressions that 3-year-old Chinese and American children hearing such stories tend to make a basic distinction between happy and negative emotions; older children doing the task are more likely to make distinctions among the negative emotions (Borke, 1973). A recent study with children aged 4, 8, 12, and college students studied how people of different ages absorb and judge emotional facial expressions based on the information provided by the surrounding context. Scenes were shown to them in which the characters' facial expressions were either consistent or inconsistent. Findings showed that college-aged participants focused predominantly on the face, while younger participants paid variable attention to the face and

context (Leitzke & Pollak, 2016). This points to a change in the way people understand and respond to emotional cues as they grow older.

It is also worth noting that an emotional experience involves both physiological and psychological mechanisms. An emotion is felt, expressed, and interpreted through physiological reactions and physical behaviors, as well as through thoughts and words (Hay, 2019). Empathy is another important feeling that a child can experience and recognize. Empathy theorists make a distinction between affective and cognitive empathy (Preston & de Waal, 2002). In order to truly empathize with another person, you must not only share their feelings but also comprehend their motivations (Decety & Meyer, 2008). Accurately interpreting another person's emotions requires both the capacity to perceive emotional signals and the comprehension of the environment in which the emotional signal is created. In other words, children figure out the context for an adult's joy, sadness, or rage.

Many children are sensitive to the incidence of discomfort and may attempt to support or comfort those in distress through actions of prosocial behaviors such as helping, sharing, and comforting (Zahn-Waxler et al., 1992). As an example, a young child offering an adult her own teddy bear may not always be appropriate for the recipient. By the time they are two years old, toddlers routinely help adults with practical challenges, and it is during this time that we first notice their attempts to bring comfort to others through the use of objects (Warneken & Tomasello, 2006) When young children feel uncomfortable, they may try to help others by diverting attention, sharing, or offering other forms of assistance (Demetriou & Hay, 2004).

Gender and Emotional Sensitivity

As infants, boys and girls demonstrate equal emotional responses (Brody, 1998). Several research have investigated whether or not young boys or girls are at a disadvantage when it comes to recognizing and processing emotions. While some research suggests that girls have a deeper capacity for feeling others' emotions, others have found the opposite to be true (Bosacki & Moore, 2004; Brown & Dunn, 1996; Laible & Thompson, 1998). Additionally, some studies found no gender differences in emotional understanding. One possible explanation for these divergent results is that gender differences in emotion comprehension are likely obscured when evaluations of this ability are aggregated across multiple dimensions (Fidalgo et al., 2018). For example, According to research by Aznar and Tenenbaum (2013, while 4-year-olds did not show any significant gender differences in their emotional understanding, 6-year-old boys outperformed 6-year-old girls when it came to comprehending the situational causes of emotion, and 6-year-old girls outperformed 6-year-old boys when it came to comprehending reflective emotions. This indicates that there may be gender differences in the types of emotions understood by girls and boys at specific ages. In addition, a research study on gender differences in connection to emotional expression found that men frequently had more intense emotional experiences, although women have greater emotional expressivity, especially for negative emotions. Additionally, gender variations depend on the particular emotion type but not the valence (Deng et al., 2016).

Theoretical Models for Child Development

Several theories have been proposed to describe the social and emotional dimensions of the developmental process. Some of them are discussed below.

Maturation Model

The maturational model is likely the most fundamental one, and when viewed through this perspective, individual development can be understood as the natural unfolding of a predetermined series of maturational stages (Gesell & Amatruda, 1947). The maturation of both the brain and the physical body is thought to be the cause of the development of higher-order functions. This form of "unfolding timeline" can be understood, for instance, as a reflection of the developmental evolution of emotional emotions as they occur throughout life.

Gene–Environment Interaction Model

Recent studies in the field of biology has shed light on the complicated connections that take place between a person's biological make-up (genetic disposition) and the environments in which they are raised (Warrier et al., 2021). An interaction between genes and the environment is the focus of the gene–environment interaction model, which highlights the ways in which the biological tendencies of individuals interact with the characteristics of their environments to determine the trajectory of development. In addition, there is a substantial connection between interactions between genes and the environment and the emergence of both internalizing and externalizing behavioral issues in children (Knafo & Jaffee, 2013). For instance, individuals who have a genetic predisposition to be shy or inhibited and whose social development is affected by parental caregiving can have their social development altered as a consequence (Fox et al., 2001, 2005). Similarly, various studies found that early life stress and negative experiences may play a causal role in the development of schizophrenia and attention deficit hyperactivity disorder (ADHD) and major

depressive disorder (MDD) (Klengel & Binder, 2013; Samek et al., 2015; Warrier et al., 2021).

Transactional Models

Sameroff (1993) proposed the transactional model, which focuses on the dynamic interaction between children and their environment across time. This perspective emphasizes the influence of parental responses on the emotional and social development of children. When parents respond to their child's emotional displays, for instance, the child's response to the parent can be shaped. Both the child and the parent continuously shape one other's social and emotional experiences. The application of Sameroff's transactional model to the study of developmental psychopathology has enhanced our understanding of the underlying dynamics that can rise to a variety of developmental disorders. By identifying specific pathways, researchers have been able to identify the risk factors and protective variables that put children at risk for developing disorders. The ecological transactional model of Cicchetti and colleagues (Cicchetti et al., 2000) provides a comprehensive understanding of the nature and development of depressive disorders in children and adolescents by taking into consideration the various and different forces that interact to cause depressive outcomes (Gustafsson, 2019).

Attachment Theory

John Bowlby's attachment theory (Bowlby, 1969) posits that early relationships with primary caregivers have a profound impact on an individual's social and emotional development. According to Bowlby, infants have an innate drive to form close and lasting relationships, known as attachment, with a small number of specific individuals, usually their

parents or primary caregivers. This attachment serves a survival function, providing the child with a sense of security and a secure base from which to explore the environment. Bowlby's theory has been widely supported by research. Literature has shown that infants as young as six months old can form attachments to their primary caregivers and that the quality of these early attachments can have long-term effects on social and emotional development. For example, children who form secure attachments with their caregivers are more likely to have positive relationships with their peers, to have better self-esteem and to be more resilient in the face of stress. In contrast, children who form insecure attachments with their caregivers, such as those who experience neglect or abuse, are more likely to have difficulty with social and emotional development, including problems with self-esteem, aggression and mental health problems (Cicchetti et al., 2000; Fernandes et al., 2020; Raikes & Thompson, 2006; Zajac et al., 2020). Bowlby's theory also highlights the importance of continuity and consistency in caregiving relationships. Research has shown that disruptions in caregiving relationships, such as those caused by institutional care or multiple changes in caregivers, can have negative effects on social and emotional development. In summary, Bowlby's attachment theory emphasizes the importance of early relationships with primary caregivers in social and emotional development. According to this theory, infants have an innate drive to form close and lasting relationships with specific individuals, which serves a survival function. Research has supported this theory, showing that the quality of early attachments can have long-term effects on social and emotional development, and that continuity and consistency in the caregiving relationship is important (Meins, 1997).

Temperament Models

Temperamental models refer to theories that propose that certain characteristics, such as emotionality and activity level, are innate and relatively stable across time and context. These characteristics, also known as temperaments, are thought to influence an individual's social and emotional development. One of the most well-known temperamental models is the New York Longitudinal Study, conducted by Thomas and Chess in the 1970s (Chess & Thomas, 1984). The study proposed that there are three major dimensions of temperament: activity level, rhythmicity, and approach/withdrawal. The study found that these dimensions are relatively stable across time and that they are related to different outcomes in social and emotional development. For example, infants high in activity level were found to be more likely to become active and assertive children, while infants low in activity level were found to be more likely to become passive and withdrawn children.

Another well-known temperamental model is the Difficult Temperament model, proposed by Goldsmith and Rothbart in the 1990s (Rothbart et al., 1994). This model suggests that there are three dimensions of difficult temperament: negative emotionality, shyness, and impulsivity. The study found that these dimensions are relatively stable across time and that they are related to different outcomes in social and emotional development. For example, children high in negative emotionality were found to be more likely to have problems with emotion regulation and have a higher risk for developing anxiety and depression (Caspi et al., 1995).

A more recent model is the Behavioral Inhibition System (BIS) and Behavioral Activation System (BAS) model, proposed by Gray in the 1990s (Ekman & Davidson, 1994;

Gustafsson, 2019). The model suggests that there are two innate systems that influence behavior: one that is sensitive to signals of non-reward and punishment (BIS) and one that is sensitive to signals of reward (BAS). The study found that these systems are related to different outcomes in social and emotional development. For example, individuals with a high BIS are more likely to be anxious and avoidant in novel situations, while individuals with a high BAS are more likely to be outgoing and approach novel situations (Degnan & Fox, 2007; Kagan et al., 1984). Hence, temperamental models propose that certain characteristics, such as emotionality and activity level, are innate and relatively stable across time and context.

Information Processing Model

Theories on social and emotional development have long recognized the role of information processing and emotional intelligence in shaping an individual's ability to interact with others. Crick and Dodge (1994) proposed an information processing model that centers on the mechanism of interpreting and reacting to social cues. Their model highlights the importance of individual factors that can influence one's ability to send, receive, and process social cues, with a focus on cognitive factors rather than affective ones.

Mayer and Salovey (1997) formulated the concept of emotional intelligence, highlighting its importance in social interactions. They suggested that children's cognitive development can be improved by teaching them to identify and process their emotions, and that emotions play a crucial part in an individual's adaptation and progress. Although the role of emotions in social interactions has received much attention, the connection between social-emotional abilities and their beneficial effects has received comparatively little

attention. Furthermore, Saarni (1999) is an early thinker to argue that emotional intelligence and understanding are intrinsic to human relationships. Saarni highlighted eight fundamental emotional skills essential for functioning effectively in social circumstances requiring the expression of emotions, with an emphasis on how these develop over time. Examples of such abilities include: the ability to comprehend and manage one's own emotions as well as those of others, the ability to read and interpret the emotions of others, as well as the ability to empathize with those with whom one is communicating.

Developing further on Saarni's model, Halberstadt and colleagues (Halberstadt et al., 2001) proposed the concept of affective social competence. This theory seeks to strike a balance between the two aspects of social competence that have previously been overemphasized in other theories. Sending emotional messages, receiving emotional messages, and feeling emotions all play fundamental roles in their approach. They also listed four pragmatic skills—awareness, identification, social context, and behavior management—needed for effective social interaction. The model stresses the importance of being mindful of the dynamic nature of social-emotional skills and the need for active learning to develop them. In summary, theories on social and emotional development have long recognized the role of information processing and emotional intelligence in shaping an individual's ability to interact with others.

Bronfenbrenner's Model

Bronfenbrenner's Bioecological Model (Bronfenbrenner, 1996) is a widely accepted framework that highlights the importance of viewing the individual within the context of numerous environments and systems that influence one another. This model includes both

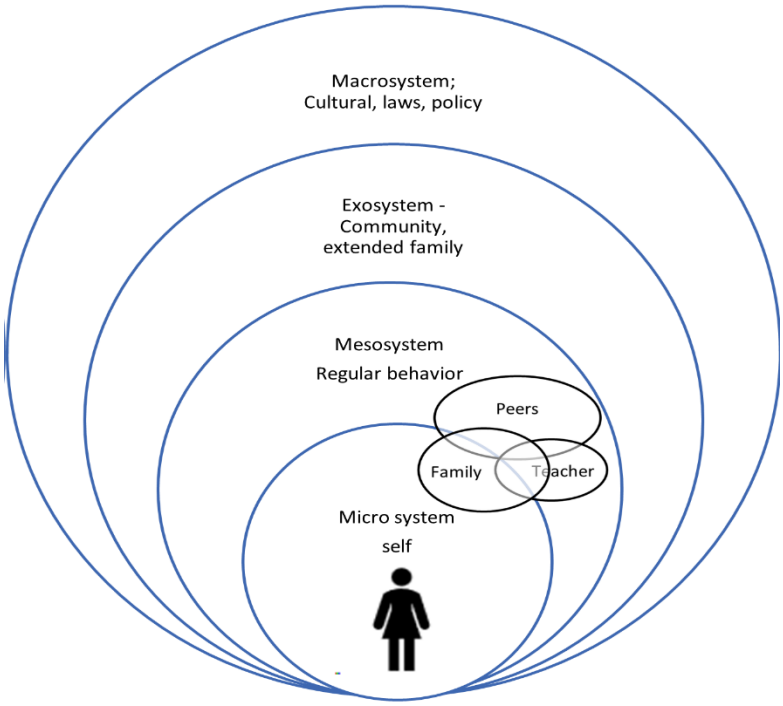
immediate circumstances, such as parent-child interactions, and distal factors, such as cultural norms and childcare policies. Many elements of a child's social and emotional development are thought to be shaped by these environments. Individual characteristics such as genotype, intelligence, temperament, and personality. According to the Bioecological Model, interacting with features of one's immediate environment, such as family, school, and friends, the larger social and economic setting, such as one's socioeconomic status, one's extended family, and one's living conditions, and one's culture, regulations, and values for example traditions and policies.

Bronfenbrenner then identified micro, meso, exo, and macro systems as components of a child's environment. According to Bronfenbrenner's sociocultural theory, effects from the immediate environment, or the microsystem, can be either short-term and fleeting or long-term and pervasive, such as the effects of ongoing family conflicts or the loss of a loved one. The child's day-to-day life is influenced by these mini environments. Different trajectories are observed between children raised in secure homes and those raised in more chaotic environments, which the model interprets as evidence that the exo-system, such as available health care services, employment prospects, or neighborhoods safety, can have a significant impact on the developing child. The mesosystem refers to the interactions between various systems. Individuals are affected by their exo-systems, according to this model; one example is external support for parents, but also extended family and community. The term macrosystem refers to the social environment, including cultures, social institutions, laws, and policies (Bronfenbrenner & Morris, 2006). This macrosystem is more distal and has an indirect impact on the development of the child.

Bronfenbrenner's Bioecological Model gives a holistic and comprehensive framework for analyzing an individual's development. It emphasizes the necessity of examining the individual in the context of multiple contexts and systems, as well as the role of proximal activities in shaping development, such as social relationships and play. Furthermore, the model emphasizes the function of time in shaping development as well as the significance of historical events in comprehending the individual's development (Gustafsson, 2019). When studying child development and everyday functioning, it is essential to comprehend the child's dynamic relationships with their environment (Bornstein, 2009). These kinds of interactions, often referred to as transactional processes, include continual feedback between the child and their environment, which ultimately leads to further development. Both the child's unique features and their environment continuously give new information that influences their growth (A. Sameroff, 2010). These transactional processes can be observed as reflected in engagement, or active participation in activities and social interactions. The child's interactions with teachers and peers can impact how they are perceived and treated, which in turn influences the child. These interactions between the child and their parents, peers, and teachers are all part of the processes that determine development at the proximal levels. It is essential to recognize that these interactions are dynamic and evolve over time. Children, through their interactions with the world around them and the qualities that they possess as individuals, ultimately play an active role in the process of molding their own development. The child's environment, as well as the child's biology, mental health, and behavior, all have an impact on the child's overall development (Bergman et al., 2014; Bronfenbrenner & Morris, 2006).

Figure 1

Bronfenbrenner Model of Bio-Ecology



Note. Bronfenbrenner Model adapted (Bronfenbrenner & Morris, 2006; Gustafsson, 2019).

Estimates of Mental Health Problems in Children

In the past two decades, mental health issues in young children, especially infants and toddlers, were frequently ignored (Zeanah, 2019). The difficulties in screening and diagnosing young children, as well as the lack of awareness that contributes to it, makes it difficult to ascertain prevalence rates (Lyons-Ruth et al., 2017). On the other hand, a huge proportion of the world's health burden, which includes intellectual and developmental disabilities, is borne by children who struggle with mental health issues. There is a 16–18% prevalence of mental difficulties in children aged 0–6 years, with somewhat more than half (8–9%) being significantly impacted by these issues, according to an epidemiological systematic review (Klitzing et al., 2015). According to the Global burden of disease (GBD) study (Baranne & Falissard, 2018) conducted in six regions of World Health Organization (WHO) including Africa, America, Eastern Mediterranean, Europe, South East Asian and West Pacific. Mental disorders are also reported to be among the leading causes of disability-adjusted life years in Europe and the Americas for children aged 5-14 years, which advocates for mental disorders as one of the most important public health challenges of the 21st century across the globe. However, researchers noted that it is difficult to accurately gauge the frequency of mental disorders in resource-poor regions. Those with limited access to psychiatric and medical help are less likely to receive a diagnosis, and the negative effects of their conditions are typically disregarded for this reason. Similarly, based on additional globally epidemiological data, it is estimated that 13 to 23% of children and adolescents experience a mental condition (Kessler et al., 2017; Polanczyk et al., 2015).

In addition, there have been advancements in discriminating between transitory individual differences (challenges during transition age) and genuine psychopathology. A Norwegian research of 1250 preschoolers from low socioeconomic position found a prevalence of 7.1% for psychiatric illnesses. The most prominent mental health disorders among them were anxiety disorders with 1.5 percent, oppositional defiant disorder with 1.8 percent, conduct disorder with 0.7 percent, attention deficit hyperactivity disorder having 1.9 percent, and depressive disorders were highest with rate of 2 percent. Moreover, comorbidity between these disorders was prevalent (Wichstrøm et al., 2012). Another national survey in England (National Survey England, 2017, 2018) revealed significant increasing trends in the prevalence of mental disorder in 5 to 15 years children. According to the findings of the study, the prevalence of mental disorders in the general population rose from 9.7 percent in 1999 to 11.2 percent in 2017, with emotional disorders being the most prevalent, affecting 5.8percent of both boys and girls in 2017. The most prevalent categories of mental illness found in children aged 5 to 10 years old were behavioral disorders (5% of cases) and emotional disorders (4% of cases), with equal incidence rates found in males (4.6%) and girls (3.6%). There is now mounting evidence that internalizing and externalizing disorders are frequently co-occurring in children who suffer from anxiety disorders (Essau et al., 2018; Masi et al., 2004). Multiple studies conducted on early children demonstrate a significant level of consistency in mental health issues, which serve as powerful indicators for the development of mental disorders in adulthood (Tillmann et al., 2018).

This is supported by research by Basten and colleagues (Basten et al., 2016) who looked at how persistent behavioral and emotional issues were in kids between the ages of

1.5 and 6 years. There is evidence from their study to imply that children's mental health problems are consistent across the entire preschool years. In addition, Basten and coworkers have further described that preschoolers typically exhibit heterotypic continuity of symptom patterns, and that the presentation of problem behavior shifts through time. Moreover, children with both externalizing and internalizing disorders were more likely to have long-lasting challenges. In preschool, it can be hard to tell the difference between usual, transient problems and those that could be signs of clinical disorders because of the flow and ebb of problem behavior's manifestation (Egger & Angold, 2006).

Similarly, a nationwide study (Whitney & Peterson, 2019) revealed that 41% of children between the ages of six and eleven in the United States were found to have mental health disorders. The findings indicated that there was a substantial prevalence (46.5%) of mild-to-moderate behavior difficulties among preschool-aged children. 5.5% of preschoolers, or around 1 out of every 18, were diagnosed with a mental disorder. The prevalence of mental disorders was notably greater in boys (6.8%) compared to girls (5.2%). The prevalence of internalizing difficulties in children has exhibited a concerning upward trend, rising from 4.3% in 1999 and 3.9% in 2004 to 5.8% by 2017 (National Survey England, 2018). Moreover, there is a strong correlation between children who exhibit externalizing problems and the development of Internet Gaming Disorder, while internalizing problems are associated with the development of Internet Addiction (Lee & Bhang, 2020; Richard et al., 2022).

Mental health problems in children have been recognized as a major public health concern and one of the leading causes of disability and societal economic burden (Lopez &

Murray, 1998). Furthermore, these problems in children and adolescents are linked to a higher chance of dying prematurely, as well as heightened levels of suffering and functional impairment, stigma and prejudice, and social isolation (Belfer, 2008; Patel et al., 2007). The life of a child is put in jeopardy when they experience mental health issues at a young age. Consequently, in recent decades, researchers have increasingly directed their attention into the mental health prevalence and interventions for preschoolers and students (Gustafsson, 2019).

Similarly, among children, the prevalence of clinically significant anxiety disorder tends to vary by culture. For instance, a ten percent community sample of preschoolers in the southern United States matched Diagnostic Statistical Manual's (DSM) criteria for having an anxiety disorder. (Egger & Angold, 2006). Comparing this with Norway, where only 3% of children of 4 years ago were surveyed using the same diagnostic interview (Wichstrøm et al., 2012). Similarly, it is anticipated that 2 percent of US preschool children experience childhood depression, when the diagnostic criteria are applied to this population (Hankin et al., 2015). When compared to those who did not have anxiety issues in childhood or adolescence, those who did have them were twice as likely to develop anxiety and depressive disorders as adults (Pine et al., 1998).

A longitudinal study of a mostly working-class sample of British children born in South London, in which both parents and children were questioned at ages 11 and 16, provides further evidence of varying prevalence rates (Pawlby et al., 2009). Major depressive disorder (MDD) was found to affect 4.2% of 11-year-olds and 14.3% of 16-year-olds. According to data presented by Hay (2019), 7% of first-born children in a longitudinal study

conducted in Cardiff, Wales met diagnostic criteria for at least one episode of mental disorder between the ages of 6 and 7. Other researchers have emphasized on behaviorally inhibited children, or the approximately 15% of children who demonstrate intense anxiety and inhibition when exposed to novelty (Fox et al., 2001; Kagan et al., 1984). Behavioral inhibition has shown modest stability from infancy to middle childhood. Evidence suggests that behavioral inhibition in childhood is a key predictor of anxiety disorders, particularly social anxiety in later developmental period in childhood (Chronis-Tuscano et al., 2009; Schwartz et al., 1999). Recent literature has highlighted potential moderators of behavioral inhibition temperament early risk, highlighting the infant's ability to successfully mobilize cognitive processes involved in negative reactivity regulation, such as attention shifting and/or inhibitory control, as critical (White et al., 2011). White and colleagues (2017) showed that behavioral inhibition in early childhood predicted later anxiety at the age of 7 years, for those who did not shift attention away from a perceived danger or risk.

Hence, it is evident from the global research discussed that child of all ages experience mental health problems with varied intensity, proportions, and manifestations. In addition, Research have shown that the prevalence of mental health disorders among children under the age of 15 is increasing and this age is particularly vulnerable (Baranne & Falissard, 2018; Vos et al., 2020). If these conditions aren't caught and managed in childhood, they often persist into adulthood, where they pose serious, lifelong challenges (Cummings et al., 2014; McLeod et al., 2016).

Mental Health in Pakistan: A Growing Concern

Although there hasn't been a lot of research done on the topic, it is indeed believed that a significant number of individuals in Pakistan struggle with issues related to their mental health. Children's mental health can be negatively impacted by factors like poverty, lack of access to education and healthcare, and witnessing or experiencing violence or trauma (Barlas et al., 2022; Malik et al., 2019). It is also challenging for children to get the support they need because there is a significant lack of mental health professionals and resources in the country (Barlas et al., 2022). In Pakistan, mental health services are severely overlooked, despite the fact that 10-16 percent of the population, which amounts to about 14 million individuals, are afflicted with mild to moderate mental disorders (Rathod et al., 2017; World Health Organization, 2015). Available data from a few studies completed in Pakistan, utilizing various evaluation measures, indicate that around 34.4% of school students experience mental health problems (Javed et al., 1992; Syed et al., 2007). According to another telephone survey, using the Strengths and Difficulties Questionnaire (SDQ), it was found that 15.9% of children between the ages of 6 and 16 have general behavior difficulties (Malik et al., 2019). Furthermore, it was estimated that 26.6% of children had behavior problems, 13% had peer difficulties, 10.6% had hyperactivity, 22.5% had emotional problems, and 3% had social issues. Inam and Zaman (2014) studied toddlers and preschoolers, they estimated that 26.6% of kids had behavior issues, 13% had peer issues, 10.6% had hyperactivity, 22.5% had emotional issues, and 3% had social issues. They further found that nearly half of them (46.5%) exhibited behavior problems that were on the brink of clinical diagnosis. The author also reported substantial differences between the genders, with

boys displaying a greater degree of externalizing difficulties. However, there is no data supporting the use of teacher reports in cross-sectional studies of behavioral issues in elementary school-aged children (4-8 years old).

Factors in Developmental Psychopathology

Learning how various talents at various stages of development correlate with healthy development later in life requires an awareness of several important areas of developmental psychopathology. At the most fundamental level, it argues that development is the product of a dynamic interplay between an individual's internal and external factors (their genes, biology, and psychology) (Rutter & Sroufe, 2000). Adaptive patterns in development are supposed to be consistent, but there is still a lot of room for change and disruption (Cicchetti & Toth, 2009). Second, it is influenced by developmental systems Bronfenbrenner's theory (Bronfenbrenner & Morris, 2006), which states that people are complex living systems that are influenced by multiple factors and exist within a larger ecological system. The dynamic processes of human development are highly reliant on these reciprocal interactions, which occur on a variety of scales, from the individual to the environmental (Shonkoff, 2010). In the third place, it is vital to perform longitudinal study when analyzing developmental psychopathology. Cross-sectional studies are a necessary first step in determining whether or if there is a connection between the numerous factors that influence the various stages of development (Coll et al., 2000). Their conclusions may be off, though, because they don't consider differences in factors or the passage of time between phases. Decisive information on developmental stability and alteration may be difficult to get through retrospective research. The conclusions of longitudinal studies describe the analysis of individuals and

events at many levels throughout the course of time. Another important characteristic of longitudinal studies is that they allow researchers to investigate stages of development. Human functioning is more malleable and potentially more amenable to change during periods of transition in developmental age (Granic et al., 2003).

Last but not the least, the developmental psychopathology view places equal emphasis on healthy and pathological patterns of behavior (Masten & Cicchetti, 2010). In this regard, it is essential to have a firm grasp on what constitutes healthy and competent growth, what constitutes a divergence from the norm, and how these abilities serve to buffer the harmful impacts of risk factors. The experiences children have in response to risk and protective factors, or processes shape their futures. According to the investigations, these factors have a significant impact on child's mental health, both making them more susceptible to problems and making them more resilient (Ahulu et al., 2020; Bayer et al., 2011; Eriksson et al., 2011; The BELLA study group et al., 2008). The quality of interactions between various biological and psychological systems is profoundly affected by the interplay between risk and protective variables during development.

Determinants of Risk

Children's mental health issues can be influenced by a wide range of factors, such as heredity, environment, brain development, social context, interpersonal context, and medical conditions (Bayer et al., 2011; Kraemer et al., 2001; Wlodarczyk et al., 2017). A child's vulnerability to mental health issues can be exacerbated by several factors, including premature birth (Williams et al., 1990), a family history of mental illness, neglect or abuse (Dube et al., 2003), poverty, maternal depression, being raised in institutional settings, and

other stressful life situations (Blum et al., 2000; Tran et al., 2017; Wang et al., 2022). Additionally, children who lack social support, have poor communication skills, or have difficulty forming relationships may be at an increased risk (Housman, 2017; Yang et al., 2019). Furthermore, children with chronic medical conditions or those who have experienced brain injury may also be at a higher risk (Massagli et al., 2004). However, it's important to note that the risk factors can interact with each other, and mental health is complex, therefore it is difficult to identify one or exact cause of mental health problems in children. Moreover, these indicators are frequently used to detect individuals at risk for developing mental disorders. One must keep in mind, however, that these risk variables are neither random nor independent, but rather frequently interact with one another in intricate ways. This means that children may be exposed to more than one risk factor at once, such as substance misuse and early parenthood, even while interventions may target just one risk factor. The likelihood of mental health problems increases dramatically when numerous risk factors are present, whereas the prevalence of mental health problems may be reduced when only a few risks are present (The BELLA study group et al., 2008).

Andershed and Andershed (2015) described two basic classes of factors that operate as buffers or risk factors for children's psychological or behavioral problems: those that are dynamic and adjustable, and those that are static and irreversible. The child's behavior and the parent-child connection are examples of dynamic elements that can be modified through intervention. In contrast, more support can't change static variables like a person's gender, race, or the circumstances of their past. The focus of interventions aimed at enhancing children's development should be on these types of dynamic risk factors. These may be

viewed as either proximal (direct) factors that have a direct causal effect on the outcome, or distal (indirect) factors that are connected to the outcome through associations with proximal factors. A third way to define potential intervention factors is to divide them into two categories: those that initiated the problem in the first place and those that continue to perpetuate it for example factors which are causing the problem to persist (Andershed & Andershed, 2015).

Multiple studies have demonstrated that a child's environment, both present and past, can interact with genetics to increase or decrease the likelihood of emotional and behavioral issues. Behavioral issues in early childhood, as well as family factors like insecure attachment, living in a single-parent household, and parental separation and divorce, were identified as risk factors for the development of antisocial personality disorder in a systematic review conducted by NICE (Kendall et al., 2009). When these risk factors are present, it is most likely that a child will become distressed between the ages of 0 and 5. A systematic evaluation of children with ADHD (4-15 years) also indicated that they were more likely to engage in antisocial behavior as they got older and were more likely to be convicted of a crime (Mohr-Jensen & Steinhausen, 2016). Numerous psychological, biological, and social factors have been found correlated with psychological and behavioral problems in primary school children and have been proven to enhance the risk of negative life outcomes (Wille et al., 2008; Wlodarczyk et al., 2017). It is important to keep in mind that risk factors for mental health problems in children are incredibly complex and disorders are almost certainly not caused by a single factor, but are influenced by the interaction of multiple environmental, social, genetic, and biological risk factors (Kraemer et al., 2001).

Individual Factors. Childhood mental health problems may have significant consequences for a child's personal growth, social life, and wellbeing in general. Children at risk for developing mental health issues can be better identified and treated with the help of information about the specific risk factors that expose them to risk. Genetics is one of the most important independent risk factors for children's mental health disorders. Environmental factors interact with the child's biological, genetic, and emotional makeup on multiple levels, for example, factors such as gender, prematurity, delays in development, and chronic physical deficiencies (Werner & Smith, 1992). If a parent or close family also suffers from a mental health illness, the child may be at greater risk of developing that disorder. A child may be more susceptible to developing depression, for instance, if one or both of their parents suffer from the disorder.

Another important individual risk factor is the child's behavior and difficult or resistant temperament (Bates et al., 1998; Caspi et al., 1995). There may be a correlation between a child's impulsivity, aggressiveness, and inability to control their emotions and the development of mental health problems. Additionally, a low birth weight (Breslau et al., 2004) is also been identified as individual risks. Trauma and adverse childhood experiences such as abuse, or neglect may also contribute to greater risk for the development of mental health disorders such as post-traumatic stress disorder (PTSD) or depression. Moreover, children who are exposed to adverse environmental conditions early in life, such as poverty, domestic violence, or inadequate access to medical care and formal education, may be more likely to experience mental health issues later in life. Furthermore, children who have poor

parental relationships, lack social support, or have difficulty forming relationships with peers may be at an increased risk. Individual risk factors are discussed further below.

Child Temperament. Children's challenging temperamental attributes have been identified as a moderate and consistent risk factor in cross-sectional and longitudinal research of early childhood predictors of later disorders of mental health (Cho et al., 2008; Dougherty et al., 2010). Child's temperament has been shown to be a significant component in understanding the onset of mental health disorders. A recent longitudinal study identified a significant interaction effect between four year olds' temperament and family over involvement in the development of higher anxiety symptoms in early adolescents (Hudson et al., 2019). On the basis of intrinsic differences in reactivity and self-regulation, temperament is regarded as largely constant across time and capable of predicting children's emotional and behavioral responses (Wlodarczyk et al., 2017). Côté and colleagues (2009) explored the emergence, course of development, and risk determinants for depressive and anxious symptoms in a preschool population. According to annual parental ratings from infancy through school admission, a difficult temperament predicted more depressive and anxious symptoms in early childhood. Similar results were found in another longitudinal study (Dougherty et al., 2010) linking mother-reported depressive symptoms in children aged 7 to 10 to their child's temperament at age 3. By the time they reach the age of 10, children who display this pattern at the age of three are more likely to be clinically depressed. These results demonstrate that preschoolers with a difficult temperament have a higher chance of developing emotional problems as adults.

Disparities in activity level, reactivity or emotional intensity, sociability, or withdrawal have all been used to explain differences in children (Buss & Plomin, 1975). Jerome Kagan and his colleagues (Kagan et al., 2018) recognized behavioral inhibition, often known as the predisposition, to withdraw from unfamiliar people or surroundings, as a characteristic of one's temperament. Inhibited infants show extreme physiological arousal (for example, elevated heart rates) in response to conditions that hardly bother unbound infants, and they start fussing and showing increased motor activity in response to novel things as early as 4 months old, such as a vividly colored mobile. At the age of 21 months, inhibited toddlers showed signs of shyness and even fear when introduced to new people, objects, or environments, while uninhibited youngsters often reacted in a flexible and confident manner. At ages 4, 5 ½, and 7 ½, children who scored higher on the inhibition scale remained less social with strangers and peers and less likely to participate in potentially dangerous activities than children whose scores were not in the inhibition range (for example, walking a balance beam). In addition, children who fit the inhibited profile as toddlers are more prone to acquire social anxiety as teenagers and irrational concerns (of being kidnapped) as elementary school children. (Kagan et al., 2018; Schwartz et al., 1999; Shaffer & Kipp, 2014).

Environmental Factors. Child's mental health issues are often triggered or exacerbated by factors in their immediate surroundings. Risk factors can be found in a variety of aspects of the family dynamics, school environment, living conditions, poverty, or peer groups (Andershed & Andershed, 2015; Bayer et al., 2011; Mohr-Jensen & Steinhausen, 2016; Reiss et al., 2019). Children's problems with mental health may be exacerbated by the

quality and form of their peer connections, such as rejection and negative peer models. Significant risk factors for children's mental health can be found in both the school environment, including the quality of education and academic rigor, and the neighborhood, including factors like crime and limited access to leisure activities. There are many facets and dimensions of mental illness and the above-mentioned risk factors typically interact with one another. Thus, to strengthen children's mental health, a holistic strategy is required that takes into account a variety of potential risk factors (Wilmshurst, 2017).

Negative Experiences in Childhood. Negative Experiences in Childhood or also known as adverse childhood experiences (ACEs) also play a major role in the child's mental health disorders in later adolescents or adulthood. ACEs refer to traumatic events that occur during childhood, for example, domestic abuse, neglect, parental discord or household dysfunction (Felitti et al., 1998). A child's future mental and physical health, in addition to their physical, psychological, and intellectual development, can be significantly affected by these types of circumstances. It has been demonstrated from research that children who endure ACEs are more likely to develop a variety of mental health issues such anxiety, depression, PTSD, and behavioral disorders later in life (Widom & Shepard, 1996). These adverse experiences in childhood may also increase the risk of substance abuse, self-harm, and suicide (Anda et al., 2006). Further, adverse childhood experiences (ACEs) can have long-lasting effects on children's physical health, including an increased risk of chronic diseases like depression, alcoholism, drug dependence, heart disease, cancer, chronic lung disease, obesity, and diabetes (Dube et al., 2003).

Additionally, indeed, ACEs in the early years have been shown to have negative long-term consequences. ACEs can also lead to difficulties with trust, attachment, and relationships, which can affect how children interact with others and how they learn. They can also impact the child's cognitive development, academic progress and can lead to poor academic achievement and low educational attainment (Bright & Thompson, 2018; Zeanah, 2019). It is vital to remember that not all children who experience ACEs will develop mental health problems, and many children are able to recover with the right support provided at the right time. Early identification and intervention can mitigate the negative impact of ACEs and minimize the chances of developing long-term mental health problems and chronic physical conditions and improve their well-being (Lorenc et al., 2020).

Family Factors. Family factors play a significant role in the development of mental disorders in children. Risk factors can be found in a variety of aspects of the family dynamics, such as family structure, attachment styles, maternal depression, parenting style, and domestic abuse (Blum et al., 2000; Formoso et al., 2000; Mohr-Jensen & Steinhausen, 2016; Raikes & Thompson, 2006; Wang et al., 2022; Yockey et al., 2021) can all contribute to the development of mental disorders such as both internalizing or externalizing problems in children. For example, studies have shown that children who grow up in households with high levels of conflict, neglect, or abuse are at an increased risk for developing mental health problems such as anxiety, depression, and behavioral disorders (Victor et al., 2019; Yockey et al., 2021). Likewise, it has been suggested that offspring of parents particularly mother suffering from depression or other mental health disorders may be more susceptible to similar issues later in life (Fong et al., 2019; Weijers et al., 2018).

Moreover, family behavior and parenting can play a role in the emergence of mental disorders in children. As an illustration, studies have revealed a correlation between authoritarian and permissive parenting styles and an increased risk for mental health issues in children, while authoritative parenting reduces this risk (Raikes & Thompson, 2006; Zajac et al., 2020). The absence of social support, poverty, and single parenting are all examples of familial circumstances that have been linked to the emergence of mental illness among children (Bates et al., 1998; Raval et al., 2016; Tran et al., 2017). Factors such as living in a conflicted household, witnessing domestic violence, and having a parent(s) with a mental health problem were investigated in a recent analysis of the National Child Health Survey, all of which may lead to the emergence of conduct disorder in adolescence (Mental Health of Children and Young People in England, 2017, 2018; Yockey et al., 2021). The chance of a child acquiring a mental condition might be amplified when these factors interact with one another and with individual characteristics including genetics, temperament, and unfavorable childhood events. Therefore, interventions such as parenting support, mental health treatment for parents, and family therapy that target these familial characteristics can be useful in preventing and treating children's mental problems (McClelland et al., 2017; Moreira et al., 2019; Rahman et al., 2016).

Additionally, a variety of negative family circumstances, such as callous-unemotional traits, mother’s mental health particularly maternal depression, parental abuse, family stress, adverse family environment, low parental self-efficacy and parenting styles and standard were found to be associated with child behavioral problems (Behere et al., 2017; Côté et al., 2009; Deater-Deckard et al., 1998; Fong et al., 2019; Wlodarczyk et al., 2017). Bayer and

colleagues' study (Bayer et al., 2011) revealed that overinvolved, overprotective or helicopter parenting, as well maternal emotional distress, were key predictors of internalizing (emotional) symptoms beginning in preschool. Findings also showed that harsh discipline (smacking or yelling) was the strongest consistent predictor of children's externalizing (conduct) problems.

Similarly, in a recent longitudinal study (Perry et al., 2018), researchers explored the relationship between overcontrolling parenting during toddlerhood, self-regulation during early childhood, and social, emotional, and academic adjustment in preadolescence over an 8-year span using a sample of 422 participants. The results show that overcontrolling parenting at age 2 is negatively associated with emotion regulation and inhibitory control at age 5, which in turn, are associated with more child-reported emotional and school problems, fewer teacher-reported social skills, and less teacher-reported academic productivity at age 10. The study also suggests that self-regulatory skills in early childhood may play a key role in shaping child adjustment into adolescence, and that overcontrolling parenting during toddlerhood is associated with preadolescent outcomes through its relationship with these skills.

Among other family factors, family structure is a crucial one in the development of a child's mental health problems. Joint families are those in which multiple generations of family members live together under one roof, while nuclear families consist of only parents and their children (Abdul Rasheed, 2015). Literature demonstrates that family structure plays a significant role in shaping a child's development. The studies suggest that children in joint families tend to have better cognitive and academic outcomes, emotional security, and

traditional values compared to those in nuclear families. While children in nuclear families tend to have better emotional and psychological well-being, self-esteem, and independence compared to those in joint families (Blum et al., 2000; Brown, 2004). However, it is important to note that these findings might vary depending on the cultural and socio-economic context of each country. Notably in the context of Pakistani culture, where the joint family system is supported over the nuclear family (Abdul Rasheed, 2015). Behavioral issues in children may be the outcome of a more authoritarian parenting style living in a joint family system. Also, under a joint family arrangement, younger ones are expected to act submissively, to control their emotions, and to respect the authority of their elders. It's possible that this contributes to kids having trouble expressing their feelings, controlling their emotions, and regulating themselves (Engelmann & Pogosyan, 2013; Sheikh, 1973).

Peer Relations. The emergence of mental health issues in children can be significantly influenced by peer relationships. Longitudinal research has shown that children who are rejected or bullied by their peers are more likely to show signs of depression, anxiety, and other internalizing problems as they grow older. (Copeland et al., 2013; Juvonen & Gross, 2008; Liao et al., 2022). Additionally, children who have poor peer relationships may struggle with social skills and may have difficulty building and maintaining positive relationships in the future (Asher & Coie, 1990). Furthermore, conduct problems, aggressiveness or anxiousness and social withdrawal may be associated with mental health disorders during adolescence (Kessler et al., 2007). Because it has been established that behavioral disorders are socially valued (for example, peer popularity) and socially clustered

(for example, homophily), peer interactions are related with psychological problems in adulthood (Long et al., 2020).

Victor and colleagues (Victor et al., 2019) demonstrated in their longitudinal study that young adolescents who reported experiencing peer victimization more frequently, having lower social self-worth and self-competence, and having more negative impressions of peers were at a larger risk of engaging in self-injurious behaviors. Children who have difficulties with social skills and relationship management, as well as those who act aggressively against their peers, are often the targets of rejection and isolation. Persistent peer conflict among children raises the risk that they may exhibit antisocial traits later in life, including school failure, criminal activity, and delinquency (Asher & Coie, 1990; Blum et al., 2000).

Schooling and Education. Dropping out of school and receiving a substandard education are significant risk determinants for the long-term undesirable effects. Research has shown that individuals from low quality education and low family income backgrounds may be at a greater brink for developing internalizing and externalizing problems. Internalizing problems including depression and anxiousness, have been found to be more prevalent among individuals from low-income backgrounds (LMICs). This may be because individuals from low socio-economic backgrounds may have fewer opportunities for positive social interactions and less access to mental health resources, which puts them at higher risk for experiencing psychological challenges. Individuals who come from families with poor socioeconomic status are more likely to face higher levels of stress and adversity, both of which are factors that can lead to the development of internalizing difficulties (Wang et al., 2022).

Furthermore, research has shown that people from disadvantaged socioeconomic situations are disproportionately affected by externalizing disorders like aggression and conduct disorder. The lack of financial stability and social support has been linked in several studies to the emergence of these issues in low-income communities. Furthermore, those from lower socioeconomic origins may be more vulnerable to stress and adversity, both of which can lead to the emergence of externalizing disorders (Costello et al., 2003; Gershoff et al., 2007; Kim-Cohen et al., 2003).

It is worth mentioning that, low socio-economic status is a complex construct and is influenced by multiple factors, including income, poverty, unemployment, parental education and occupation, family structure, parental mental health, housing, access to healthcare, and access to recreational and educational resources, play a significant role in the development of behavioral problems and mental illnesses (Blum et al., 2000; McCoy et al., 2016; Rathod et al., 2017; Wang et al., 2022).

Protective Factors

Rutter defined protective factors as "*factors that modify, mitigate, or change an individual's response to an environmental hazard that predisposes to a maladaptive outcome*" (Rutter, 1985). Examples include age, personality, and problem-solving skills. Because they influence many different hazards, they do not ensure normal growth in the absence of other risk factors. Garmezy and Rutter (1988) identified three types of factors that can improve a child's well-being: the child's own positive characteristics, a supportive family environment, and access to resources or support from external agencies that can help the

child develop coping skills. These factors could also be examined under the areas of child, family, and socioeconomic conditions.

Protective factors alter how we react to adversity, allowing us to avoid negative consequences. In contrast, risk determinants are those factors that enhance the likelihood of negative consequences (Zolkoski & Bullock, 2012). The positive aspect is that both protective and risk factors occur in response to circumstances, resulting in a variety of conclusions. Thus, a child's ability to thrive and grow normally despite the presence of the indicated risks may be bolstered by the presence of one or more protective factors (Wlodarczyk et al., 2017). Since promoters almost always have a positive effect, we say that they have a "direct effect," while protective factors only have an effect when the child is exposed to risk factors (acting as a "buffer"). Behavior issues are less likely to occur when a child is exposed to protective factors, which can be specific to the family, the preschool, the child, or the child's wider social milieu (Andershed & Andershed, 2015; Wille et al., 2008).

Furthermore, protective factors refer to the characteristics or conditions that help to reduce the risk of negative consequences, for example, internalizing and externalizing problems, in children. Multiple protective factors can be classified as follows. One of the key protective factors is positive family dynamics. Strong and supportive relationships within the family can provide children with a sense of security, belonging, and emotional support. This may aid to minimize the possibility of developmental psychopathology in children (Blum et al., 2000; Bronfenbrenner & Morris, 2006; Wang et al., 2022). Adequate parenting is also a protective factor for children's well-being, good parenting practices, such as providing warmth and support, setting clear boundaries, and monitoring children's activities, can help to

promote positive development and reduce the risk of behavioral problems (Formoso et al., 2000; Hofer et al., 2013).

Positive peer relationships are another important protective factor, children who have positive relationships with their peers tend to have better mental health outcomes, as they can benefit from social support and a sense of belonging (Long et al., 2020). A positive school environment is also a protective factor, a supportive and nurturing school environment can provide children with the opportunity to learn, grow, and develop positive relationships with adults and peers (Bronfenbrenner & Morris, 2006). Resilience is another protective factor; it refers to the ability to bounce back from adversity. Children who are resilient are better able to cope with stressors and adversity and are less likely to develop mental health disorders. Resilience is optimized by increasing protective factors at all interacting levels of the socio-ecological model (i.e., individual, family, and community). Additionally, protective factors for mental health research has demonstrated that a child's social environment, which includes their family, peer, school, and neighborhood contexts, is associated with the extent to which they develop resilience (Wlodarczyk et al., 2017; Zolkoski & Bullock, 2012).

Positive self-esteem is also a protective factor, children who have positive self-esteem, who feel good about themselves and their abilities, are more likely to have better mental health outcomes (Haslam et al., 2019). Furthermore, protective factors can also include the availability of community resources and services that support children and families, such as access to mental health care, educational opportunities, and extracurricular activities. Children who have access to these resources and services are better able to thrive and develop positive mental health (James et al., 2002). It is essential to note that that these

protective factors are not mutually exclusive, they often interact with each other and with other factors such as genetics, temperament, and adverse childhood experiences. They also may vary in strength and impact depending on different contexts and circumstances like risk factors. However, by identifying and promoting these factors, we can help to reduce the risk of mental health problems in children and support their positive development. Interventions that focus on promoting protective factors, such as self-efficacy, emotional regulation, relationship skills, problem solving skills and parenting support, can be effective in preventing and treating mental health challenges including internalizing and externalizing problems in children.

Individual Characteristics. Certain child characteristics, such as great health, above-average Intellectual ability, a positive self-concept, a positive temperament, and interpersonal skills, can also protect a person from harm (Garmezy & Rutter, 1988; Williams et al., 1990). Social competence includes academic achievement, the ability to interact with others, and participation in a wide range of activities. Increased social competence is also associated with increased self-efficacy and self-esteem (Denham, 2006; Rutter, 1985).

Extensive longitudinal studies have elucidated the core traits of children's personalities that, over time, distinguish resilient youngsters from those who are easily impacted by risk factors (Garmezy & Rutter, 1988; Moriarty & Murphy, 1976; Rutter, 1985; Werner, 1984; Zolkoski & Bullock, 2012). Werner (1984) found that the temperamental traits of resilient youngsters were associated with favorable responses from both familiar adults and new acquaintances. Young children who can bounce back from adversity are more likely to have developed a strong sense of autonomy and a strong interpersonal orientation,

as stated by Murphy and Moriatry (1976). Other attributes include (a) a positive outlook on life despite the difficulties, (b) the ability to form close relationships with others while maintaining a sense of independence, (c) an optimistic outlook on life and (d) the willingness to take part in required acts of supportiveness.

Furthermore, resilience is influenced by a child's intellectual capacity, relationships and attachments, coping skills, internal motivation, gender, health and temperament (Benzies & Mychasiuk, 2009; Bolig & Weddle, 1988; Rutter, 1985; Zolkoski & Bullock, 2012). Parto and Besharat (2011) studied the relationship between self-efficacy, problem solving, coping, and adolescents' mental health. The findings suggest that self-efficacy and problem-solving skills serve as a child-specific protective factor and reduce mental health problems. The study also shows that the association between self-efficacy in problem resolution and psychological well-being was moderated by both types of coping strategies (effective and ineffective). Children who exhibit fear may or may not be predisposed to develop anxiety disorders. According to a literature review on the topic of predicting anxiety disorders, including the progression from normal childhood fearfulness to a full-blown anxiety disorder, there are important protective factors that can help shield children with repressed fears from becoming full-blown anxiety. The following are examples of protective factors: Being a girl (possibly because shyness is more socially acceptable for girls), having parents who are accepting of their child's shyness and caution, having positive experiences in childcare settings, and having good attention skills have all been linked to a lower risk of developing social anxiety in children (Degnan & Fox, 2007).

Self-regulation. Research has shown that children with strong self-regulation skills are better able to cope with stress and adapt to new situations, and are less likely to develop behavioral or emotional problems (Blair & Raver, 2015). This is because self-regulation allows children to control their impulses and make healthy decisions, which in turn helps them to avoid problem behaviors. It is one of the important protective factors. Teaching children problem-solving skills can help them to develop self-regulation skills by giving them the tools they need to make healthy decisions (Gross, 2015). Researchers have found an easy-going personality and effective self-regulation as protective variables in resilience (Buckner et al., 2003; Eisenberg et al., 2010; Werner, 1984).

A study conducted over the course of five years (Rydell et al., 2003) investigates the connection between children's emotionality, emotion control, and behavioral flexibility. Mothers were asked to rate their children on how well they dealt with negative emotions such as anger and fear, as well as positive emotions like happiness. The findings indicated that externalizing behavior and prosocial behavior were predicted by poor management of positive emotions and optimism. Furthermore, internalizing problems are associated with excessive fear emotionality and impaired fear regulation. On the other hand, high levels of prosocial activity were linked to positive emotions and excitement. In a study conducted with children aged 4-8, Eisenberg and collaborators (Eisenberg et al., 2010) looked at the connection between negative mood, regulation/control, and internalizing/externalizing problem behaviors. According to the results, children with externalizing issues have a harder time controlling their emotions and are more likely to exhibit behavioral issues like aggression and impulsivity. Whereas children who struggled inside were more likely to

experience feelings of sadness, have trouble paying attention, and act impulsively. Therefore, the ability to self-regulate is a crucial buffer against the emergence of both internalizing and externalizing behavior disorders in young people.

Emotional Regulation. Children with strong emotional regulation skills are better able to manage their emotions, which helps them to avoid becoming overwhelmed and acting out in negative ways (Eisenberg et al., 2010; Sabatier et al., 2017). Child emotion regulation is recognized as a crucial aspect of social and emotional competence, and it is utilized in almost all of the child's interactions with the outside world (Gustafsson, 2019; Hay, 2019; Housman, 2017). As children approach the preschool years, they are more required to regulate their emotions in order to attain their own and society's goals, and indications of emotional dysregulation are commonly recognized as the basis for psychiatric disorders and interpersonal difficulties (Christ et al., 2019; Dvir et al., 2014).

Lack of emotional or behavioral regulation is frequently regarded as a component of psychopathology; indeed, some types of issues (e.g., some externalizing problems and depression/anxiety) are defined in part by a lack of self-regulation (Daunic et al., 2021; Dvir et al., 2014; Eisenberg et al., 2010). Evidence has demonstrated a link between healthy social-emotional development and a variety of developmental outcomes, as well as its role as a protective factor (Barblett & Maloney, 2010; Durlak et al., 2015).

Children that are socially and emotionally competent will form better social ties, which are essential for future success (Mendez & Fogle, 2002). Social-emotional abilities have an impact on academic success because children who are socially competent and joyful tend to be good students (Reyes et al., 2012). The development of emotional self-regulation

in children is influenced by factors such as the social environment, maturational processes, and temperament. It develops in a relational setting and is crucial for self-regulation and social-emotional competence (Wille et al., 2008; Wlodarczyk et al., 2017).

Social Competence. Social competence refers to social skills that serve as a protective factor for mental health. These skills may include showing respect and empathy, understanding and expression of emotions of others, handling criticism and rejection, making friends, dealing with authorities and interpersonal skills (Del Prette & Del Prette, 2021). Furthermore, positive interactions and relationships with friends and teachers, positive teacher response, a warm, loving setting and are also considered as protective factors for the child (Hoza, 2007; Hughes et al., 2014; Lippard et al., 2018; Sjöman et al., 2016). Social competence has been identified as a potential protective factor for child psychopathology in various studies. For example, a study by Ladd and colleagues (Ladd, 1999; Ladd et al., 1997) found that children with higher levels of social competence were less likely to develop internalizing problems such as anxiety and depression. Similarly, another study (Wang & Liu, 2021)with children of average 5.36 years old in first grade, showed that poor executive function predicted high levels of both internalizing and externalizing problems and also a low rate of decline in externalizing problems over time. Additionally, the study found that the impact of poor executive function on behavioral problems may depend on its association with disruptive social competence. These findings suggest that social competence may play an important role in promoting positive mental health outcomes for children.

Self-Concept. Self-concept, or an individual's beliefs and perceptions about themselves, has been found to play a protective role in the development of internalizing and

externalizing problems (Fong et al., 2019; Wlodarczyk et al., 2017). A longitudinal study with adolescents found that self-concept clarity plays a protective role in adolescent's susceptibility to friends' influence on delinquency, and also found that adolescents with lower self-concept clarity are more likely to engage in delinquent behavior (Levey et al., 2019).

Coping Strategies. Research has indicated that psychological stress can be a risk factor for children, particularly when the stress exceeds their ability to cope with negative emotions, relationships, and fear (Gunnar et al., 2009). Coping, on the other hand, can be viewed as a protective factor when it includes cognitive and behavioral techniques that help children deal with internal or external demands (Folkman et al., 1987). One study (Gunnar et al., 2010) found that preschoolers who attend preschool have higher levels of cortisol in the afternoon, which is linked to intrusive and over-controlling care from their teachers. This increased cortisol level was associated with aggressive behavior in boys and watchful, worried behavior in girls. The study suggested that an external setting, such as preschool, can act as a protective factor, mitigating the effects of negative stress on children (Söderström et al., 2013). Overall, it is important to recognize that stress and coping are interconnected and can impact children's behavior and mental health.

Environmental Factors.

Family Environment. A landmark longitudinal research conducted beginning in 1959 indicated that children and adolescents who were raised in an authoritative manner had better outcomes on several measures of health and development (Baumrind, 1991). The author went on to describe authoritative parents as those who are both responsive and demanding, who create an atmosphere that is stimulating to the mind while also being emotionally and

physically nurturing. Additionally, they set firm, consistent, and age-appropriate boundaries for their children without being overpowering or domineering. Research has also shown that parental expression of positive emotions is linked to children's social competence and overall well-being (Eisenberg et al., 2003). Additional factors that contribute to a family's capacity for bouncing back from adversity include the composition of the family, the quality of the connections between family members and their intimate partners, the cohesiveness of the family, the presence of healthy parent-child exchanges, the availability of pleasant settings (Benzies & Mychasiuk, 2009). It is important to note that parenting style is just one of many factors that contribute to child development and should be considered in conjunction with other protective factors for family resilience.

Many studies have found that children thrive when they have the backing of their parents, are subject to an authoritative style of parenting, and are part of a close-knit, happy family. Research have found that children raised in authoritative homes, characterized by warmth, engagement, autonomy support, and clear norms and expectations, experience fewer psychological and behavioral problems (Baumrind, 1989). Additionally, positive parent-adolescent relationships and supportive parenting have been linked to lower levels of depression and better overall functioning (Wille et al., 2008).

A Chinese study by Hai-Jiao et al. (2011) investigated the correlation between adolescent's mother and father relationships and their effect on adolescent emotional health, specifically depression. Researchers discovered that adolescents reported greater maternal support than paternal support and more conflict with mothers than fathers. The findings highlight the significance of parent-adolescent connection quality in reducing depressive

symptoms in adolescents. Nonetheless, there may be grade-specific differences in the association between parents-adolescent relationships and depression, and gender may mitigate this association. Only parent-adolescent conflict was found to predict depression in a positive and substantial way at the seventh-grade level. Perceived parental support at age 5 and 10 was associated with lower depression, while parent-adolescent conflict was associated with increased depression. Adolescent girls were more likely to be negatively affected by mother support and adolescent-father conflict than boys were, and vice versa. This research shows that gender has a moderating effect in understanding adolescent depression and that different types of relationships and exchanges between parents and adolescents are crucial.

Community Support. It has been noted that children at risk can benefit from having positive adult role models outside of the family (Bolig & Weddle, 1988; Fong et al., 2019; Garmezy et al., 1984; Masten, 2001; Rae-Grant et al., 1989). This can include teachers, counsellors, after-school managers, coaching staff, community center staff, psychologists, and even neighbors. In addition, the environments in which people live and the social structures that exist within a community each play an important part in fostering well-being. Early prevention and intervention, community safety, access to associated support services, outdoor recreational facilities and activities, adequate healthcare, economic opportunities for families, religious and spiritual groups, and social support networks outside the nuclear family may contribute to a protective community environment (Benzies & Mychasiuk, 2009; Shaffer & Kipp, 2014).

Furthermore, it is important to note that protective factors that successfully assist a child's development in adapting to and coping with life's hardships must be considered in the

context of their specific cultures and developmental stages. Different cultures and developmental stages each have their own unique characteristics that can shape the way a child interacts with protective factors such as the availability of a loving, supportive adult or access to safe, nurturing environments. Thus, the use of protective factors to successfully help children adapt and cope with life's hardships must be tailored to each individual situation, taking into account cultural context and developmental stage (Alvord & Grados, 2005). The International Resilience Project (Grotberg, 1995) emphasizes the fact that children's developmental and cognitive levels, in addition to their internal and biological vulnerabilities, have an effect on their capacity to make use of a variety of protective mechanisms. Furthermore, belief systems, education, skills, and training can all contribute to improving resilience (Benzies & Mychasiuk, 2009).

In addition, understanding the behavioral and emotional manifestations of children's psychological problems is crucial since it not only facilitates diagnosing but also guides in managing and addressing them effectively. Behavioral and emotional manifestations of children's psychological problems are crucial in effectively diagnosing, managing, and addressing them. A child's ability to control their emotions, communicate them to their careers, and engage in independent inquiry are all signs of psychological well-being. A child's future intellectual and social achievement, as well as his or her emotional and social development, can all be greatly aided by exhibiting these behaviors (Zeanah, 2019). However, the challenge is further compounded by the fact that many of these children and adolescents do not have access to the necessary specialized interventions. These interventions are often expensive and beyond the reach of those in poverty, leaving them without access to

the supports that could help them improve their circumstances (Burkey et al., 2018; Durlak et al., 2011; Green et al., 2013; Husky et al., 2011; Rathod et al., 2017). Implementing evidence-based treatment for these young children, as suggested by researchers, may help to prevent psychological issues later in life (Basten et al., 2016).

Social-Emotional Development and Role of Culture

As a child grows, their emotions are regulated by social development and their growing understanding of the environment. While distinct emotional facial expressions have been observed across cultures, there are cultural limits on the situations in which emotions are displayed (Shioiri et al., 1999; Sneddon et al., 2011). Children learn to disguise emotion as infancy and early childhood, in accordance with their culture's conventions (Cole, 1986). Emotional socialization for girls and boys often differs within a culture, with differing display rules guiding emotional behavior in the two genders, where females show advantage throughout the age groups in recognition of better emotional expressions (Abbruzzese et al., 2019; Hay, 2019; Olderbak et al., 2019).

The role of culture on emotions expression and understanding has been widely studied in the field of cross-cultural psychology. Researchers have found that culture plays a significant role in shaping the ways in which emotions are expressed and understood (Matsumoto et al., 2008). Different cultures have different norms and expectations for emotional expression, which can lead to variations in the ways that emotions are communicated and perceived. For example, some cultures may place a greater emphasis on the suppression of negative emotions, such as Japan, while others, such as the United States,

may encourage open expression of emotions (Ekman & Friesen, 1971; Matsumoto & Hwang, 2019).

Culture also influences the way that emotions are conceptualized and categorized. Different cultures have different models of emotion, which can lead to variations in the way that emotions are labeled and understood. For example, some cultures, such as those in East Asia, may have a greater number of terms for different shades of a particular emotion, such as shame and guilt (Kitayama et al., 2000), while others may have fewer terms for the same emotion. Culture also shapes the way that emotions are linked to particular social roles and relationships. For example, some cultures may expect men to express emotions differently than women, or to express different emotions based on their social status (Heine et al., 2002).

Additionally, culture has an impact on the way emotions are perceived, not only by others but also by oneself. For instance, some cultures may emphasize the role of cognitive or cognitive-based emotions such as guilt or shame, while others may focus on physiological or bodily sensations of emotions (Elfenbein et al., 2007; Engelmann & Pogosyan, 2013). Furthermore, because children are exploring and learning culturally acceptable social interactions during their early years of life, evidence-based programs targeting social emotional competence at an early age can help them learn better (McCoy et al., 2019).

Whether the self is seen as an individualistic or collective construct is a significant cultural difference. Individualism and collectivism are both present in the self-conceptions of the vast majority of human societies; what varies is the emphasis placed on each, as well as the contexts and interpersonal dynamics in which they are most salient (Green et al., 2005; Kim et al., 1994). In cultures that place an emphasis on independence and self-determination,

people tend to view themselves as fundamentally concerned with their own identities as persons, complete with their own set of needs, desires, opportunities, and privileges. There is a strong emphasis on autonomy over reliance. In contrast, collectivist societies tend to be communally based and reward members whose actions benefit the whole. Interdependence and cooperation are seen as the norm, as are unity, connectedness, working with others, and selflessness. In individualistic societies, skills like self-awareness and self-management are prized while in collectivist societies, competencies like social awareness and connection skills are valued more highly. In a person-centered approach, for instance, the ability to precisely identify and control one's own thoughts, emotions, and actions is emphasized. Those who live in more collectivist societies place a premium on empathy and social harmony. Cultural differences may also affect whether these skills are taught in small-group settings or through individual coaching (Durlak et al., 2015; Matsumoto & Hwang, 2019; Weissberg et al., 2015). We turn next to factors influencing each of the social and emotional competencies.

Self-Awareness. Self-awareness is significantly influenced by cultural structures. Individualists prefer to focus on their emotions, thoughts, and influences, but collectivists have a broader perspective that incorporates their interactions with others and the context. This difference manifests itself in a variety of ways, including how people from diverse cultures perceive their physique. For instance, a study by (Maister et al., 2015) indicated that while body image is more closely linked to physical appearance and social components of self-identity in East Asian societies, it is more focused on physical features in Western societies. Individualists are more prone to attribute behavior to internal tendencies, whereas

collectivists are more likely to explain behavior to environmental structures such as standards and roles (Suh et al., 1998). Suh and colleagues (1998) argue that in more individualistic cultures the self is seen as an "*autonomous, self-sufficient entity that is essentially independent from its surrounding interpersonal context*" (p. 482) and "*internal attributes, such as attitudes, emotions, preferences, and beliefs, become the diagnostic markers of one's identity*" (p. 483). Other studies show that cultural influences, particularly those that are individualistic or collectivist, influence how much attention young children pay to their own internal, personal self-image versus their more developed, social self-awareness (Durlak et al., 2015). These findings demonstrate that self-awareness is shaped by cultural structures and can vary across different societies and cultures.

Self-Management. Self-management is significantly influenced by cultural structures including attitudes, rules, and expectations. Matsumoto and colleagues (2008) discovered that cultural beliefs have an impact on general emotion regulation in a study involving 23 nations. Cultures that prioritize the long term and societal order are more prone to suppress emotional expression, whereas cultures that respect individuals are more inclined to exhibit them. The regulation of expressive behaviors depending on social circumstances is governed by cultural display rules, which are cultural norms learned at an early age (Matsumoto & Hwang, 2011). Something as simple as eye contact also is rule governed. In an Asian culture, if a woman avoids looking someone in the eyes while conversing, she is not demonstrating a lack of interest or low self-confidence; rather, she is being polite, respectful, and reasonable, whereas an individual who makes eye contact is perceived as an affront or challenge to an authority (Scudder, 2012). Similarly, assertiveness may actually mean different things in

different cultures (Pacquiao, 2000). People in Malaysian, U.S., and Filipino cultures are more likely to speak up clearly when they disagree than are people in Japanese culture. This shows that different cultures have varying attitudes towards self-expression, and this leads to varied reactions to expressiveness among people from different cultures.

Social Awareness. Unlike self-awareness and self-management, social awareness focuses on the relationships between and among people. Cultural awareness, in general, is a basis of communication, and it requires the cognitive ability to step back from us and become aware of our own cultural values, beliefs, and perceptions, as well as those of individuals around us. Why do individuals behave in this manner? What are people's perspectives on the world? Why do people react the way they do? This is a structural aspect since evaluating or judging anything requires a cognitive system to function effectively. Cultural awareness is especially important when we engage with people from various cultures. For example, an Orthodox Jewish man would not shake hands with a female other than his wife on Friday at the start of the Sabbath (Noble et al., 2009). This rule structure can be quite unfamiliar to people who do not understand its cultural basis. As may be apparent from the previous discussion, collectivist cultures are more integrated and operate more on consensus of norms, with disapprobation toward individuals who deviate from shared norms. Individual behavior is judged by others, not by the individual, and individuals seek approbation from others. Thus, social awareness is very highly valued in these cultures. Other studies point to differences in “face saving” or the practice of interaction that allows people to feel proud of themselves. In Eastern cultures, rules exist to guide interactions toward face saving, which is less valued in Western cultures (Tse et al., 1988). Additionally, social structures such as

power dynamics can impact social awareness. Those with less power tend to have better perspective-taking abilities as they need to adapt to those with more power. Power also influences nonverbal behaviors such as eye contact (Durlak et al., 2015; Guerrero et al., 2008).

Relationship Skills. Relationship skills are crucial for maintaining healthy and productive interactions with others. These skills can encompass a wide range of behaviors such as effective communication, empathy, and assertiveness. However, the development and expression of these skills can be influenced by cultural factors. Asian cultures have been found to place a strong emphasis on collectivism and interdependence, which can shape the way that individuals interact with others. For example, in a study by Matsumoto and colleagues (2008) involving 23 nations, it was discovered that cultures that prioritize the long-term and societal order tend to suppress emotional expression. This contrasts with cultures that respect individualism and self-expression.

In Pakistan, a collectivistic culture, the emphasis on maintaining social harmony and avoiding conflict can lead to a reluctance to express disagreement or assert oneself in interactions. This can be seen in the way that direct confrontation is often avoided in favor of indirect communication and the use of indirect language (Hussain, 2017). Additionally, the traditional gender roles in Pakistani culture can also play a role in shaping relationship skills. For example, women may be expected to be more passive and submissive in interactions with men (Raza, 2012). However, it's important to note that cultural influences on relationship skills are not fixed and can vary depending on the context and individual. For example, research has shown that as individuals become more acculturated to Western

culture, they may adopt more individualistic values and behaviors, which can lead to a greater willingness to express oneself and assert oneself in interactions (Hofstede, 2001).

Responsible Decision Making. Structural factors also affect the choices people make. Although people in all cultures are likely to value decisions that fulfill individual needs and promote community norms, standards, and outcomes (Mann et al., 2010), those in individualistic cultures tend to value more highly the decisions that promote individual needs, whereas those in collectivist cultures value those that promote group outcomes. Similarly, Triandis (2018) argues that collectivists are socialized toward responsibility taking. Western students tend to place greater emphasis on personal or individual decision making skills, whereas those in Eastern or collectivist cultures such as Pakistan tend to view decision making as a shared activity and rely on the opinions of the group (Mann et al., 2010). Suh and colleagues (1998) reported that Westerners typically form judgments based on internal assessments and feelings criteria valued in individualistic cultures. Thus, there appear to be cultural differences in responsible decision making both in terms of who makes decisions (self or group) and the criteria for judging decisions (Durlak et al., 2015). Asian cultures such as Pakistan, have been found to place a strong emphasis on collectivism, tradition, and respect for authority, which can shape the way that individuals make decisions.

In Pakistan, the collectivistic nature of the culture can lead individuals to prioritize the needs and opinions of the group over their own, which can make it difficult for them to make autonomous decisions. Additionally, the traditional and hierarchical nature of Pakistani society can lead individuals to rely heavily on the guidance and approval of authority figures, rather than developing their own decision-making skills (Raza, 2012). Furthermore, the

traditional gender roles in Pakistani culture can also play a role in shaping decision-making skills. For example, women may be expected to be more passive and submissive, which can limit their autonomy and ability to make their own decisions (Raza, 2012). Similarly, Bilwani & Anjum (2022) showed that women tend to have a stronger concern for care and empathy, and men expect women to care for others. However, culture may play a bigger role in shaping these ethics of care rather than gender. Both men and women believe they have a responsibility to care for others due to societal norms of collectivism.

The trajectory of children's internalizing and externalizing difficulties during early life is closely correlated with their level of social and emotional competence. (Sun et al., 2022). Considerable literature demonstrates that children's social emotional competence serves as potential protective factors for challenging life events and are not limited to immediate wellbeing (Sharp et al., 2012). As there is a dearth of studies focusing on primary school children in our area, we aimed to evaluate existing estimates of the prevalence of internalizing and externalizing disorders among this population. An additional objective of this research was to investigate the links between social and emotional competence, externalizing and internalizing disorders, and young Pakistani school children.

Social Emotional Learning (SEL)

Social Emotional Learning (SEL) has been defined in several ways (Humphrey et al., 2011). Frey et al., (2019) defined it is a broad term that refers to *"a collection of social, emotional, behavioral, and character abilities that contribute to success in school, the workplace, relationships, and the community"*(p. 7). Current efforts to fulfill the social and emotional needs of students may be traced back to Waters and Sroufe's (1983) definition of

competence as the ability *"to generate and coordinate flexible, adaptive responses to demands and to generate and capitalize on opportunities in the environment"* (p. 80). In other words, competent individuals are adaptive, appropriately respond to situations, and actively seek out possibilities in their communities. Consequently, it appears that educational institutions should spend resources to develop this skill set in children (Frey et al., 2019). Furthermore, Durlak and his colleagues (2011) defined social emotional learning as "*the ability to recognize and manage emotions, set, and achieve positive goals, appreciate the perspectives of others, establish, and maintain positive relationships, make responsible decisions, and deal constructively with interpersonal situations* (p. 406). Therefore, social emotional learning refers to the process of developing the knowledge, skills, attitudes, and behaviors that are necessary for individuals to effectively understand and manage their own emotions, as well as navigate relationships with others. Social emotional learning is grounded in the idea that emotional and social competencies are essential for personal and academic success, as well as overall well-being.

SEL programs typically focus on five core competencies: awareness of own's emotions, regulations and self-management, awareness of social cues and emotions, interpersonal skills, and adequate ability to make sound decisions (CASEL, 2013). These competencies are interconnected and support each other in fostering an individual's academic and professional success in life. SEL can be implemented in different settings such as schools, workplaces, and communities. They can be integrated into the curriculum, or delivered as standalone programs (Barlas et al., 2022; Lawson et al., 2019).

Social emotional learning programs may include behaviors such as role-playing, journaling, and discussions to help learners practice and apply their skills. Research suggests that social emotional learning programs can lead to a variety of positive outcomes, such as improved academic achievement, increased self-esteem, and reduced behavioral problems (McClelland et al., 2017). social emotional learning can be an effective way to promote well-being and resiliency, as well as to help individuals develop the skills they need to succeed in school, work, and life (Anticich et al., 2013; Arace et al., 2021; Robson et al., 2020). Overall, social emotional learning is a holistic approach that aims to foster the emotional, social, and cognitive well-being of individuals by developing the skills and competencies that are essential for personal and academic success. It is a vital aspect of education that can help individuals to build strong relationships, make responsible decisions, and achieve personal and academic goals.

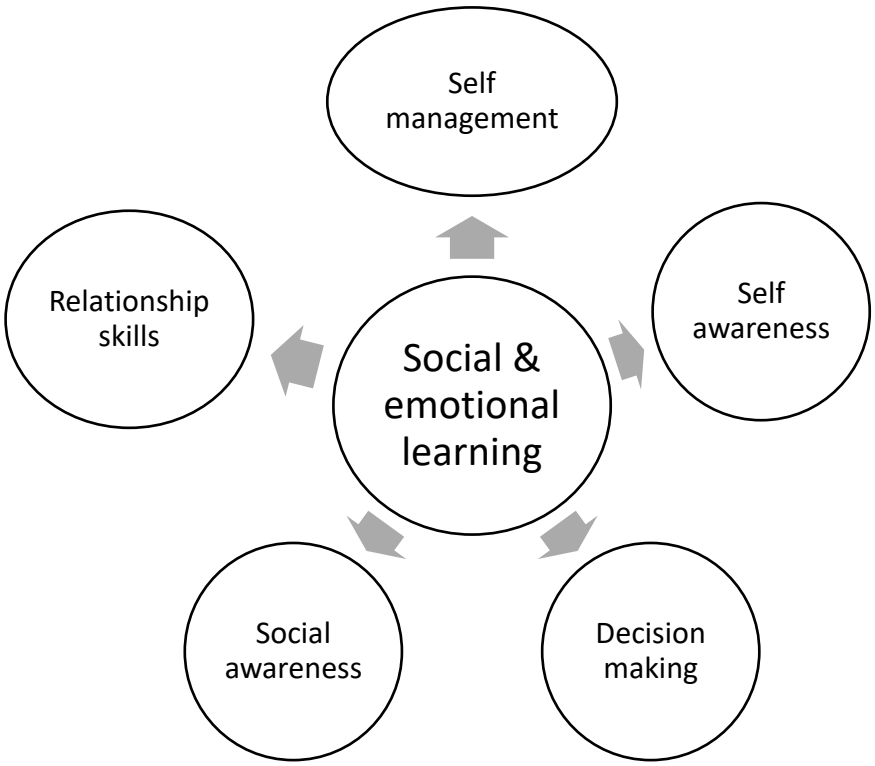
Theoretical Models for Social Emotional Competence

CASEL Model

The Collaborative for Academic, Social, and Emotional Learning (CASEL) (2013) identified five interconnected cognitive, affective, and behavioral competencies (see figure 2). Social emotional development, as defined by the CASEL (2013), is "*the process by which children and adults acquire and effectively use the knowledge, attitudes, and skills necessary to understand and control emotions, set and achieve positive objectives, feel and exhibit empathy for others, establish and sustain meaningful relationships, and make responsible decisions*."

Figure 2

CASEL Five Core Competencies.



Note. CASEL five competencies. *Adapted From CASEL Guide* (2013)

1. **Self-Awareness.** - the ability to evaluate one's own feelings or emotions, values or beliefs, and behaviors.

   According to Jones and colleagues' (Jones et al., 2018) description, "*Children who are able to effectively manage their thinking, attention, and behavior are also more likely to have better grades and higher standardized test scores*" (p. 15). Jones and colleagues (Jones et al., 2017) also noted that "*children must learn to recognize, express, and regulate their emotions before they can be expected to interact with others who are engaged in the same set of processes*" (p. 16). Recognizing emotions requires more than merely knowing labels; students must also learn to appropriately apply those labels to themselves and others. The

ability to do so grows via practice, particularly when that exercise includes several opportunities to evaluate their emotional state and communicate about how they and others are experiencing. Students who are skilled at emotional self-regulation may appropriately evaluate their current emotional state, estimate how they will feel for the duration of the day, and take attempts to preserve their homeostasis (Frey et al., 2019).

Students who have great cognitive self-regulation can tell which difficulties they can tackle on their own and which problems (or when within the problem-solving attempt) they will require help with. The critical nature of help seeking, and avoidance becomes obvious when we consider that children who seek assistance every time, they face difficulties or adversity do not develop the perseverance and grit necessary to persevere and become autonomous learners. Or that students who continually refuse help (even when their teacher knows that help is the only way to success) can frustrate both themselves and those who teach them. Their refusal to support is based on a variety of behaviors and attitudes, such as avoiding work, being in denial, and having automatic responses to situations that make them feel bad. Getting these children back on track may need a coordinated effort from teachers who remind them of academic recovery options, administrators who meet with them individually, and family members who encourage the development of more productive habits. (Frey et al, 2019).

2. **Social Awareness.** The ability to view situations from a different perspective, respect the social and cultural norms of others, and celebrate diversity.

Social skills may include prosocial behaviors such as listening, helping, seeking help, caring and sharing (Denham, 2006). Prosocial abilities contribute to social competence and

are necessary for, but not the same as, developing and maintaining relationships, some of which develop into friendships. Empathy, or the ability to comprehend the emotions of others, is an additional major element of relationship development and prosocial behavior. Although there is little evidence that empathy can be taught directly, it can be developed through exposing children to compassionate responses. According to some suggestions (Gerdes et al., 2011; Pianta et al., 2012; Willis, 2016) for fostering empathy, teachers should be consciously aware of their own actions, include literature that allows students to explore empathy for historical and contemporary characters, and model compassionate responses to their students. Teachers can also adopt methods that are likely to result in children gaining empathy, such as labelling and discussing students' emotions, teaching nonverbal remedies, and encouraging sympathetic behaviors. (Frey et al., 2019).

3. **Relationship skills.** The ability to establish and sustain positive relationships with peers, teachers, families, and other groups.

Relationships necessitate the development of a different set of abilities, including communication, empathy, and ways for healing broken relationships (Frey et al., 2019). Sharing resources and materials willingly can be difficult for some children, but it is important to promote and practice as a core skill for strong relationships. Consider how primary-aged children view partial resource sharing as a sign of mutual friendship (Liberman & Shaw, 2017). Similarly, teamwork is described as a 21st-century's one of the top five skill or as a "soft skill" in the workplace (Melnichuk, 2022). Teamwork requires a variety of other social and emotional abilities, such as positive relationships, communication, self-regulation, goal setting, and taking responsibility. Many childhood activities demand teamwork (e.g.,

sports, music, theater, play). In school, the value of teamwork is often demonstrated through a variety of group projects that necessitate reciprocal participation to be completed (Fisher & Frey, 2014).

Positive social skills and relationships, which are necessary in the classroom and in life, are contagious. Negative ones, on the other hand, are not (Marsden, 1998). Poor interpersonal interactions spread quickly and hinder learning. This is why there must be an investment in teaching social skills and healthy relationships at both the individual and classroom levels. A study looked at how a student's well-being is affected by their classmates' well-being. It was conducted on Filipino secondary school students, with two studies conducted in total. Both studies found that students in classes with higher levels of life satisfaction and positive affect were also more likely to have higher levels of life satisfaction and positive affect at later time points. The study found that a student's well-being is partly dependent on their classmates' well-being, showing the importance of considering classmates' well-being when assessing and promoting a student's well-being in the classroom. These results suggest that creating a positive classroom environment may have a positive impact on the well-being of students, and that interventions that target the well-being of a whole class may be more effective than those that only target individual students.

Effective communication is another essential ingredient of healthy relationships. Through good communication, relationships with peers, instructors, and the school are established, deepened, and maintained. Communication is also an important tool for learning. As part of their education, students are expected to read, write, speak, and listen. There are also specific communication standards (commonly referred to as language arts) that direct instructors'

efforts toward developing this component of learning. However, many people, both young and old, struggle to communicate, particularly when it comes to expressing ideas, emotions, and reactions to emotionally charged situations. It is possible that this is due to the fact that certain schools restrict dialogue to specific, safe themes. Communication cannot be restricted to academic discussions; students must also discuss social problems. Students can learn about their own and other people's points of view through communication circles. Circles are used in "restorative practices" work (Smith et al., 2015) and can be used as a basis for fixing harm after it has occurred. A student who has not had experience sharing one's feelings in the low-stakes environment of communication circles, for example, may be unwilling to participate in higher-stakes conferences where damage or harm has been done (Frey et al., 2019).

4. **Self-Management.** A set of abilities that includes self-motivation, goal planning, personal organization, self-discipline, impulse control, and the use of stress-reduction techniques.

In general, self-management refers to deliberate, intentional, and metacognitive behavior, motivation, and cognition directed toward a specified goal. *"Students are self-regulated to the extent that they are metacognitively, motivatorily, and behaviorally active participants in their own learning process*" (Zimmerman, 1989, p. 329). In other words, cognitive self-regulation necessitates that students engage in learning-related activities. They take on more responsibility for their learning and are active participants in the processes and approach taken by their instructors. Zimmerman (1989) also highlights the importance of unique strategies used by self-regulated learners. In his own words, *"Self-regulated learning techniques are acts and processes aimed at acquiring information or skills that involve learners' notions of agency, purpose, and instrumentality. They include strategies such as*

organizing and synthesizing knowledge, self-consequating, information seeking, and practicing or using memory tools.".

Stressed students perform worse, forget more of what they've learned, and intentionally avoid thinking about the material outside of the classroom. The findings of Ramirez and his colleagues (Ramirez et al., 2017), who investigated mathematics classrooms and reported that classroom stress promotes motivated forgetting of mathematics knowledge. In another study (Vogel & Schwabe, 2016), it is highlighted that worse, high levels of discomfort during learning are related with a reduced capacity to absorb new information.

5. **Responsible Decision Making.** The ability to make decisions that consider both one's own and others' wellbeing.

Children and adolescents frequently require assistance and direction in recognizing and resolving difficulties. Academic or social difficulties can be overwhelming to them, resulting in paralysis. Of course, this has developmental implications as well. Young children benefit from learning the power of an apology as a means of resolving a conflict. However, as children grow older, their difficulties can become more complex (Frey et al., 2019). Decision-making is intimately linked to problem-solving abilities. Within the process of addressing an issue is the ability to consider various choices or courses, choose one, and then act.

Our proposed universal intervention was founded on the same five principles as CASEL's social emotional learning framework, which was implemented in this study. As a result, new study evidence of these five important competencies is presented, stressing their significance in relation to emotional and behavioral disorders in schoolchildren. Research indicates that

time spent on social emotional learning can enhance academic achievement (e.g., Corcoran et al., 2020; Durlak et al., 2011; McClelland et al., 2017). Students learn more when they develop prosocial and self-regulation capabilities (Schonert-Reichl et al., 2012).

Wallace Foundation Model

The approach of the Wallace Foundation (Jones et al., 2018) identified three social emotional learning domains: First, cognitive regulation, inhibitory control, working memory and planning, as well as cognitive flexibility, comprise cognitive regulation. Second, emotional processes consist of emotion recognition and expression, emotion and behavior management, and empathy or perspective-taking. And third, recognizing social cues, resolving conflicts, and engaging in prosocial behavior are examples of social and interpersonal abilities.

Integrated Social Emotional Learning Model

The model proposed by Frey and colleagues (2019) categorizes the various components of Social and Emotional Learning (SEL) into five broad categories, each with its own set of related concepts and skills. The first category is Identity and Agency, which deals with the sense of self that children and adolescents develop and their confidence in their ability to have an impact on the world around them. Factors that influence this category include self-assurance, self-efficacy, growth mindset, and resilience. Self-assurance refers to the willingness to take a chance on something new, while self-efficacy is the belief in one's own abilities. A growth mindset is characterized by perseverance and grit, and resilience is the ability to bounce back after experiencing setbacks. The second category is Emotional Regulation, which focuses on the skills that positively help to regulate emotions. These

include the ability to recognize and express emotions, recognizing one's own emotional state, managing impulses, and delaying gratification, recognizing and dealing with stress and using adaptive coping strategies. Emotional regulation is crucial for successful social interactions and for maintaining positive relationships. The third category is Cognitive Regulation, which deals with how students learn and develop their knowledge and abilities. This category of social emotional learning, which is the one that most directly overlaps with the academic education provided to children daily, focuses on developing students' abilities in the areas of metacognition, sustaining attention, goal setting and monitoring, problem solving, decision making, seeking help, and keeping organized. The fourth category is Social Skills, which is important for having successful interactions both within and outside of the classroom. A large degree of adult guidance is required for students to learn how to build, maintain and repair relationships. Prosocial skills, such as sharing and teamwork, connection building, effective communication, developing and expressing empathy, healing relationships, and civic spirit, are very important for students to learn and apply.

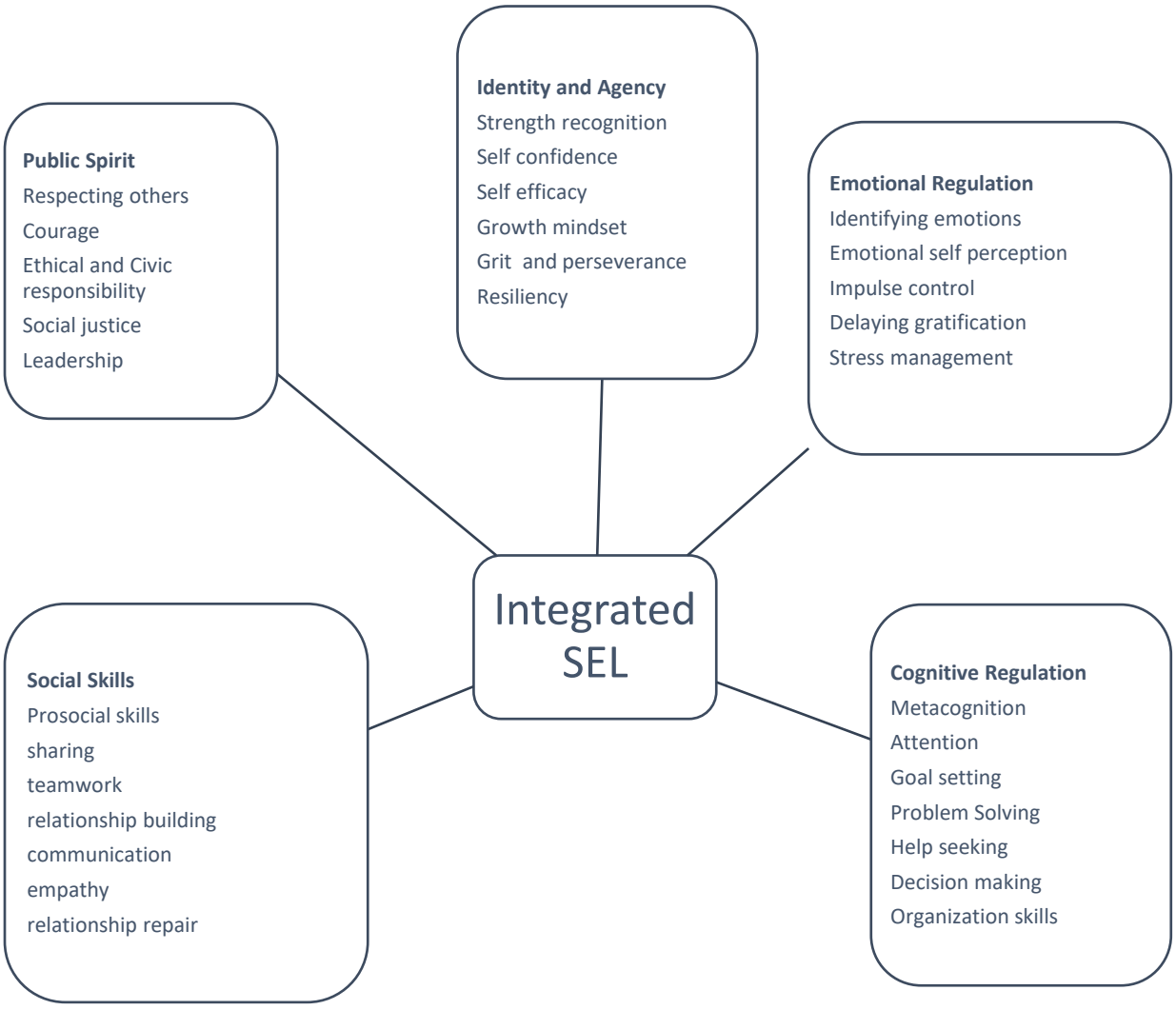
Lastly, we have the “Public Spirit," which is essential to building and maintaining a society in which everyone is treated with dignity and respect. People's contributions to and stewardship of their communities demonstrate public spirit. Respect for others, bravery, knowing one's ethical responsibilities, knowing one's civic responsibilities, seeking material improvements in the lives of others via social justice, service learning, and leadership, and so on are all important factors in shaping students' public spirits.

In conclusion, each category includes a set of related concepts and skills that are crucial for the development of children’s overall well-being and success. The model emphasizes the

importance of adult guidance and opportunities for children to practice these skills to develop their abilities and prepare them for future success.

Figure 3

Social Emotional Learning Integrated Model



Note. Integrated SEL model adapted (Frey et al., 2019, p. 22)**.**

Prevention Science

Gustafsson highlighted the mental health promotion as per definition of World Health Organization (2008) as: *"Aims to protect, support, and sustain emotional and social wellbeing and create individual, social and environmental conditions that enable optimal psychological and psychophysiological development and improve the coping capacity of individuals. Mental health promotion refers to positive mental health rather than mental ill health" (p.34)* (Gustafsson, 2019; WHO, 2008). Promoting health, then, is the process of giving people the tools they need to take charge of their health and make positive changes. An individual or community can only achieve full mental, emotional, and social health when it is helped to recognize and pursue its own unique goals for meeting its members' individual needs and influencing or mastering its immediate surroundings. Therefore, health promotion extends beyond the idea of healthy lifestyles to that of overall health and wellbeing, and it is not solely the responsibility of the health sector (WHO, 2008). Therefore, preventing mental health issues requires a combination of various strategies.

Gustafsson (2019) further explained that as a protective concept, the idea of "prevention" in psychology developed at the turn of the 20th century, with its origins in the field of psychiatry. In the latter half of the century, however, it has been given substantial consideration within the field of developmental psychopathology. Those involved in the field of prevention science pay close attention to the diversity of biological, psychological, and social aspects that all play a part in the emergence of psychological disorders. The goal of preventive interventions is to interrupt the processes that lead to dysfunctional behaviors by lowering certain risk factors and raising protective ones. Fundamentally, preventive science

is an interdisciplinary field that combines basic and applied research to determine the causes of problematic growth and to design effective interventions (Coie et al., 1993).

For a long time now, the field of preventive science has been characterized by using a wide range of criteria and from a wide variety of perspectives. First, the concept was seen through the lens of public health, with an emphasis on primary, secondary, and tertiary prevention measures. Health promotion is advocated for by Cowen (1983), who defines prevention as more than only the avoidance of mental illness. He proposed these five important components in The Primary Mental Health Project (PMHP): focusing on very young children, engaging in active early identification and screening, utilizing nonprofessional assistance to expand services, and developing new professional roles (Cowen et al., 1983).

Preventive measures are preferable in this situation since they save money, help children feel better sooner, and can reach a wide audience in a short amount of time (Lowry-Webster, 2001). Preventive measures in the field of mental health care have dual goals. From a medical standpoint, they can improve long-term prognoses by identifying and addressing individual risk and protective variables. The economic and societal costs of sickness tend to be much higher than the expenditures associated with preventive measures (Beardslee et al, 2011). There are typically three categories of prevention. Preschools incorporate universal preventive measures because their goals encompass broader populations like the preschool class. Preschools and families in high-crime neighborhoods are only two examples of the at-risk communities targeted by selective prevention programs. Children whose parents are in the early phases of substance dependence, as well as children with identified/diagnosed

psychiatric issues, are prime candidates for indicated prevention (Public Health Agency of Sweden, 2016; WHO, 2008).

Early Intervention

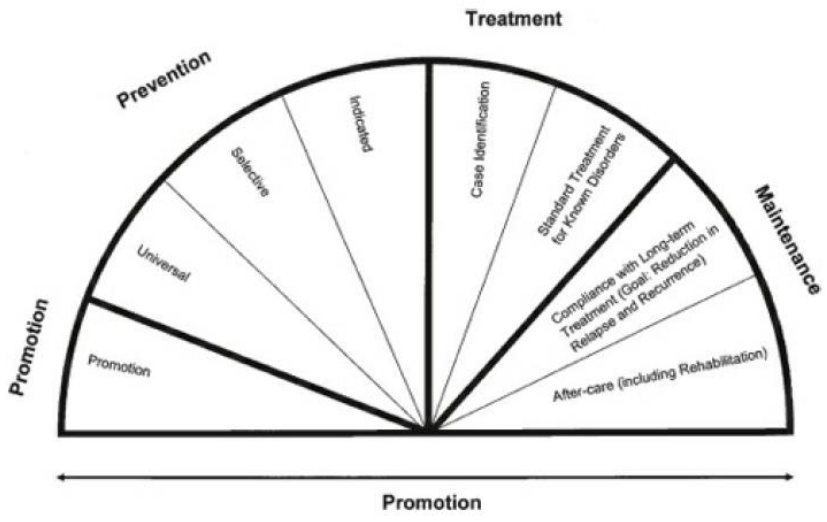
Infant mental health services aim to alleviate any distress a child may be experiencing, as well as to lower the likelihood of unfavorable outcomes (such as academic failure, delinquency, psychiatric illness, social isolation or conflict, developmental delays, and deviant behavior), and to increase the likelihood of positive outcomes by fostering greater social competence and resilience. Interventions aimed at achieving these overall aims should (1) improve the capacity of carers to provide optimal care for young children; (2) provide access to supplementary services for families who need them; and (3) improve the capacity of non-family carers to recognize and respond to, and ultimately avoid, social and emotional difficulties in young children. Infant mental health focuses on establishing or improving connections because of the impact they have on a young child's development and conduct. The aim of intervention can be the child's behavior, the parent's behavior, or the social setting in which the child is developing.

Figure 4 illustrates the range of infant mental health services based on the mental health intervention spectrum provided by the National Research Council and the Institute of Medicine (Zeanah et al., 2004), providing an updated conceptualization. The National Research Council and the Institute of Medicine (2009) distinguish not only between preventive and curative care, but also between promotion and maintenance care in their framework. Infants and their families may access services at any point along the continuum,

may require services from multiple points at once, or may progress through the different levels of services over time.

Figure 4

Mental Health Intervention Spectrum,



Note. Mental health intervention spectrum *adapted by Zeanah* (Zeanah, 2019)

Recent work has highlighted how prospective, longitudinal studies of early childhood psychopathology have revealed connections to family history, risk factors, and biological differences, and how these characteristics show patterns of continuity and discontinuity that are remarkably similar to those found in older children and adults (Zeanah, 2019). Young children exhibit persistent (i.e., homotypic and heterotypic) social and emotional symptoms and patterns that are similar to those observed in older children (Briggs-Gowan et al., 2006; Bufferd et al., 2018). In fact, it appears that the stability of symptoms across middle childhood is essentially equivalent to that of middle childhood itself (Briggs-Gowan et al., 2003). Considering these results, it is no longer appropriate to presume that early-onset symptoms are invariably or even generally temporary. In addition, there is evidence suggesting that earlier interventions are more fruitful, at least in certain areas of growth.

Earlier intervention may be more advantageous for three reasons, as proposed by Dishion and coworkers (Dishion et al., 2008). First, interventions made early may be more successful at changing children's behavior before it becomes more severe. They claimed that it is simpler to address compliance and oppositional behaviors than it is to address deception, theft, or pro-active hostility because these are all problems that can be seen as being external to the individual. Second, younger parents have the potential to be less stressed and more open to change because they themselves are younger than their children. Third, during the early years of their children's lives, parents and carers have a more positive outlook on the prospect of their relationship evolving. Converging evidence from the fields of economics, neuroscience, and child development, as noted by Knudsen and colleagues (Knudsen et al., 2006), suggests that investing in children at an early age yields better financial returns. They give strong evidence that early intervention is more likely to be effective, citing papers from all three fields of study, and so providing a basis for policies that promote a wide range of early childhood activities. As a result, we need to think about the various forms of preventive care for infants' mental health.

In the last two decades, there has been a shift from a focus on treating mental health problems to a focus on preventing and intervening early, with an emphasis on the well-being of children and adolescents (Greenberg et al., 1999). Connolly and Bernstein (2007) propose that early intervention and prevention should be the preferred approach for effectively addressing anxiety problems in children and adolescents. In a recent review of preventative literature, Bienvenu and Ginsburg (2007) conclude that early-life prevention treatments are required to successfully reduce the burden of anxiety disorders.

Top researchers in the field of mental health have, thanks to recent advancements, begun to grasp the complexity of the etiology and progression of mental health diseases, as well as the breadth of possible interventions (Rapee et al., 2005). Consequently, the field of mental health literature has adopted a continuum model for classifying interventions, placing them in pre- and post-treatment phases (Mrazek et al., 1994). Three sorts of preventive measures are discussed: universal, selective, and suggested.

From a universal standpoint, interventions are implemented across a whole population without considering the specific risk posed by each member of the community. Contrarily, indicated interventions focus on those who have already begun to show signs or symptoms of a problem, whereas selected interventions target people who have risk factors for a specific disorder (Rapee et al., 2005; Dohl, 2013). The social-emotional learning method emerged as a unique paradigm for preventing emotional and behavioral issues in children and establishing positive competences in children in safe and learning environments of schools through the integration of concepts from developmental psychopathology and preventive research (Greenberg et al., 2017).

Social Emotional Competence and Early Intervention

Resilience is a subset of social competence that is gaining popularity. It focuses on the development and study of infants and young children who are able to thrive despite being at a high risk, who can continue to function competently despite adverse conditions, and who can overcome traumatic experiences (Masten, 2014; Zeanah, 2019). Children's social and emotional competence is a hallmark of healthy early childhood development and an essential set of skills for later life. Helping children build social and emotional skills can reduce their

chances of developing mental health issues later in life (Rubin et al., 2007). Davidson argues that prefrontal cortex development, which is facilitated by social-emotional training, can lead to improvements in executive functions crucial to academic success (Soni, 2014). According to the findings of a meta-analysis conducted in 2011, students in grades K-12 who were provided with social-emotional education had an average score that was 11 percentile points higher on standardized achievement tests. The significance of this effect is not entirely obvious (Durlak et al., 2011).

Various authorities also advocate for the need of nurturing children's social and emotional development from a young age. Significant changes in social-emotional development and understanding appear to occur in early childhood, notably between the ages of 3 and 6 (Ashiabi, 2000). Rubin and colleagues (2007) described that children's social skills can be defined as their capacity for social interaction, the attainment of social goals, the development and maintenance of relationships, and the acquisition and maintenance of the acceptance of peers. Children need to learn how to control and express their emotions, as well as how to apply this information in acceptable ways while interacting with their peers and adults (Saarni, 1999). To have emotional competence in early childhood means that a child can express and manage their emotions in ways that are in line with their parents' and culture's norms, and that they can reflect on the antecedents and outcomes of their own and others' feelings (Saarni et al., 2007).

Teacher’s Role in Delivering Social Emotional Learning Interventions

Teachers must teach students how to make decisions about the choices and problems they face. A student who has excellent content knowledge, but poor social or problem-

solving skills is a student at risk of being manipulated. Similarly, students who are able to predict possible consequences of their actions may be better equipped to make good decisions (Frey et al., 2019). Importantly, educators place a premium on fostering students' social and emotional development. For instance, a national survey of over 600 educators (Bridgeland et al., 2013) found that educators at all levels agree that students can learn social and emotional skills, that doing so will benefit students from affluent and impoverished backgrounds alike (97%), and that it will have a positive impact on students' persistence through high school (80%), standardized test scores (80%), and overall academic performance (80%). Teachers also acknowledged a need for significant assistance from district and school authorities to effectively adopt and promote social emotional learning. Therefore, there is a need for a systemic strategy that promotes implementation at the federal, state, district, and school levels, as instructors are equipped to promote social emotional learning.

Another element is student conduct (Ferguson et al., 2012). Disorders with student discipline, classroom management, and mental health become evident early in a teacher's career, and first-year teachers often feel unqualified to properly manage their classrooms and often misdiagnose common mental health problems like anxiousness in their students (Koller & Bertel, 2006). Positive classroom management strategies that deter aggressive student behavior and foster a productive learning environment have been shown to be more likely to be proposed and implemented by teachers who have received training in the behavioral and emotional factors that impact teaching and learning in the classroom (Norris, 2003). Institutional elements that may impact social emotional learning promotion need to be

addressed to understand the conditions under which the effective promotion of students' social emotional learning and development can occur. In light of this, it is crucial to consider whether or not preservice teacher education equips future educators with the knowledge, skills, and experiences necessary to facilitate students' social and emotional development in the classroom through well-managed learning environments that prioritize students' emotional well-being (Durlak et al., 2015).

School Based Interventions

Beginning in the latter half of the nineteenth century, philosopher John Dewey argued against the rise of exclusively vocational elementary schools. He believed that education should focus on developing students' "plasticity" (the capacity to take in new information and be changed by it) and "interdependence" (the belief that all people are interconnected and dependent on one another) (the ability to work with others). Taking Dewey's idea, a step further, social-emotional learning posits that all emotions, not only the "good" ones, can be adaptive if handled correctly. When it comes to studying or editing a written document, studies suggest that people in a bit sad mood are more detail-oriented, whereas people in a slightly furious state are better at telling the difference between convincing and weak arguments. Thus, the goal of a social-emotional learning curriculum is not to dull the impact of emotional experiences but to guide them, teaching students how to ride the waves of challenging emotions rather than being swept away by them (Durlak et al., 2015; Macklem, 2020; Weissberg et al., 2015).

Many of these children don't get mental health treatments, despite the fact that early detection and intervention is widely acknowledged as crucial. A life course perspective and

the incorporation of interventions into children's already existing social and health systems are necessary to increase the scope of services (Hamdani et al., 2021). Schools are a part of a system that helps kids of all ages and gives them the chance to improve their mental health amid boosting their chances of succeeding in school and their social lives (3–6). Problems can be spotted and remedied at a more manageable and affordable stage of development with the help of school-based programs.

According to Weissberg (2015), there are four ways to implement social emotional learning in schools: Teach skills; create opportunities to implement skills; influence student attitudes; and recognize pro-social behavior. Success in later life was found to be substantially connected with a child's degree of mental well-being, according to a study quoted by Elias (Weissberg et al., 2015). This study was conducted in 2011 utilizing data collected on 17,000 British infants who were tracked for 50 years. Similar research has shown that children who acquire these traits are less likely to experience mental health issues later in life, including depression and anxiety. Moreover, there's reason to believe they'll be healthier in body and mind. According to Elias (2015), a classroom can't run smoothly unless there are people with strong emotional and social skills present.

In addition, studies have shown a correlation between classroom kindness and better grades (Tsolou & Margaritis, 2013). Nevertheless, poor academic performance is correlated with behavioral issues (Hyland et al., 2014). Research has also focused on developing interventions to promote children's social and emotional learning and providing evidence that these abilities improve the children's academic and social outcomes (Durlak & Weissberg,

2011). Bywater and Sharples (2014) argued that better results may be achieved by employing a mix model approach that incorporated both universal and individualized interventions.

Preschool PATHS (Promoting Alternative Thinking Strategies)

The PATHS Program (Promoting Alternative Thinking Strategies) is an evidence-based program designed to improve the social and emotional well-being of children and young individuals. The program aims to enhance children's self-control, self-esteem, empathy, and problem-solving skills, as well as reduce aggressive and disruptive behavior (Kusche & Greenberg, 1994). The program is typically implemented in schools and is delivered through a combination of classroom activities and small group sessions. The curriculum is divided into two parts: the first part focuses on developing social and emotional skills, while the second part focuses on applying these skills to real-life situations. The program is designed for children and young people aged between 5 and 12 years old but can be adapted for older age groups. The program has been extensively researched and has been shown to have positive effects on children's social and emotional development, as well as reducing aggressive and disruptive behavior (Domitrovich et al., 2007; Inam, 2016). The PATHS program is an effective way to support children's social and emotional well-being and can help to improve the overall learning environment in schools.

A number of studies have been conducted to evaluate the effectiveness of the PATHS Program. An earlier study by Domitrovich and colleagues evaluated the effectiveness of the PATHS program in promoting social emotional competence and reducing behavior problems in children in a randomized controlled trial. Results revealed that the children in the intervention group had better emotion knowledge skills and more social competence

compared to peers. Furthermore, teachers reported that intervention children were less socially withdrawn at the end of the school year compared to control group children (Domitrovich et al., 2007). Similarly in another study (Greenberg et al., 1995) targeting both mainstream and children with special needs showed PATHS program's effectiveness in the children's emotional development. 286 second- and third graders were assessed in 30 classes in a randomized intervention school trial. 30% of children were in self-contained special needs classrooms and 70% in mainstream education. Study findings showed that both typically developing and high-risk (special needs) children benefited from the intervention in terms of increased emotional vocabulary, confidence in their ability to control their emotions, and a deeper awareness of how emotions shape their personalities. In addition, a study by Domitrovich, Cortes, and Greenberg (Domitrovich et al., 2007) evaluated the effectiveness of the program in improving academic achievement. The study found that the program had a positive effect on children's academic performance, with children in the program scoring higher on standardized tests of reading and math. Finally, another metanalysis (Durlak et al., 2011) evaluated the effectiveness of the PATHS program in improving social and emotional skills, as well as reducing problem behavior, among young people. The study found that the program was effective in improving children's social and emotional skills, as well as reducing problem behavior, including aggressive and disruptive behavior.

In general, the literature suggests that the PATHS Program is an effective way to improve children's social and emotional well-being and reduce externalizing behaviors such as aggressive and disruptive behaviors. The program has also been shown to have a positive effect on academic achievement and social emotional competence. Hence, the PATHS

program showed promising results for promoting the social and emotional well-being of children and young people.

Tools of the Mind Program

The Tools of the Mind program (Bodrova & Leong, 2007) uses implicit tactics to promote social-emotional abilities. Vygotsky's model, upon which Tools is founded, postulates that children learn to control their impulses in the course of social interactions, especially through sociodramatic play. Bodrova and Leong (Bodrova & Leong, 2007) mentioned that a key component of Tools is a daily 50-minute period of pretend play in which teachers encourage and facilitate extended and complicated sociodramatic play while also highlighting the need of planning, personality development, and interpersonal negotiation. The curriculum also features games that encourage the development of self-control (controlling the speed of movement, remembering directions over time). Children are paired up for several of the program's learning activities to encourage greater participation. In a randomized control experiment conducted by Barnett and colleagues (Barnett et al., 2008). A total of 210 preschoolers, ages 3 and 4, (93% of whom were Latino), were randomly assigned to classes taught by instructors using Tools or a curriculum established by the school district. Observers at the conclusion of the school year found that Tools had a substantial effect on the targeted teaching practices, such as classroom organization and time management, teacher engagement with students, and the quality of the reading environment and instruction. A broader evaluation of student-teacher relationships, however, showed no significant changes. Teacher ratings of behavior problems in the intervention classrooms were significantly lower than those in the control classrooms by year's end, and the

intervention students also improved on a vocabulary exam but not on measures of emerging literacy or mathematics.

Diamond and colleagues (Diamond et al., 2007) followed up the original sample (who were still in pre-k) a year after the Barnett and colleagues (2008) study and tested their executive functioning. Tests of children's executive function skills showed that those in the Tools classrooms performed better than their counterparts in the control classrooms. Four studies on the Tools of the mind program have been recently meta-analyzed, and their findings point to favorable but modest impacts (Baron et al., 2017). All four pooled effect sizes favored Tools, although only one of them were statistically significant. The lack of statistical significance across three of the four outcome measures may be due to the short number of included studies, which reduced power. Tools may have little effect on children's self-regulation, or their effect may be too subtle to be noticed with the available data. Furthermore, it is evident that the respective program benefits the child's executive functions skills and maybe the role of the teacher moderates the relationship. Goble and colleagues (Goble et al., 2021) identified that there are certain factors that may moderate the results of the intervention program on executive functions enhancement such as teachers characteristics, the method of training implementation and attendance and interactions between these elements.

I Can Problem Solve

One of the earliest explicit social emotional learning programs created for preschoolers was called "I Can Problem Solve" (ICPS) (Shure, 2001; Shure & Spivack, 1982). This intervention's logic model places a premium on teaching children to think

covertly, so they can respond creatively and intelligently to societal problems. The program's primary objective is to help young people become better equipped to handle social difficulties by enhancing their ability to creatively respond to complex interpersonal issues and to foresee the outcomes of their actions. The ICPS curriculum consists of 46 brief (20- to 30-minute) lessons. Learning the fundamental cognitive skills that lay the groundwork for addressing problems begins with familiarization with ideas like "same-different," "if-then," and the recognition of basic emotions such as happiness, sadness, and anger. Then, a series of interpersonal dilemmas are presented, and the children talk about them, offering and evaluating potential solutions. Training ideas are illustrated through teacher demonstration and puppet play, and if practical, the problem-solving strategies are applied to real-world classroom issues.

In a randomized controlled trial (Shure & Spivack, l982) among 113 inner-city African American children (aged 4-5), those in the program's intervention classrooms showed greater growth than those in the "usual practice" classrooms in terms of measures of alternative and consequential thinking, as well as teacher ratings of frustration tolerance, impulsivity, and task engagement. Follow-up assessments conducted a year later by new teachers who were unaware of the children's treatment group found that the gains made during the intervention period had been maintained.

Al's Pals: Kids Making Healthy Choices

According to Lynch and colleagues (Lynch et al., 2004), Al's Pals is a thorough social emotional learning program for preschool, kindergartner, and first-graders that aims to foster social-emotional competence and increase resilience in young children growing up in

underprivileged, high-risk circumstances. Based on the principles of social learning theory, the program helps kids develop competencies in areas including talking to others, showing their feelings, making friends, controlling their anger, and overcoming social problems. In addition to equipping children from economically disadvantaged urban areas with "survival skills" like keeping an eye out for potential danger and making wise decisions when it comes to substance use, the program's goal is to instill hope in these young individuals and decrease their vulnerability to community violence. Classroom teachers are responsible for delivering the program's 23 sessions to their students twice weekly for 15 to 20 minutes each. Teachers can find scripts for each lesson, together with supplementary notes and activity guidelines, in the accompanying manual. A two-day introductory workshop is meant to help create a good atmosphere in the classroom and help people use their skills in other situations. This training for educators will focus on active listening, nonjudgmental responses to children's disclosure of sensitive matters, and methods for assisting children in problem-solving and making wise decisions. Several quasi-experimental research were conducted to develop and improve Al's Pals (Lynch et al., 2004).

Positive Action

Positive Action is a social emotional learning program with the overarching goal of enhancing students' sense of identity, sense of worth, and sense of well-being. The foundation of the curriculum is the belief that students' capacity for self-awareness and social awareness are directly proportional to their potential for academic and personal achievement. Positive Action teaches students how to talk to themselves in a positive way, be aware of themselves, and control themselves through a variety of activities and exercises.

Longitudinal research including 930 students in grades 3-5 was conducted. This research aims to assess the impact of a school-wide initiative to improve the social and emotional well-being of late-elementary school students from low-income, urban, and minority backgrounds. Comprehensive analyses showed that the program had a good impact on student's social and emotional well-being, sense of self-worth, problem and healthy behaviors, the environment climate, and academic performance (Lewis et al., 2021).

Numerous quasi-experimental and experimental trials of Positive Action have shown consistently positive outcomes. Results from three longitudinal, experimental Positive Action studies following children from ages 6 to 11 over the course of three to four years provide information about proximal effects. Overall developmental trends revealed deterioration in self-sufficiency (self-control, being honest to oneself, working toward continual improvement). Comparatively speaking, the decreases in Positive Action were less severe than those seen in comparator schools (Li et al., 2011). Distal results have also been shown to benefit with Positive Action. Beets and colleagues (Beets et al., 2009) found that fifth graders who had been exposed to Positive Action in primary school had lower rates of substance use and sexual behavior, lower rates of violent and bullying behaviors, and higher rates of reading and math proficiency (Flay et al., 2001). The intervention's pillars are put into practice in the classroom through the direct teaching of social and emotional competencies like healthy body image, managing one's feelings in social situations, telling the truth, and working to better oneself and one's relationships (Flay & Allred, 2003).

Second Step

The Second Step program is a comprehensive social-emotional learning program designed to help students in grades K-8 develop the skills they need to succeed in school and in life. The program focuses on building students' emotional intelligence, self-regulation, and problem-solving skills through a variety of activities and exercises.

One of the key components of the Second Step program is teaching students how to recognize and manage their emotions. This includes learning how to identify different feelings, understand the causes of those feelings, and develop strategies for dealing with them in a healthy way. For example, students learn how to use deep breathing and other relaxation techniques to calm down when they are feeling upset or anxious. Another important aspect of the Second Step program is teaching students how to build positive relationships with others. This includes learning how to communicate effectively, resolve conflicts, and work as part of a team. The program also emphasizes the importance of empathy and understanding the perspectives of others. For example, students learn how to put themselves in someone else's shoes and understand how their actions might affect others. The Second Step program also focuses on teaching students problem-solving skills. This includes learning how to identify problems, generate possible solutions, and evaluate the pros and cons of each solution. For example, students might be asked to identify a problem they are having with a friend, brainstorm possible solutions, and then choose the one that they think is most likely to be successful. Additionally, the program also focuses on teaching students problem-solving skills. This includes learning how to identify problems, generate possible solutions, and evaluate the pros and cons of each solution. For example, students

might be asked to identify a problem they are having with a friend, brainstorm possible solutions, and then choose the one that they think is most likely to be successful.

The Second Step program is implemented in a variety of settings, including schools, after-school programs, home settings and community-based organizations. It is designed to be flexible and can be adapted to meet the specific needs of different populations. The program includes teacher training and ongoing support to ensure that it is implemented effectively.

The Second Step program has been extensively researched and has been found to be effective in improving students' social-emotional skills. For example, in a meta-analysis study by Durlak and colleagues (2011) found that students who participated in the Second Step program showed significant improvements in their emotional intelligence, self-regulation, and problem-solving skills. Similarly, a RCT trial (Frey et al., 2005) of children studying in two to five grades showed significant improvements in their social emotional skills such as interpersonal skills, prosocial behaviors and cooperation. The study also found that the program was effective in reducing problem behaviors, such as aggression and defiance.

Moreover, Norwegian studies point to a decrease in externalizing behaviors and improvement in social competence among 5-6 grade students (Holsen et al., 2008). German researchers found that compared to a group of K-3 control students, those participating in Second Step exhibited significant improvements in social behavior, anxiety, and internalizing problems (Schick & Cierpka, 2013).

RULER

RULER is a school-wide social and emotional learning intervention that features professional development opportunities for educators and administrative personnel, as well as a supplemental curriculum for use in the classroom. RULER is based on the ability model of emotional intelligence (Mayer & Salovey, 1997) and is meant to improve five important emotional skills including emotional recognition, identification, understanding, expression and management (Brackett et al., 2006, 2012). When it comes to improving students' social and/or academic abilities, few social emotional learning programs have been created with an emphasis on emotional skills as a proximal outcome. Few studies have been done on this program. The research that has been done thus far reveals that the intervention improves both proximal and distal outcomes. More precisely, it improves students' emotional and interpersonal abilities, as well as the social environment of the classrooms.

After receiving the intervention, students in one quasi-experimental study demonstrated improvements in emotional abilities (RULER skills), interpersonal skills (social competence), and academic performance (Reyes et al., 2012). Furthermore, A subsequent randomized controlled study with sixth graders found that students' emotional abilities (students' comprehension and regulation of emotion) and social problem-solving skills were more likely to develop when teachers got high-quality training in the intervention and children received sufficient dosage (Brackett et al., 2012). Classrooms where RULER has been implemented have been found to have more positive, emotionally supportive social environment than their non-RULER counterparts (Rivers et al., 2013).

MindUP

The uniqueness of the MindUP intervention strategy lies in the incorporation of mediation-oriented practices into regular classroom activities. Fourth graders in a single quasi-experimental evaluation of MindUP's effects on students in grades 4-7 reported greater optimism and a more positive perception of themselves. According to teacher evaluations, children in the intervention group showed considerable improvement in focus, emotion management, and social and emotional competence compared to those in the control condition (Schonert-Reichl & Lawlor, 2010). Therefore, it is reasonable to assume that the processes in play are the breathing exercises and general instruction in mindfulness that are meant to bring students into the present moment. Program theory suggests that focusing on improving students' emotional (emotion regulation), cognitive (executive function, including attention), and self-skills (self-awareness) abilities would lead to improved social and academic outcomes (MindUP, 2011; Schonert-Reichl et al., 2012).

Furthermore, a study (Crooks et al., 2020) was conducted to evaluate the effectiveness of a mindfulness-based social and emotional learning program called MindUP on behavioral problems, adaptive skills, and executive functioning in kindergarten students. The study included 23 classrooms in the intervention group and 19 classrooms in the comparison group. Teachers assessed the behavior of the students before and after the intervention using two measures. The results found that students in the intervention group demonstrated an improvement in adaptive skills and reduction in behavioral symptoms, internalizing composite, and externalizing composite outcomes. Additionally, there was a significant decrease in executive functioning deficits among students who participated in

MindUP. The study suggests that mindfulness-based social and emotional learning interventions can improve psychosocial and behavioral outcomes in young children.

Other Evidence Based Practices in Intervention Studies

The mission of the Collaborative for Academic, Social, and Emotional Learning (CASEL) is to elevate SEL to its rightful place as a cornerstone of the educational experience. CASEL is a group that aims to improve social and emotional learning through research, practice, and policy (CASEL, 2013). In addition, CASEL has produced a framework for evaluating the quality of SEL programs, which may be used to locate and rank social emotional learning programs that are both well-designed and supported by evidence, and hence have the potential to be implemented on a large scale. A decade ago, the first systematic review of social emotional learning programs was published, marking the beginning of this process (CASEL, 2003). Universal school-based prevention programs with an emphasis on teaching the five fundamental social-emotional competences are included in the CASEL guidance. The guide focuses on three key requirements when evaluating social emotional learning programs: (1) high-quality training and other implementation supports, including initial training and ongoing support to ensure sound implementation, (2) multi-year programming, and (3) an evidence base.

Durlak and Wells' formative review evaluated the outcomes of 177 primary prevention studies (Durlak & Wells, 1997). The meta-analysis demonstrated that not only did most programs achieve significant positive effects, but they also significantly improved difficulties, competencies and Functioning across several adjustment domains. This was further replicated by Durlak and colleagues in another meta-analysis examining universal

school-based socio-emotional skills programs. This second study found that teacher-delivered programs were also effective in improving social and emotional skills, behavioral adjustment, prosocial behaviors, internalizing difficulties, and academic performance (Durlak, et. al., 2011).

There is a substantial body of evidence demonstrating that a social emotional learning strategy is beneficial for both students and educators. According to Norris (2003), a pleasant classroom environment is crucial to students' achievement in school, and social emotional learning-based interventions provide educators with the tools they need to emphasize these qualities in their students. The results of another study's findings (Taylor & Dymnicki, 2007), social emotional learning intervention led to gains in students' grades, positive behaviors at school, feelings of belonging at school, and school attendance. The effectiveness of social emotional learning treatments was also confirmed in settings that were both racially and ethnically diverse, as well as geographically and economically disadvantaged (Payton et al., 2008). While the program developed by Cunningham and colleagues (Cunningham et al., 1999) to avoid adolescent depression did lower depressive symptoms, as well as raise adolescents' optimism and sense of self-efficacy, these positive outcomes were found to be only temporary. Rice and his colleagues ((Rice et al., 1993) discovered that a 16-session program geared at seventh graders resulted in decreases in negative life events and increases in perceptions of self-control over school-related problems when compared to controls.

Teacher-rated social competency in kindergarten consistently and significantly predicted outcomes in school, employment, criminal justice, substance use, and mental health in an analysis of nearly 20 years of data from the Fast Track Project published in July 2015

(Jones et al., 2015). Those kindergarteners who scored higher on tests of social competence were statistically more likely to be college graduates, high school diploma holders, and employed full-time by age 25. The development of students' social and emotional skills has been identified as a key component of successful anti-bullying programs (Smith & Low, 2013). Other researchers conducted a meta-analysis of 75 research that have looked at the results of school-wide initiatives to improve students' social, emotional, and behavioral health (Sklad et al., 2012). Although many different outcomes were targeted by the therapies that were studied, improved social skills, and reduced antisocial conduct were the most frequently reported ones. Positive benefits were found throughout seven broad domains of investigation, including social skills, antisocial conduct, substance addiction, positive self-image, academic accomplishment, mental health, and prosocial behavior. Except for substance misuse, where a "sleeper effect" was observed, the data demonstrated that the immediate impacts of the interventions were more powerful than the delayed effects.

Group Based Interventions.

Extensive research has been conducted in the field of child-focused cognitive-behavioral therapy (CBT) on the use of group treatment instead of individual therapy to treat higher numbers of children. Studies have demonstrated that group therapy is beneficial and has distinct advantages, such as fostering normality and peer learning among study sample (Bieling et al., 2022). Another area of research aimed at enhancing the delivery of cognitive behavioral therapy is the administration of treatment protocols with increased intensity over shorter time intervals. Some authors argue that intensive (brief) forms are as successful as regular formats (Bekker, 2019; Storch et al., 2007).

Evidence-based research suggests that by offering treatment in a group setting, CBT treatments are more widely available and can be provided more efficiently. In the past few years, there has been a major expansion in the amount of research that lends support to the use of group therapies for children and adolescents. Several randomized controlled studies and two large meta-analyses have found that group CBT is effective for treating anxiety and other mental health issues in children and adolescents, with treatment falling in the medium range (In-Albon & Schneider, 2007; Jónsson et al., 2011; Reynolds et al., 2012).

CBT-based treatments for child and adolescent anxiety were found to have moderate effects in a recent evaluation conducted by Cochrane (James et al., 2015). This analysis comprised 41 studies with a total of 1806 participants. The evaluation also evaluated delivery styles and concluded that "*CBT looks equally effective in family, individual, and group settings, which raises the question of whether group CBT may be more cost-effective…. Health economic studies are required to resolve this question*" (p. 29). These results lend credence to the efficacy of group CBT forms as an alternative to standard individual CBT, particularly for treating larger populations of young people at once, which can save both time and money. Despite this, the evaluation did uncover a few holes in the existing research, including those comparisons to "treatment as usual" and controls that did not involve CBT were both restricted and ambiguous.

In another meta-analysis conducted by Reynold (2012), looked at the effectiveness of psychological therapies for anxiety disorders in children and young people. 55 high quality studies were included in the study, which were all randomized controlled trials that included a control group and had data that could be used for analysis. The study found that

psychological therapy for anxiety in children and young people was moderately effective overall, but the effect sizes were small to medium when compared to an active control group. The most effective therapy was found to be cognitive behavior therapy or behavior therapy. Studies that targeted specific anxiety disorders, individual psychotherapy, and therapy for older children and adolescents had larger effect sizes than studies that targeted a range of anxiety disorders, group psychotherapy, and therapy for younger children. These results varied from James and his colleagues (2013) research work who observed no significant differences.

This may be because James et al. (2013) did not include all anxiety disorders such as phobias, OCD, PTSD, and selective mutism. On the other hand, Reynolds et al. (2012) included all anxiety disorders and highlighted the significance and effectiveness of individual's assessment and management planning, whereas the excluded disorders from the former study were rather more complexed and more suitable to independent assessment and management plans. These two large meta-analyses detail the evidence for group CBT as an effective and efficient treatment modality for emotional problems in children, including specifically anxiety. There is a dearth of research into the efficacy of group CBT for children and adolescents with disorders other than anxiety, such as depression (Bekker, 2019).

Furthermore, multiple meta-analyses and reviews have found clear preventive effects from evidenced based programs ((Anticich et al., 2013; Department of Child Psychiatry, School of Medicine, National and Kapodistrian University of Athens, " et al., 2020; Pahl & Barrett, 2010; B. H. Smith & Low, 2013; Werner-Seidler et al., 2021) as well as added benefits such as reduced stigma and improved academic performance (Durlak et al., 2011;

Greenberg et al., 2017). Specifically, Merry and colleagues did a Cochrane review (Merry et al., 2012) to assess the efficacy of various educational and health programs in avoiding the onset of depression in children and adolescents. The evaluation included 15 trials and 3115 participants. The review uncovered evidence that preventive strategies are successful compared to no intervention.

Stockings and colleagues (2016) reviewed 146 randomized controlled trials on children and adolescents, examining the efficacy of selected, universal, and suggested preventive trials intended to reduce the prevalence of depression and anxiety in adolescents. According to the findings, preventive interventions can be more effectively delivered to young people in educational contexts like schools. Few studies have evaluated the effectiveness of preventive treatments given through the internet, and most of those have focused on programs integrated into regular school classes. Nonetheless, there are major issues with the quality of research of school-based preventive initiatives. Programs that target many risk factors appear to be more successful than those that target a single substance. For example, alcohol-related harm can be mitigated, but not eliminated, by interventions that emphasize general psychosocial development and life skills. The widespread incorporation of tobacco-prevention techniques into K-12 curricula lacks comprehensive evaluation. Study also shows that tobacco use can be reduced through the use of skill-based therapies that emphasize the need of avoiding negative peer pressure and gaining confidence in one's own social competence. It is unknown whether treatments shown to be beneficial in one country's cultural, financial, structural, social, and gender-based contexts can be replicated in another country with a different set of circumstances, as is highlighted by this study.

Werner-Seidler and colleagues (2017) reviewed RCTs to evaluate school-based psychological preventive programs. Three web databases were examined for articles on school-based prevention interventions to October 2020, containing 118 trials and 45,924 participants. Depression (g = 0.21) and anxiety (g = 0.18) had small immediate effect sizes following the intervention. External providers and targeted prevention programs for youth with risk factors or symptoms reduced depressive symptoms more than universal programs and school-staff programs. The study found that school-delivered psychological prevention programs reduce depression and anxiety symptoms slightly and suggests that they need to be refined and delivered in schools sustainably after the trial period to have population-level preventive effects.

According to the findings of certain studies, preventive treatments seem to have the best chance of effectiveness when administered to children displaying the earliest stages of anxiety at a young age (anywhere between the ages of three and six years). To determine if an early intervention program is successful in reducing anxiety in preschoolers, Rapee and colleagues (Rapee et al., 2005) conducted a randomized controlled experiment. The sample size was N = 146 (mean age = 46.8 months), and it was drawn from 95 preschools located in an urban area of Australia. Participants were assessed to be hesitant by their parents. The parent education program and the control condition were both chosen at random for the parents of the children who participated in the study. Children whose parents were in the education condition showed significantly fewer anxiety diagnoses at a 12-month follow-up when compared to the control group. These findings support the conclusion that early infancy

is the most effective time to implement preventive and early intervention measures (Dohl, 2013).

Fun FRIENDS Program

For the present study, the Fun FRIENDS program has been selected. The FRIENDS program is evidence based and is the only program that is supported by the World Health Organization for the prevention and treatment of anxiety and depression in children and youth (WHO, 2004). The Fun FRIENDS Program was developed by Dr. Paula Barrett, it promotes social and emotional development of children aged 4 to 7 by using play-based group activities.

The respective program fosters the child's development by teaching them to engage resilience early on, encouraging them to thrive and smoothly transition into school life (P. Barrett et al., 2015; Pahl & Barrett, 2007). The selected program focuses on four main criteria i.e., scope, focus, audience, and pedagogical framework. Scope of Fun Friends is based on 5 core skill competencies in an orderly manner as depicted in CASEL framework (2013).

The FRIENDS program (Pahl & Barrett, 2007, 2010) is a set of CBT-based treatment and prevention programs that are tailored to different developmental stages. These programs have been found to be effective in preventing and treating internalizing disorders, specifically anxiety, depression, and reduction in behavioral inhibition (Anticich et al., 2013; Fisak et al., 2011; Shortt et al., 2001). These programs also established to enhance social emotional competence (Durlak et al., 2011; Pahl & Barrett, 2007). Children who have completed the program in a school setting have reported reductions in anxious symptoms, behavioral

difficulties, and behavioral inhibition, as well as increases in social and emotional competence (Anticich et al., 2013; Barrett et al., 2015; Rivero et al., 2020). Studies have also shown that the benefits of the program can be maintained for several years following completion and the program can be used as a preventive measure or as a treatment for those already experiencing symptoms (Bekker, 2019).

The first published study of evaluating the FRIENDS program as a universal intervention was conducted with 489 children aged 10–12 years old (Barrett et al., 2006; Barrett & Turner, 2004). The findings indicated that children who participated in the program observed a decrease in feelings of anxiety. Additionally, children identified as being vulnerable to anxiety also reported a decrease in symptoms of depression. Additional research has also documented a decrease in anxiety and depressed symptoms, as well as favorable alterations in risk status, following program completion (Lowry-Webster, 2003). Replicated studies have also assessed the efficacy of the FRIENDS Program as a universal intervention in nearly 21 countries, including the United Kingdom, Australia, Africa, Canada, Germany, Mexico, and Japan. Teachers and facilitators are required to undergo basic training, which includes a resilience program, in order to prioritize their own self-care. The FRIENDS program consists of 12 sessions, each lasting 1-1.5 hours. It is exclusively delivered by facilitators who have received proper training and certification.

Development of FRIENDS Program

Early iterations of the FRIENDS programs trace back to manualized Cognitive Behavioral Therapy programs like Kendall's "Coping Cat" intervention (Kendall, 1994), a manualized, individually administered, Cognitive Behavioral Therapy program for children

and adolescents aged 7–13 with a range of anxiety disorders. It has been established that Coping Cat is able to make clinically substantial decreases in anxiety symptoms, and these reductions were sustained at 1 year follow up (Kendall, 1994). Barrett (1995) modified the "Coping Cat" program so that it could be implemented in a group setting in Australia; the resulting initiative is known as the "Coping Koala" program. After being tested in a number of large-scale studies, researchers found that the program reduced anxiety symptoms clinically and that these effects persisted at 6- and 12-month follow-up, becoming even more prominent when the family was included (Barrett et al., 1996). Soon after, the first FRIENDS program was developed to include parental involvement, build upon the foundational knowledge presented in the 'Coping Koala' curriculum, and maintain the group dynamic (Barrett & Turner, 2004). Since then, the program has undergone significant revisions, including the addition of third-wave techniques like mindfulness, an increased emphasis on resilience building, expanded cross-diagnostic focus (including anxiety and depression), and modernized visuals and presentation (Bekker, 2019).

Developmental Iterations and Content.

The FRIENDS program is a collection of treatment and preventive programs based on cognitive-behavioral therapy (CBT) for internalizing disorders, particularly anxiety and depression. The program has undergone four versions, each adapted to the user's developmental stage. There are four different versions of the program, including Fun FRIENDS for children ages 4-7 (Pahl & Barrett, 2010), FRIENDS for Life for children ages 8-11 (Barrett et al., 2006; Briesch et al., 2010) , My FRIENDS Youth for children ages 12-15

(Fisak et al., 2011), and the STRONG NOT TOUGH Adult Resilience program (Games et al., 2020; Prince-Embury & Saklofske, 2014) for those aged 16 and beyond.

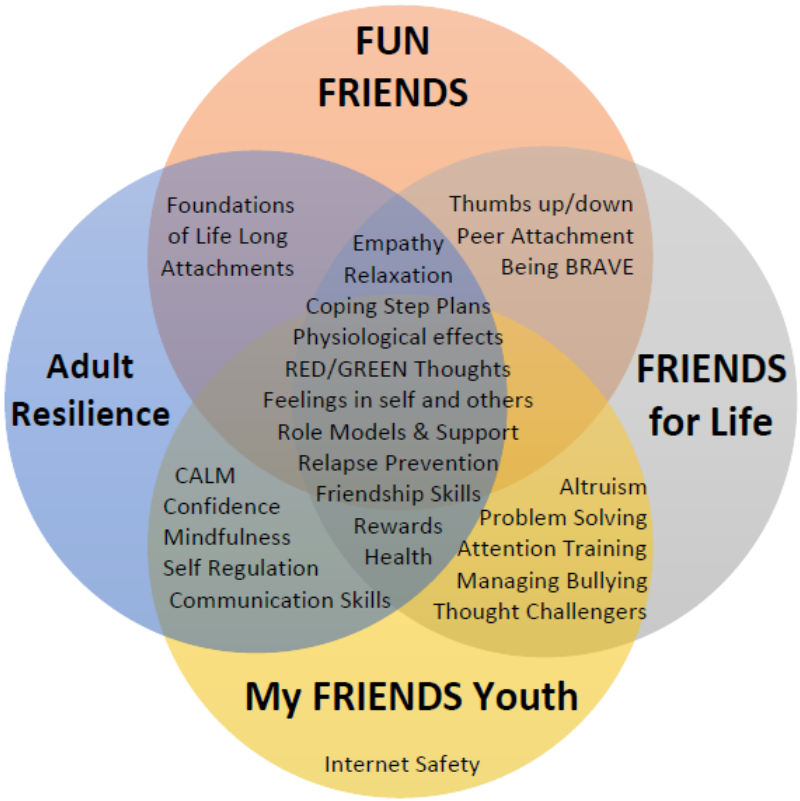
The most important aspects of the program (see figure 5) include developing an awareness of one's own and other people's feelings and emotions, developing the ability to relax improving one's cognitive awareness and reorganizing thought processes, establishing exposure hierarchies and rewarding oneself, lowering one's vulnerability to negative experiences and raising one's level of resilience, and developing a roadmap for the future Although these essential components are shared by all versions of the program, the distribution format and techniques are adjusted to the user's developmental stage. The Fun FRIENDS program, for example, focuses on age-specific abilities like friendship-making, whereas the adolescent and adult versions focus on conflict resolution. Similarly, for younger children, cognitive restructuring is taught as a game, in which thoughts referred to as “red thoughts” or “unhelpful” and “green” or “helpful thoughts”. Whereas for adolescents and adults, it is explained in a more mature format. The idea of acting in a way that helps oneself and others (thumbs up), as opposed to acting in a harmful way (thumbs down), is one of the age-specific abilities shared throughout the two programs for ages 4-11. The curriculum also emphasizes the necessity of developing strong friendships and confronting issues rather than avoiding them (see table 1).

Across twelve sessions, the Fun FRIENDS program aims to accomplish certain fundamental goals. The primary objective of the program is to facilitate children's comprehension of their personal sense of identity, enhance their ability to effectively cope with fear, and foster the cultivation of bravery through the practice of direct eye contact with

others. Moreover, it fosters the development of empathy by cultivating an awareness of one's own emotions as well as those of others and facilitates the acquisition of crucial social competencies through the act of play. Additionally, the curriculum instructs students on techniques for achieving bodily relaxation, identifying and modifying unhelpful thoughts, and adopting a gradual approach to tackling difficult activities. Being a compassionate and helpful friend, as well as cultivating the ability to reward oneself, are also emphasized. In addition, the program encourages children to identify positive role models within their family and social circles and extends their support and courage to various contexts. The desired outcomes are enhanced emotional intelligence, improved social skills, increased self-confidence, and the capacity to navigate various aspects of life with resilience and compassion.

Figure 5

Skills Shared Across Developmental Iterations of The FRIENDS Programs.



Note. FRIENDS skills shared model adapted (Bekker, 2019)

Having established its efficacy in multicultural societies, for present study, Fun FRIENDS program will be used in Pakistan. Curriculum designers recognize the importance of social-emotional skills and positive skills for balanced early childhood development in the culture. Therefore, it is important to emphasize the use of preventive approaches in Pakistan's education system, and to test the effectiveness of indigenously tailored interventions, in particular those interventions that have proven to be effective and cost-effective in developed countries. The program's goal is to promote health and provide children and their families with the cognitive behavioral skills they need to face and overcome adversity. Over the course of 12 sessions, children are guided through a variety of play-based learning activities that help them "be brave, to try new things, to learn to relax, to be kind and empathetic, to make friends, and to notice good helpful thoughts" (Barrett, 2007, p. 2). Table 1 presents the detailed learning components of Fun FRIENDS program.

Table 1

Fun FRIENDS Learning *Components*

Fun FRIENDS Learning Components	
Session 1	**Getting Started**
	Sense of Identity – Who am I?
	Feeling scared is ok.
	Being brave by looking people in the eye.
	Understanding similarities and differences among each other.
	Learning social skills through play.
Session 2	**My Feelings**
	Recognition of feelings in self and others
	Role plays of feelings
	All feelings are normal
	How to make happy feelings grow
Session 3	**Others' Feelings**
	Paying attention to others' feelings and emotions
	Helping other through empathy
	Recognizing others' feelings
Session 4	**Relax Our Bodies**
	Listening to body cues
	Breathing exercise
	Relaxing activities
Session 5	**I can Try—Thoughts**
	Identification of unhelpful "red" thoughts
	Identification of helpful "green" thoughts
Session 6	**I can Try--Changing Thoughts**
	Changing "red" thoughts into "green" thoughts
	Saying Goodbye to "red" thoughts can be easy

Session 7	**Explore: Doing things one step at a time**
	Learning things one step at a time
	Breaking hard things into small steps
	Learning to be brave
Session 8	**Explore: Being a kind friend**
	Making new friends
	Being kind friend: smile, share, help and listen
Session 9	**Explore: Reward yourself**
	How to reward yourself
	How to plan a reward (step wise)
Session 10	**Nurture: Family and Friends**
	Identifying someone to look up to
Session 11	**Dare to be brave: Circle of Love and Friends**
	Support family and friends across settings and become brave
Session 12	**Stay Brave: Circle of Love and Friends**
	Be kind and brave

The lessons in Fun FRIENDS are designed to help children develop the five-core social and emotional skills recommended by the Collaborative for Academic, Social, and Emotional Learning (CASEL) (2003). These skills are taught during 12 lessons including: taking Individual and social responsibility (caring and respecting others and for the environment); prosocial behaviors such as being empathetic, sharing and respecting for others, understanding and identifying emotions); maintaining eye contact; focusing on voice tone; facial expressions; self-regulation strategies such as managing and regulating emotions, adaptability and flexibility, and changing management; and self-awareness and identity are all addressed in the curriculum (Pahl & Barrett, 2007).

Figure 6

Social-Emotional Learning Competencies Addressed Through Fun FRIENDS (Dohl, 2013; Pahl & Barrett, 2007)

Fun FRIENDS **Objectives**	**Core Social-Emotional Learning Competencies**				
	Self Awareness	Social Awareness	Responsible Decision-Making	Relationship Skills	Self-Management
Developing a sense of self	✓				✓
Social skills		✓		✓	
Self regulation	✓		✓		✓
Responsibility for self and others		✓	✓		✓
Prosocial behaviour		✓	✓	✓	

Note. Source British Columbia Ministry of Children and Family Development (2011) and Pahl and Barrett (2007).

At its core, the Fun FRIENDS program is an intervention curriculum designed to help students of all backgrounds learn to thrive in today's challenging social environment (Pahl & Barrett, 2007). It is intended for use in a group setting, so many different types of students can profit from it without being subjected to discrimination. What's more, it caters to the requirements of those who need assistance but may not be identified by specialists. The program is based on the principles of resilience and CBT, and it takes a multisystem approach to resiliency by putting the emphasis on the interplay between the individual and their surroundings. Furthermore, parents are encouraged to participate, and a family activity workbook is provided to facilitate skill maintenance and transfer from the classroom to the home environment. Evidence for this view may be found in several sources (Pahl et al., 2012; Pahl & Barrett, 2007; Rivero et al., 2020; Zwaanswijk & Kösters, 2015).

Because of the inclusive nature of this curriculum, it can assist a diverse group of children without putting any of them at risk of being discriminated against (Pahl & Barrett, 2007). In addition, the needs of children who require intervention but are not yet identified by supporting professionals can be met by a program that serves all children (Pahl et al., 2012).

Two theoretical frameworks form the basis of the Fun FRIENDS program: resilience theory and cognitive-behavioral therapy (Pahl & Barrett, 2007). The curriculum offers a multisystem strategy for building resilience, with an emphasis on how one's context affects them both individually and collectively (Werner, 1984). Parental involvement and community involvement are new additions to the Fun FRIENDS program (Pahl & Barrett, 2007). Parents are encouraged to attend information sessions held periodically throughout the program to gain insight into the curriculum and its effects on their children. Parents are also given a notebook filled with activities for the whole family to do together to ensure that their child's program skills are reinforced in their everyday life.

Adaptations and Replications in Different Cultures

Numerous studies conducted all around the world have supported and voted for the efficacy of the FRIENDS programs, which have also been modified to cater to the needs of specialized groups of individuals. These programs have been able to show an effective decline in the level of stress and anxiety levels among the participants and have enabled them to increase their overall well-being. These populations have included young people with developmental disorders such as Autism (Slack, 2013). Fun FRIENDS program has been adapted and translated for non-English speaking backgrounds and languages such as

Japanese, German, Dutch, Spanish, and Brazilian (Essau et al., 2012; Gallegos-Guajardo et al., 2020; Kösters et al., 2015; Matsumoto & Shimizu, 2016; Rivero et al., 2020; van der Mheen et al., 2020; Zwaanswijk & Kösters, 2015). Furthermore, these programs have made a real impact on people from a wide variety of backgrounds and cultures, demonstrating the power of their effectiveness across many language and cultural barriers. This is because Fun FRIENDS programs are tailored to meet the needs of individuals from diverse backgrounds, providing a safe and comfortable environment in which participants can learn skills necessary for dealing with anxiety, depression and other mental health issues.

In the light of current literature, an adapted Urdu version of Fun FRIENDS program was selected for the present study. The program consists of 12 group play based sessions and are based on experiential learning approach. The goal of the Fun FRIENDS program is to develop children's emotional resilience, social emotional skills, and coping abilities, and to reduce emotional and behavioral problems. The Fun FRIENDS program is an adaptation of the FRIENDS for Life program for young children (Barrett & Turner, 2000), which was based on the Coping Cat program (Kendall, 1994). In a recent study, the Coping Cat program appeared culturally appropriate with Pakistani children with anxiety related problems (Khan et al., 2020), however there is no evidence of its efficacy with mainstream school children in Pakistan.

Number of studies established the effectiveness of Fun FRIENDS program both as preventive and treatment program across cultures (Fisak et al., 2018; van der Mheen et al., 2020). In one study conducted by Pahl and Barrett (2010) with 263 preschool children (mean age =4.56), the majority of children improved on anxiety, behavioral inhibition and social

emotional strength regardless of the treatment conditions of Fun FRIENDS. However, girls score on social emotional skills significantly increased than boys. In another study, Anticich and his colleagues (2013) evaluated the effectiveness of the Fun FRIENDS program as implemented by teachers to a sample of 488 children (4-7 years) in Australia. The findings revealed an advantageous effect in the intervention group, notably indicating statistically significant decrease in anxiety, behavior difficulties, behavioral inhibition, and increase in social emotional skills. These results were found consistent for anxiety, behavioral inhibition and social and behavioral skills at the 12-month follow up. Additional findings from a recent study in Mexico of the Fun FRIENDS program revealed that first grade children showed improvements in interpersonal, intrapersonal, and affective strengths as well as prosocial behavior with effect sizes ranged from d=1.18 to d=.415. (Gallegos-Guajardo et al., 2020). Fun FRIENDS program has been adapted to different languages across cultures including LMIC such as Mexico and Brazil (Gallegos-Guajardo et al., 2020; Garcia, 2019) and has established its efficacy in improving children's social emotional functioning. Considering these promising outcomes across cultures, the aim of the current study was to evaluate the effectiveness of the Urdu version of the Fun FRIENDS program as a universal, school-based intervention in promoting social emotional competence in Pakistani school children. It was hypothesized that after receiving the intervention, children will increase in their social emotional functioning.

In addition, Fun FRIENDS program is also loaded with emotional competence and social skills using play-based activities, therefore, it is another step to enhance the life skills of school children and further contribute to the indigenous literature specifically and global

literature generally to develop more understanding of social-emotional functioning domain of children.

FRIENDS As Treatment and Prevention Protocol

In the beginning, the FRIENDS programs were primarily examined as treatment programs for anxiety (Shortt et al., 2001). Later, however, they evolved to be used and evaluated as a preventive regimen spanning anxiety and depression (Barrett et al., 2006), with both exhibiting long-term follow-up efficacy (Barrett, Duffy, et al., 2001; Barrett et al., 2006). The first Randomized Control Trial of the FRIENDS programs was undertaken by Shortt et al. (2001) with 71 children and young adults between the ages of 6 and 10. This study showed efficacy using the Revised Children's Manifest Anxiety Scale and the Child Behavior Checklist, with 69% of children and adolescents being free of a diagnosis immediately after the intervention, compared to just 6% in the Waitlist control, and with 68% of children and adolescents remaining being free of a diagnosis at the 12-month follow-up.

Liber and colleagues (Liber et al., 2008) assessed the FRIENDS program in both group and individual settings with 127 children and adolescents ages 8 to 12 years old. Significant improvements were observed as judged by the Anxiety Diagnostic Interview Schedule, with 62% of youth in the individual format and 54% in the group format no longer meeting criteria for their primary anxiety diagnosis following intervention, and 48% in the individual treatment and 41% in the group treatment no longer meeting criteria for any anxiety diagnosis. A study by Wergeland and colleagues (Wergeland et al., 2014) found that treatment was effective in reducing anxiety as measured by the Spence Children's Anxiety Scale, with larger effects seen in the group treatment compared to individual treatment. At

the 12-month follow-up, a majority of those in both treatments were free of at least one diagnosis and a significant portion were free of all anxiety disorders.

In Ireland, Rodgers and Dunsmuir (Rodgers & Dunsmuir, 2015) used a randomized controlled trial to examine the effectiveness of a focused treatment in a school context. Sixty-two adolescents between the ages of 13 and 14 were studied to see how well they coped with anxiety and how well they adjusted to school. Their findings showed that a lowering of anxiety was correlated with a better school adjustment. Despite this correlation, participants in the FRIENDS programs who experienced a substantial decrease in anxiety relative to the control group did not demonstrate enhanced school adjustment at either the 2- or 4-month follow-up. In another study (Eiraldi et al., 2016), although researchers did not perform a statistical comparison between the FRIENDS program and the other two group CBT interventions, they did find that 70% of participants in the FRIENDS program showed a significant reduction in diagnostic severity across internalizing and externalizing disorders at three month follow-up, compared to 60% and 55% in the other interventions. These findings corroborate the efficacy of the FRIENDS programs in treating anxiety disorders in both individual and group settings, and across cultural and linguistic boundaries.

Children are exposed to the FRIENDS programs in schools and clinics due to the efforts of health professionals and educators (Anticich et al., 2013; Barrett et al., 2015; Barrett et al., 2006; Fisak et al., 2011). Ten research was found by Fisak et al. (2011) that used the FRIENDS programs as a preventive strategy, and the authors determined that these studies had larger impact sizes than those that did not use the FRIENDS programs. The FRIENDS program had a larger effect size (Cohen's d = 0.25) than other therapies (Cohen's d

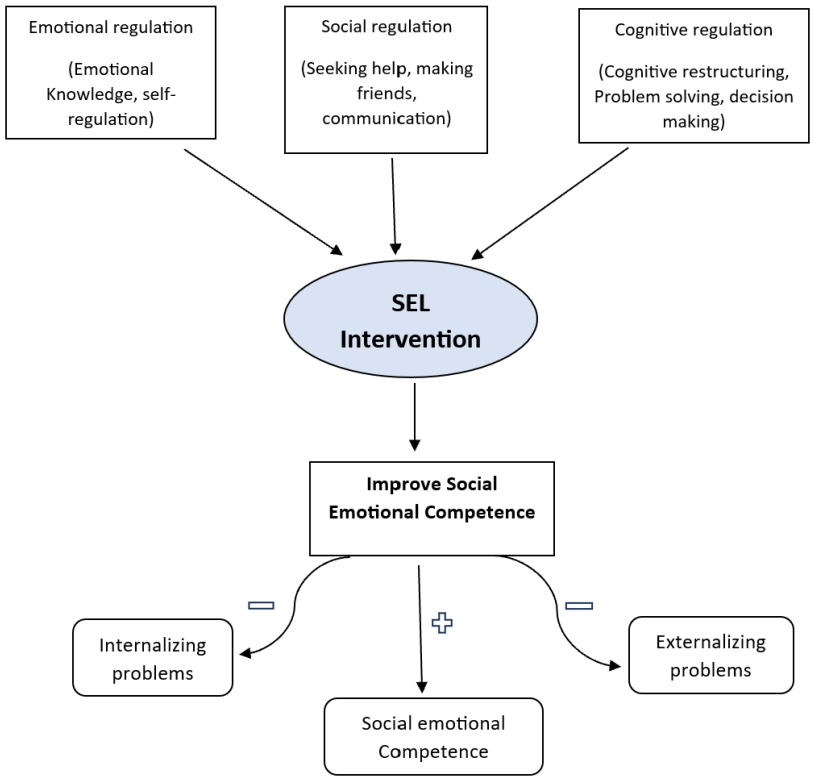
= 0.11). In the time since, Kozina (Kozina, 2020) has examined the impact not only on preventing internalizing disorders but also on demonstrating a reduction in aggressive and conduct-related behaviors as compared to a control group at 6 months follow-up.

Conceptual Framework

This research relies on Bronfenbrenner's (1979) Bioecological Model as its conceptual framework, which views children as embedded within several microsystems such as their families, schools, and social networks (see Figure 1). These microsystems interact with each other and the degree to which they cooperate has an effect not only on the child's behavior but also on how well they develop and on their overall health. As part of our work, we anticipated observing the efficacy of social and emotional learning programs and modules implemented by teachers in a classroom context. And will see its effect on the child's behavioral issues and development of social and emotional abilities on an individual level. The conceptual framework is shown in figure 7.

Figure 7

Conceptual Framework



Rationale of the Study

In Pakistan, the standard school curriculum is providing basic knowledge and moral education but lacks drastically in performance-based education and life skills. There is a general lack of data on the burden of mental health problems, barriers in seeking mental health services, policy making, financial resources and infrastructure for mental health services in low- and middle-income countries (LMIC) (Baxter et al., 2013; Rathod et al., 2017). Consistent findings indicated that children's mental health was a serious concern, and this was amply established in several Asian nations, supporting the necessity for school-based mental health care (Renwick et al., 2022). Pakistan is at the evolving stage of

epidemiological studies on children's mental health. Recent literature from Pakistan highlighted alarming findings of behavior problems in preschoolers (46.5%) and school children (15.9%) and recommended immediate need of school-based interventions focusing on social emotional competence (Inam & Zaman, 2014; Malik et al., 2019).

Furthermore, in Pakistani education system, the student's success is measured solely by academic grades rather than social emotional competence. External pressure from parents' and teachers' demands have increased the amount of depression, anxiety and feelings of discouragement in school children (Najmussaqib & Ijaz, 2021). In a recent cross-cultural study, McCoy et al. (2019) found that children from Pakistan are behind in certain social emotional competence such as showing sympathy or empathy, including others in play and sharing behaviors. Findings also suggested that country's level of education, economic stability and health measures are associated with the development of social emotional competence in children. Pakistani policymakers have also recognized the need for an intervention program within curriculum to enhance social emotional competence in children and criticized lack of adequate resources (Barlas et al., 2022; Mian & Chachar, 2020).

Globally, researchers identified the need for social emotional learning programs, and it is increasingly becoming a fundamental component of education in schools. Social emotional learning (SEL) has gained increasing attention in recent years due to concerns over school violence, bullying, and teen suicide. SEL aims to instill a deep emotional intelligence that will help children regulate their emotions and establish neurological pathways that make them less vulnerable to anxiety and quicker to recover from unhappy experiences (Blair & Raver, 2014; Espinet et al., 2013). Studies have found that children who participate in social

emotional learning programs continue to perform better even after the program has ended, showing less physical aggression, less anxiety and stress than children who did not participate (Flay & Allred, 2003). Theoretically speaking, social emotional learning training can help establish neurological pathways that make children less susceptible to anxiety and better equipped to cope with negative experiences.

From US National Conference of State legislators' successful resolution supporting the teaching of social emotional learning in schools in 2001 to the adaptation of social emotional learning programs across countries with promising results (Cramer & Castro-Olivo, 2016; Werner-Seidler et al., 2021). However, the use of evidenced based social emotional learning programs and area of prevention research in schools is a developing field, yet highly essential, in Pakistan. Barlas et al. (2022) observed only one culturally appropriate adaptation of the PATHS curriculum with preschoolers (Inam et al., 2015) and argued that there is a critical need for efficacy research on school-based programs in Pakistan due to the importance of native language, sociocultural and religious perspectives in educational context. Therefore, the current study will highlight the need of an evidenced based programs for Pakistani school children and make an essential contribution to the literature on the effectiveness of fun FRIENDS program for enhancing social emotional competence of school children from LMIC.

To appreciate the significance of applying evidence-based approaches in Pakistan, consider the underlying causes of mental health difficulties in the context of the country's demographics and changing social landscape. This emphasizes the need to take effective steps to encourage positive character formation in early children. Increased rates of mental

health issues, especially in young children, highlight the importance of developing effective intervention measures to mitigate the impact of these issues. Preschool prevention programs are especially important since studies have shown that emotional and behavioral issues in later childhood and adolescence have their origins in the childhood and preschool years (Anselmi et al., 2008).

In recent years, intervention programs have been used in Pakistan to equip children with essential skills to deal with their emotional concerns and social competence. The effectiveness of any treatment becomes prominent if the program addresses the needs of target population and special attention is given to the cultural miss matches when an evidence-based program is delivered in different cultures. Inam and Tariq (2015) also reported difficulty in understanding and labeling the emotions in Pakistani school children when delivered the Pakistani version of PATHS curriculum. Another study by Mushtaq, Lochman and Tariq (2017) reported the same kind of problem when they were delivering the culturally adapted Coping Power program to at-risk aggressive children. The children had difficulty in recognizing, labeling and identifying their own emotions and others. Fun FRIENDS program is also loaded with emotional knowledge, labeling and recognition. Therefore, it is another step to enhance the life skills of school children and further contribute to the indigenous literature specifically and global literature generally to develop more understanding of social-emotional learning domain of young children.

As it was previously mentioned, developing nations like Pakistan have struggled to implement evidence-based school preventive initiatives, particularly on two fronts. One goal is to pique the attention of the next generation of academics in the Pakistan in the emerging

area of prevention science and evidence-based therapies within the context of developmental psychopathology. Second, the relevance of social-emotional skills and positive competences for healthy development in early infancy is highly acknowledged by curriculum architects in Pakistan's educational system, therefore it's crucial to stress the use of preventive interventions in this context.

Keeping in mind the limited research, the current study should be considered a steppingstone towards gathering evidence that can further help to target the relevant issues in future school-based interventions/preventive intervention programs. This would also help in the discovery of relevant predictors that can also be used for the development of contextually relevant programs in the future. Furthermore, until now, there has been little to no data to show policymakers and grant givers the economic benefits of social emotional learning curriculum.

Chapter II

Research Design

The goal of this research is to examine the effectiveness of Fun FRIENDS program with Pakistani school children. An Urdu adapted version of the program was used for this study. The three studies that made up the research were as follows:

Study I: Translation and Pilot Study

This study was designed to carry out initial screening and validation of the translated instruments on a smaller group of children. These children were not part of the main study.

Study II: Estimation of Behavioral Problems in School Children

In study II, estimation and prevalence among school children were observed. Clinical and borderline ranges of internalizing and externalizing problems were estimated.

Study III: Effectiveness of Fun FRIENDS program

The purpose of this study was to determine the efficacy of the Fun FRIENDS program in the development of social emotional competence and its impact on behavioral problems in young school children. The design of this study was a randomized control trial (RCT). The results of the study were compared between pre- and post-assessments. 473 children were recruited to determine the effectiveness of the Urdu version of Fun FRIENDS.

Chapter III

Study I: Translation and Pilot Study of Outcome Measures

Objectives

1. To translate and adapt the outcome measures.
2. To validate translated version of Social Emotional Development Assessment (SEDA) scale.
3. To validate translated version of Preschool Anxiety Scale (PAS).
4. To validate translated version of Behavior Inhibition Questionnaire (BIQ).
5. To determine the psychometric properties of all study variables.
6. To conduct a pilot study of translated outcome measures.

Method

This study was carried out in two phases. The first phase was the translation of outcome measures. Whereas the second phase was related to the pilot study of these outcome measures.

Phase I: Translation of Outcome Measures

The following outcome measures were translated and adapted to gauge the impact of the final evaluation of the effectiveness trial except Kusche Emotional Inventory Labeling subscale and both versions of Child Behavioral Checklists, which were already adapted in Urdu for Pakistani children. Details of these measures will be provided in Study II. Below is the description of translated measures:

Measures

Social Emotional Development Assessment (SEDA). The Social Emotional Development Assessment (SEDA) scale is a tool used to evaluate social emotional skills in children from kindergarten to 2nd grade. It consists of 12 self-report items that are rated on a scale of 0-2. A thumbs down clip art represents "not true or rarely true," a sideways thumbs clip art represents "sometimes true," and a thumbs up clip art represents "usually or always true." The scale assesses social emotional skills across five domains: self-regulation, social skills, school belongingness, social responsibility, and optimism. The domains of school belongingness and optimism consist of 3 items apiece, whereas the remaining domains consist of 2 items each. For example, some of the items include "I wait my turn in line," "I invite kids to play with me," and "I like myself." The scale had satisfactory internal consistency ($\alpha = 0.83$).

Kusche Emotion Inventory. The Kusche Emotion Inventory, also known as the KEI (Kusche, 1984), was designed to assess the ability of preschool-aged children to differentiate between a variety of emotions. Labels for emotions range from the simple "happy," "sad," "angry," and "scared" up to the more complex "confused," "love," "surprise," "pride," "disappointment," "embarrassment," and "tired". The KEI-Labeling subtest included 40 stimulus pages, each with a single figure and four possible labels, of which only one was right. The children were tasked with identifying the appropriate emotion. Every correct answer to a stimulus was worth two points, whereas every erroneous response was worth zero. A child would receive a score of 1 if he or she correctly identified the valence of the

target emotion (such as happy for an excited expression). Kusche (1984) found an overall test-retest reliability of 0.85 for the initial measure.

The Preschool Anxiety Scale (PAS). The Preschool Anxiety Scale (PAS; Spence et al., 2001), is a 22-item teacher-rating scale designed to assess childhood anxiety symptoms. The PAS was developed from the Spence Children's Anxiety Scale and is normed for use with young children ages 4–6 years-old. It consists of 28 items. A total score is calculated based on five subscales including separation anxiety, physical injury fears, social anxiety, obsessive- compulsive disorder and generalized anxiety. The measure possesses good psychometric properties, including an established factor structure and strong correlations with other measures of internalizing problems (Achenbach, 1991, 1992; Achenbach & Rescorla, 2000).

Behavioral Inhibition Questionnaire. On a 7-point Likert scale, the Behavioral Inhibition Questionnaire (BIQ; Bishop, Spence, & McDonald, 2003) is a teacher-reported questionnaire consisting of 28 items that measures the frequency of behaviors associated with behavioral inhibition (BI). In addition to a comprehensive overall score, the measure comprises six distinct scores that are indicative of BI: physical challenge, peer situations, separation/preschool, performance situations, unfamiliar adults, and general novel situations.

Translation of the Outcome Measures

Brislin's (1980) guidelines were followed to translate Social Emotional Development Assessment Scale, Kusche Emotion Inventory (Labeling) scale, Behavioral inhibition questionnaire, preschool anxiety scale and primary intervention rating scale into Urdu. The following steps were involved in the translation process.

Step I: Scale Items Relevance for Pakistani Children

The study's scale items were analyzed before moving further with the translation process. Seven professionals were consulted for this study; these included four preschool teachers and three educationists with a combined total of more than 15 years of experience working with young children in educational settings. They were tasked with determining whether the materials were useful for Pakistani students. Items were shown to correspond with typical student behavior in Pakistani classrooms.

Step II: Forward Translation of Items

For this purpose, a group of six people who are fluent in both languages was contacted. During this stage of the process, we contacted a group consisting of six bilinguals. Two of these individuals have a Master of Arts degree in English and were able to communicate effectively in both Urdu and English. Three of them held master's degrees and doctoral degrees and worked in the field of clinical and developmental psychology. The fourth person held a doctorate in education and had expertise in dealing with young children as well as proficiency in both languages. They were contacted with the request to translate the items while keeping in mind that conceptual equivalent should be maintained. After that, the researcher checked the translations for consistency.

Step III: Committee Approach

As soon as the initial translation was finished, a committee of three people was assembled to discuss and decide upon the most accurate translation of the scales. Researchers and professors in the field of psychology were recruited for their expertise in item development and translation.

Step IV: Back Translation of Items

Following this, Urdu translations of the two scales chosen via the committee method were prepared by inviting three bilingual specialists to back translate the English versions. These multilingual individuals held master's degrees but were not familiar with the first version of the scales.

Step V: Finalization of Scales' Items

Following the completion of the back translation of all the scales, a committee consisting of three members reviewed the back translations and finalized the Urdu translations by comparing the original versions with the back translations. Items were kept in the scales that were thought to be the most culturally relevant, as well as those that conveyed meaning as closely as possible to how it was expressed in the original scales. The committee agreed that the final version should be used in future research.

Adaptation of Kusche Emotion Inventory-Labeling Subtest

This picture test consists of forty pages of different stimuli in assessing a child's ability to label a range of emotion. For adapting this picture test, the pictures were evaluated by a panel of five experts (one with a master's degree in psychology, two with doctorates in psychology, one clinical psychologist, and one with a master's degree in English), who were also involved in the process of translating other outcome measures. An art expert re-drew the pictures after the panel's suggestions, making subtle adjustments to the manner in which male and female characters dressed, their hairstyles, and the expressions they made to reflect local culture. The panel reached the conclusion that the adapted inventory could be used appropriately with Pakistani school children.

Phase II: Pilot Testing of Outcome Measures

During this phase, pilot testing of all the study outcome measures including CBCL and Kusche Emotion Inventory labeling scale was completed. Complete protocol for child reported measures and teacher reported measures were tested in pilot study.

Sample

For the pilot testing of instruments, 142 children between the ages of 4 and 8 (M=6.08, SD=1.26) from Prep (50%), Class 1 (35.9%), and Class 2 were chosen as a sample (14.1%). There were 74 (52.1%) boys and 68 (47.9%) girls. Purposive sampling method was used in February 2021 to collect data from two Government schools in Islamabad. An initial pool of 160 individuals was contacted, but there was an 11% attrition rate after that. Eighteen students were left out of the study because they were older than eight years old, and ten others were newcomers about whom teachers knew very little. The questionnaires were completed by six teachers.

Procedure

Permissions were sought from the Federal Directorate of Education (FDE), Islamabad. Informed consent was taken from the parents and teachers, due to covid restrictions of social and public meetings, parents were approached through letters from the schools. Data was collected in class groups with the assistance of researchers. Relevant authorities of the school were briefed about the objectives of the study. The study was approved by the Ethical Committee of the National University of Modern Languages (NUML), Islamabad. Administration of the research questionnaires took 15 minutes with

children, and 20 minutes each for teacher reports' measures. Participants were provided refreshments after data collection.

Ethical Considerations

Initially, authorization from the Federal Directorate of Education in Islamabad was requested to perform the study. Nominations for schools were received, and instructors were later asked to give parents with the consent form and demographic information form. Parents and teachers were asked for written permission. They were informed of the research's purpose and assured that the information would only be used for research reasons.

Analysis Plan

All analyses were conducted using SPSS version 26.0. Descriptive statistics were computed including frequencies, percentages, and standard deviations of all demographic variables. The psychometric properties of the translated versions of SEDA, Kusche Emotion Inventory - Recognition, Preschool Anxiety Scale and Behavioral Inhibition Questionnaire were assessed through reliability and validity analyses. Reliability properties were established using internal consistency measured using Cronbach's alpha and split-half reliability considering following guidelines for qualitative interpretation: $.70 < \alpha < .79$ = adequate; $.80 < \alpha < .89$ = good; and $.90 \ \alpha$ = excellent internal consistency (Hunsley & Mash, 2008).

We then performed item analysis using corrected item-total correlation. The factor structure of the original Social Emotional Development Assessment was based on Exploratory Factor Analysis (EFA) and Item Response Theory (IRT). Therefore, to examine how adequate the identified model of the original scale fits the Urdu Social Emotional

Development Assessment -12, we initially conducted Confirmatory Factor Analysis (CFA) of original five factor model. Model was not found fit (see results). We then conducted the EFA and repeated CFA and retained three factor model for Urdu version of Social Emotional Development Assessment. Based on the review of the scree plot and the amount of the variance explained by the first factor, the results of the EFA supported one-dimensionality, like the original scale. Three domains reflecting a broader construct of positive social-emotional development in Urdu version of Social Emotional Development Assessment. Item factor loadings can be seen in Table 4. In CFA, model fits were assessed through comparative fit index (CFI; ≥ .90), Tucker Lewis Index (TLI; ≥ .90), root mean square error of approximation (RMSEA; ≥ .08), and root mean squared residual (RMSR; .08) (Hu & Bentler, 1998). Furthermore, Confirmatory Factor Analysis (CFA) were performed for Preschool anxiety scale and behavioral inhibition questionnaires. Item factor loadings for these scales can be seen in Table 8.

Results

Results of study I include demographics of the sample, psychometric characteristics and reliability analysis of all study outcome measures including Social Emotional Development Assessment Scale, Kusche Emotion Inventory Recognition and Labeling subscales, Child Behavior Checklists, Preschool Anxiety Scale and Behavioral Inhibition Questionnaire. These were completed by descriptive, reliability estimates, skewness, kurtosis, and item total correlations. This section aimed at evaluating the appropriateness of the outcome measures which were used in the main study. Table 2 shows the demographics of the participants, which were not part of the main study.

Table 2

Demographic Characteristics of the Sample (N=142)

Demographics	Frequency *F*	Percentage (%) or Mean (SD)
Gender		
Boys	74	52.1
Girls	68	47.9
Age		6.08 (1.26)
Family Structure		
Nuclear	60	42.3
Joint	82	57.7
Class		
Prep	71	50.0
Grade 1	51	35.9
Grade 2	20	14.1
Family Income (Monthly in PKR)		26,197 (8,813.46)

The sample in this study consisted of 142 participants, with 74 (52.1%) being boys and 68 (47.9%) being girls. The mean age of the participants was 6.08 years old (SD = 1.26). In terms of family structure, 60 (42.3%) participants came from nuclear families

and 82 (57.7%) participants came from joint families. In terms of class, 71 (50.0%) participants were in prep class, 51 (35.9%) were in grade 1, and 20 (14.1%) were in grade 2. The mean monthly family income for the participants was PKR 26,197 (SD = 8,813.46). These demographic data suggest that the sample is relatively evenly distributed by gender, with a slight majority of boys. The age of the participants indicates that they are all primary school students. The majority of the participants come from joint families, and there is a relatively even distribution across different class levels. Additionally, the data suggests that the sample comes from families of relatively lower-middle class income.

Reliability Analysis

Reliability estimates of all the translated outcome measures are computed. Secondary data is used to do this analysis. Table 3 shows Pearson alpha coefficients, means, standard deviations, actual and potential ranges, skewness and kurtosis for Social Emotional Development Assessment Scale, Kusche Emotion Inventory Recognition subscale, Preschool Anxiety and Behavioral Inhibition Questionnaire. Results show that all translated scales and their subscales have high alpha coefficients except four subscales of Behavioral Inhibition Questionnaire i.e., social novelty inhibition of adults and performance, and situational novelty inhibition of separation and physical challenges. However, the alpha coefficient of the complete scale shows a high reliability score. Similarly, physical injury subscale of preschool anxiety scale shows low reliability, however the overall score depicted adequate reliability coefficient. Table no. 4 and 5 show item total correlations of all outcome measures.

Table 3

Psychometric Properties of the Outcome Measures (N=142)

Variables	No of Items	M	SD	α	Range		Skew	Kurt
					Potential	Actual		
SEDA	12	20.77	3.44	0.74	0-24	3-24	-1.92	5.66
Self-Regulation	6	10.59	1.86	0.60	0-12	3-12	-1.50	2.09
Social Skills	3	5.04	1.25	0.70	0-6	0-6	-1.59	2.52
School belongingness	3	5.14	1.05	0.68	0-6	0-6	-1.56	3.63
KEI								
Labeling	40	49.06	10.94	0.81	0-80	20-67	-0.15	-0.74
Recognition	30	38.39	9.80	0.82	0-60	18-55	-0.09	-0.97
CBCL*								
Internalizing	CTRF-32	63.97	12.27	0.90	34-100	34-95	-0.29	1.44
	TRF- 35	60.61	8.72	0.81	37-100	37-77	-0.61	1.01
Externalizing	CTRF-34	58.45	6.79	0.87	34-100	36-77	-0.99	4.70
	TRF- 32	61.16	9.10	0.89	41-100	41-79	-0.01	0.45
Total Problems	CTRF-99	62.63	10.66	0.96	29-100	29-92	-0.71	4.18

	TRF-112	60.10	10.48	0.96	32-100	32-83	-0.26	1.06
PAS	22	22.58	13.09	0.87	0-88	0-67	1.03	1.23
Generalized Anxiety	4	4.35	3.21	0.73	0-16	0-16	1.07	0.96
Social Anxiety	5	5.37	3.14	0.45	0-20	0-16	0.75	0.47
OCD	5	5.20	3.17	0.41	0-20	0-15	1.10	0.69
Physical Injury Fears	2	2.38	1.87	0.49	0-8	0-7	0.51	-0.83
Separation Anxiety	6	5.27	4.15	0.67	0-24	0-21	1.12	1.63
BIQ	28	100.23	23.69	0.83	28-196	34-182	-0.30	2.13
Adults	4	13.00	3.84	0.60	1-28	5-25	0.42	0.20
Peers	6	20.74	5.53	0.71	1-42	6-39	-0.18	1.08
Performance	4	15.60	4.31	0.62	1-28	5-28	-0.19	0.77
Separation/Preschool	4	16.37	5.03	0.66	1-28	4-27	-0.49	-0.11
New Situations	6	19.89	7.19	0.75	1-42	5-39	0.20	-0.61
Physical Challenges	4	14.64	4.15	0.70	1-28	5-28	0.32	1.49

Note. PAS = Preschool Anxiety Scale, OCD= Obsessive Compulsive Disorder, BIQ = Behavioral Inhibition Questionnaire, CBCL= Child Behavior Checklist, KEI= Kusche Emotion Inventory, SEDA= Social Emotional Development Assessment; Skew= skewness; Kurt= kurtosis.

*All scores are based on T-scores.

Table 3 presents psychometric data for a variety of measures, including the Behavioral Inhibition Questionnaire (BIQ), Kusche Emotion Inventory (KEI), and Child

Behavior Checklist (CBCL). The measures are assessed using a range of statistics, including the number of items, mean, standard deviation, alpha coefficient, potential range, actual range, skew, and kurtosis. The Social Emotional Development Assessment (SEDA) scale has 12 items and a potential range of 0-24, with an actual range of 3-24. The scale has an alpha coefficient of 0.74 and a mean of 20.77, with a standard deviation of 3.44. The skew and kurtosis values are -1.92 and 5.66, respectively. These values indicate that the distribution of scores is moderately skewed and has a high degree of peakedness. The Self-Regulation subscale has 6 items and a potential range of 0-12, with an actual range of 3-12. The scale has an alpha coefficient of 0.60 and a mean of 10.59, with a standard deviation of 1.86. The skew and kurtosis values are -1.50 and 2.09, respectively. These values indicate that the distribution of scores is moderately skewed and has a moderate degree of peakedness. The Social Skills subscale has 3 items and a potential range of 0-6, with an actual range of 0-6. The scale has an alpha coefficient of 0.70 and a mean of 5.04, with a standard deviation of 1.25. The skew and kurtosis values are -1.59 and 2.52, respectively. These values indicate that the distribution of scores is moderately skewed and has a moderate degree of peakedness. The school belongingness subscale has 3 items and a potential range of 0-6, with an actual range of 0-6. The scale has an alpha coefficient of 0.68 and a mean of 5.14, with a standard deviation of 1.05. The skew and kurtosis values are -1.56 and 3.63, respectively. These values indicate that the distribution of scores is moderately skewed and has a high degree of peakedness.

The Kusche Emotion Inventory (KEI) consists of two scales: Labeling and Recognition. The Labeling scale has 40 items and a potential range of 0-80, with an

actual range of 20-67. The scale has an alpha coefficient of 0.81 and a mean of 49.06, with a standard deviation of 10.94. The skew and kurtosis values are -0.15 and -0.74, respectively. These values indicate that the distribution of scores is slightly skewed and has a low degree of peakedness. The Recognition scale has 30 items and a potential range of 0-60, with an actual range of 18-55. The scale has an alpha coefficient of 0.82 and a mean of 38.39, with a standard deviation of 9.80. The skew and kurtosis values are -0.09 and -0.97, respectively. These values indicate that the distribution of scores is slightly skewed and has a low degree of peakedness. Based on the skewness and kurtosis values provided, it appears that the distribution of scores for the internalizing and externalizing subscales are negatively skewed, indicating that more scores are at the lower end of the scale. The kurtosis values for these subscales are also high, indicating that the distribution is relatively peaked. This may suggest that there is a relatively small number of children and adolescents who score in the higher range of these subscales, but a relatively large number of children and adolescents who score in the lower range.

The PAS (Preschool Anxiety Scale) has a total of 22 items and a potential range of scores from 0-88. The mean score for this scale is 22.58 with a standard deviation of 13.09. The alpha coefficient for this scale is 0.87, indicating a moderate level of internal consistency. The actual range of scores is from 0-67, indicating that most scores fall within this range. The skewness of the scores is 1.03, indicating that the distribution of scores is positively skewed, meaning that there are more scores at the lower end of the scale than at the higher end. The kurtosis of the scores is 1.23, indicating that the distribution of scores is moderately peaked.

The BIQ (Behavioral Inhibition Questionnaire) has a total of 28 items and a potential range of scores from 28-196. The mean score for this scale is 100.23 with a standard deviation of 23.69. The alpha coefficient for this scale is 0.83, indicating a moderate level of internal consistency. The actual range of scores is from 34-182, indicating that most scores fall within this range. The skewness of the scores is -0.30, indicating that the distribution of scores is slightly negatively skewed, meaning that there are more scores at the higher end of the scale than at the lower end. The kurtosis of the scores is 2.13, indicating that the distribution of scores is moderately peaked.

Table 4

Inter Item Total Correlation of Social Emotional Competence Scales (N=142)

Items	M	SD	Item total Correlation	Cronbach's Alpha if item deleted
Lab1	1.02	0.96	0.45	0.82
Lab2	0.70	0.67	0.66	0.81
Lab3	0.77	0.88	0.37	0.81
Lab4	1.84	0.49	0.33	0.81
Lab5	1.14	0.66	0.45	0.81
Lab6	1.33	0.83	0.40	0.81
Lab7	1.22	0.81	0.48	0.81
Lab8	1.27	0.65	0.40	0.80
Lab9	1.10	0.89	0.45	0.80
Lab10	1.29	0.86	0.42	0.82
Lab11	0.87	0.66	0.64	0.81
Lab12	1.08	0.89	0.59	0.81
Lab13	1.35	0.90	0.53	0.80
Lab14	0.91	0.83	0.42	0.80
Lab15	1.08	0.85	0.59	0.81
Lab16	1.69	0.65	0.68	0.80
Lab17	0.86	0.73	0.34	0.81
Lab18	1.20	0.72	0.41	0.80

Lab19	1.47	0.72	0.43	0.80
Lab20	1.02	0.90	0.72	0.81
Lab21	1.47	0.74	0.42	0.81
Lab22	1.06	0.89	0.45	0.80
Lab23	1.32	0.77	0.60	0.80
Lab24	1.54	0.80	0.44	0.82
Lab25	1.45	0.72	0.52	0.80
Lab26	1.05	0.90	0.35	0.80
Lab27	1.21	0.83	0.43	0.80
Lab28	1.15	0.77	0.65	0.81
Lab29	1.48	0.81	0.56	0.80
Lab30	1.13	0.84	0.44	0.80
Lab31	1.18	0.81	0.43	0.80
Lab32	1.53	0.79	0.53	0.80
Lab33	0.96	0.85	0.46	0.81
Lab34	1.35	0.76	0.42	0.80
Lab35	1.61	0.67	0.24	0.81
Lab36	1.16	0.78	0.44	0.81
Lab37	1.34	0.85	0.52	0.80
Lab38	1.18	0.81	0.35	0.80
Lab39	1.13	0.86	0.54	0.81
Lab40	1.54	0.77	0.36	0.80

Rec1	0.98	0.53	0.51	0.82
Rec2	1.54	0.71	0.53	0.83
Rec3	1.09	0.89	0.41	0.82
Rec4	1.26	0.70	0.55	0.83
Rec5	1.45	0.73	0.35	0.82
Rec6	1.31	0.71	0.53	0.83
Rec7	1.46	0.73	0.43	0.82
Rec8	1.30	0.84	0.44	0.82
Rec9	1.13	0.95	0.61	0.83
Rec10	1.34	0.89	0.49	0.81
Rec11	0.92	0.93	0.48	0.81
Rec12	0.77	0.90	0.48	0.83
Rec13	1.35	0.81	0.52	0.82
Rec14	1.27	0.82	0.67	0.83
Rec15	1.47	0.77	0.34	0.82
Rec16	1.44	0.70	0.46	0.82
Rec17	1.14	0.84	0.41	0.82
Rec18	1.33	0.75	0.41	0.82
Rec19	1.41	0.79	0.44	0.82
Rec20	1.43	0.82	0.34	0.82
Rec21	1.21	0.87	0.34	0.82
Rec22	1.11	0.91	0.36	0.82

Rec23	1.66	0.71	0.40	0.82
Rec24	1.34	0.82	0.30	0.82
Rec25	1.06	0.89	0.48	0.81
Rec26	1.61	0.72	0.61	0.81
Rec27	1.15	0.92	0.67	0.81
Rec28	1.13	0.92	0.56	0.81
Rec29	1.35	0.81	0.60	0.81
Rec30	1.37	0.67	0.41	0.83
SEDA1	1.48	0.77	0.35	0.74
SEDA2	1.56	0.66	0.30	0.73
SEDA3	1.73	0.56	0.59	0.73
SEDA4	1.80	0.54	0.57	0.70
SEDA5	1.71	0.61	0.58	0.69
SEDA6	1.76	0.56	0.41	0.72
SEDA7	1.82	0.49	0.44	0.71
SEDA8	1.67	0.62	0.55	0.70
SEDA9	1.82	0.50	0.32	0.73
SEDA10	1.77	0.52	0.48	0.73
SEDA11	1.83	0.39	0.46	0.73
SEDA12	1.84	0.49	0.48	0.73

Note. Note. REC= Kusche Emotion Inventory- recognition scale; LAB= Kusche Emotion Inventory- labeling scale; SEDA= Social Emotional Development Assessment.

Table 4 provides the mean, standard deviation and corrected item total correlation of measures including KEI- Labeling scale, recognition scale and social emotional development assessment scale. The item total correlation refers to the correlation between each item (e.g., Lab1, Lab2, etc.) and the total score of all items. A high item total correlation indicates that the item is strongly related to the overall score, whereas a low item total correlation indicates that the item is less related to the overall score. The Cronbach's alpha if item deleted refers to how the overall reliability of the test changes if a particular item is removed. A higher alpha indicates a more reliable test, and a lower alpha indicates a less reliable test. In this case, the item total correlation values range from 0.24 to 0.72, with most items having a correlation between 0.35 and 0.60. The Cronbach's alpha values if an item is deleted range from 0.69 to 0.83, with most values being between 0.80 and 0.83. This suggests that the test has a good level of reliability, and that the removal of any single item does not greatly impact the overall reliability of the test.

For KEI- Labelling scale, the mean (M) of the items ranges from 0.70 to 1.84, with a standard deviation (SD) ranging from 0.49 to 0.96. The item-total correlation ranges from 0.24 to 0.72, which indicates the relationship between each item and the total score of the scale. A high correlation indicates that the item is a good indicator of the overall construct being measured. The Cronbach's alpha if item deleted ranges from 0.80 to 0.82, which is considered as good. For KEI- Recognition scale, the range of values for M is 0.77-1.66, which indicates that the scores for the items on the scale are relatively close to one another. The range of values for SD is 0.53-0.95, which indicates that the scores for the items on the scale have a moderate amount of variability. The range of values for the item total correlation

is 0.35-0.67, which indicates that the items on the scale are moderately correlated with the overall score. The range of values for Cronbach alpha's is 0.81-0.83, which indicates that the internal consistency of the scale is relatively high and deleting any item would not greatly affect the internal consistency. For SEDA scale, all the means are between 1.48 and 1.84, which indicates that the scores for the items on the scale are relatively close to one another. All the standard deviations are between 0.39 and 0.77 which indicates that the scores for the items have a moderate amount of variability. The range of values for the item total correlation is 0.30-0.59, which indicates that the items on the scale are moderately correlated with the overall score.

Table 5

Inter Item Total Correlation of Behavioral Problems Scales (N=142)

Items	M	SD	Item total Correlation	Cronbach's Alpha if item deleted
CBCL1	0.96	0.89	0.38	0.95
CBCL2	0.96	0.89	0.38	0.95
CBCL3	0.96	0.89	0.38	0.95
CBCL4	0.96	0.89	0.48	0.95
CBCL5	0.72	0.75	0.37	0.95
CBCL6	0.43	0.62	0.46	0.95
CBCL7	0.85	0.70	0.30	0.95
CBCL8	0.83	0.68	0.41	0.95
CBCL9	0.57	0.78	0.30	0.95
CBCL10	0.72	0.62	0.57	0.95
CBCL11	0.74	0.58	0.35	0.95
CBCL12	0.28	0.54	0.46	0.95
CBCL13	0.46	0.69	0.33	0.95
CBCL14	0.61	0.71	0.40	0.95
CBCL15	0.43	0.66	0.36	0.95
CBCL16	0.63	0.57	0.57	0.95
CBCL17	0.41	0.58	0.56	0.95
CBCL18	0.46	0.55	0.59	0.95

CBCL19	0.30	0.55	0.62	0.95
CBCL20	0.35	0.53	0.39	0.95
CBCL21	0.43	0.69	0.41	0.95
CBCL22	0.63	0.57	0.33	0.95
CBCL23	0.78	0.63	0.54	0.95
CBCL24	0.63	0.57	0.48	0.95
CBCL25	0.43	0.58	0.41	0.95
CBCL26	0.46	0.59	0.35	0.95
CBCL27	1.13	0.91	0.58	0.95
CBCL28	0.61	0.61	0.48	0.95
CBCL29	0.46	0.66	0.55	0.95
CBCL30	0.37	0.57	0.55	0.95
CBCL31	0.46	0.62	0.37	0.95
CBCL32	0.65	0.60	0.40	0.95
CBCL33	0.65	0.77	0.49	0.95
CBCL34	0.50	0.59	0.67	0.95
CBCL35	0.54	0.62	0.45	0.95
CBCL36	0.24	0.48	0.36	0.95
CBCL37	1.02	0.88	0.43	0.95
CBCL38	0.48	0.59	0.59	0.95
CBCL39	0.35	0.60	0.32	0.95
CBCL40	0.52	0.55	0.30	0.95

CBCL41	0.39	0.61	0.53	0.95
CBCL42	0.26	0.44	0.53	0.95
CBCL43	0.50	0.62	0.71	0.95
CBCL44	0.52	0.59	0.50	0.95
CBCL45	0.39	0.65	0.72	0.95
CBCL46	0.24	0.52	0.51	0.95
CBCL47	0.41	0.62	0.50	0.95
CBCL48	0.48	0.55	0.48	0.95
CBCL49	0.30	0.47	0.59	0.95
CBCL50	0.43	0.62	0.50	0.95
CBCL51	0.33	0.52	0.51	0.95
CBCL52	0.46	0.69	0.42	0.95
CBCL53	0.48	0.51	0.31	0.95
CBCL54	0.33	0.56	0.41	0.95
CBCL55	0.30	0.47	0.35	0.95
CBCL56	0.28	0.50	0.63	0.95
CBCL57	0.20	0.50	0.48	0.95
CBCL58	0.30	0.55	0.45	0.95
CBCL59	0.30	0.59	0.62	0.95
CBCL60	0.43	0.62	0.57	0.95
CBCL61	0.41	0.72	0.52	0.95
CBCL62	0.83	0.77	0.36	0.95

CBCL63	0.54	0.55	0.38	0.95
CBCL64	0.57	0.66	0.44	0.95
CBCL65	0.57	0.69	0.32	0.95
CBCL66	0.30	0.55	0.51	0.95
CBCL67	0.20	0.50	0.41	0.95
CBCL68	0.89	0.74	0.35	0.95
CBCL69	0.35	0.48	0.37	0.95
CBCL70	0.30	0.55	0.33	0.95
CBCL71	0.87	0.86	0.37	0.95
CBCL72	0.52	0.75	0.40	0.95
CBCL73	0.54	0.55	0.46	0.95
CBCL74	0.74	0.93	0.32	0.95
CBCL75	0.91	0.84	0.39	0.95
CBCL76	0.57	0.54	0.45	0.95
CBCL77	0.33	0.63	0.55	0.95
CBCL78	0.48	0.72	0.48	0.95
CBCL79	0.76	0.67	0.47	0.95
CBCL80	0.24	0.48	0.35	0.95
CBCL81	0.57	0.62	0.34	0.95
CBCL82	0.50	0.62	0.46	0.95
CBCL83	0.43	0.54	0.51	0.95
CBCL84	0.59	0.58	0.49	0.95

CBCL85	0.63	0.77	0.30	0.95
CBCL86	0.76	0.87	0.32	0.95
CBCL87	0.41	0.62	0.59	0.95
CBCL88	0.70	0.87	0.39	0.95
CBCL89	0.50	0.72	0.47	0.95
CBCL90	0.50	0.66	0.64	0.95
CBCL91	0.52	0.55	0.43	0.95
CBCL92	0.76	0.87	0.36	0.95
CBCL93	0.35	0.64	0.45	0.95
CBCL94	0.41	0.62	0.54	0.95
CBCL95	0.50	0.69	0.37	0.95
CBCL96	0.70	0.76	0.39	0.95
CBCL97	0.30	0.55	0.51	0.95
CBCL98	0.41	0.58	0.52	0.95
CBCL99	0.78	0.76	0.25	0.95
TRF1	0.45	0.68	0.49	0.96
TRF2	0.45	0.68	0.49	0.96
TRF3	0.45	0.68	0.49	0.96
TRF4	0.45	0.68	0.49	0.96
TRF5	0.50	0.62	0.33	0.96
TRF6	0.51	0.63	0.42	0.96
TRF7	0.55	0.60	0.49	0.96

TRF8	0.53	0.62	0.37	0.96
TRF9	0.26	0.59	0.63	0.96
TRF10	0.60	0.79	0.60	0.96
TRF11	0.58	0.76	0.35	0.96
TRF12	0.33	0.57	0.58	0.96
TRF13	0.55	0.68	0.32	0.96
TRF14	0.45	0.60	0.32	0.96
TRF15	0.60	0.70	0.43	0.96
TRF16	0.45	0.60	0.49	0.96
TRF17	0.50	0.60	0.40	0.96
TRF18	0.40	0.53	0.46	0.96
TRF19	0.44	0.72	0.49	0.96
TRF20	0.30	0.53	0.45	0.96
TRF21	0.29	0.56	0.49	0.96
TRF22	0.60	0.69	0.42	0.96
TRF23	0.35	0.58	0.58	0.96
TRF24	0.44	0.66	0.56	0.96
TRF25	0.56	0.69	0.39	0.96
TRF26	0.43	0.66	0.53	0.96
TRF27	0.71	0.75	0.63	0.96
TRF28	0.41	0.69	0.62	0.96
TRF29	0.45	0.69	0.56	0.96

TRF30	0.33	0.64	0.54	0.96
TRF31	0.36	0.63	0.51	0.96
TRF32	0.54	0.72	0.43	0.96
TRF33	0.26	0.53	0.53	0.96
TRF34	0.28	0.56	0.40	0.96
TRF35	0.39	0.57	0.43	0.96
TRF36	0.35	0.60	0.61	0.96
TRF37	0.39	0.62	0.45	0.96
TRF38	0.28	0.52	0.35	0.96
TRF39	0.28	0.58	0.57	0.96
TRF40	0.24	0.54	0.61	0.96
TRF41	0.35	0.60	0.61	0.96
TRF42	0.48	0.70	0.35	0.96
TRF43	0.28	0.58	0.66	0.96
TRF44	0.30	0.51	0.38	0.96
TRF45	0.27	0.51	0.53	0.96
TRF46	0.24	0.52	0.59	0.96
TRF47	0.45	0.69	0.32	0.96
TRF48	0.41	0.61	0.65	0.96
TRF49	0.55	0.66	0.66	0.96
TRF50	0.45	0.63	0.38	0.96
TRF51	0.34	0.56	0.37	0.96

TRF52	0.51	0.56	0.34	0.96
TRF53	0.30	0.53	0.44	0.96
TRF54	0.24	0.52	0.37	0.96
TRF55	0.28	0.52	0.43	0.96
TRF56	0.38	0.55	0.24	0.96
TRF57	0.30	0.58	0.56	0.96
TRF58	0.29	0.61	0.64	0.96
TRF59	0.44	0.71	0.45	0.96
TRF60	0.22	0.46	0.65	0.96
TRF61	0.41	0.61	0.59	0.96
TRF62	0.44	0.69	0.58	0.96
TRF63	0.33	0.54	0.53	0.96
TRF64	0.60	0.73	0.37	0.96
TRF65	0.26	0.53	0.44	0.96
TRF66	0.39	0.69	0.45	0.96
TRF67	0.19	0.47	0.34	0.96
TRF68	0.25	0.54	0.43	0.96
TRF69	0.36	0.65	0.38	0.96
TRF70	0.32	0.61	0.55	0.96
TRF71	0.33	0.64	0.51	0.96
TRF72	0.49	0.60	0.55	0.96
TRF73	0.23	0.49	0.60	0.96

TRF74	0.40	0.64	0.40	0.96
TRF75	0.52	0.68	0.49	0.96
TRF76	0.46	0.61	0.60	0.96
TRF77	0.53	0.63	0.51	0.96
TRF78	0.47	0.74	0.38	0.96
TRF79	0.27	0.57	0.47	0.96
TRF80	0.48	0.62	0.43	0.96
TRF81	0.89	0.82	0.54	0.97
TRF82	0.32	0.59	0.59	0.96
TRF83	0.39	0.69	0.39	0.96
TRF84	0.31	0.62	0.54	0.96
TRF85	0.19	0.44	0.42	0.96
TRF86	0.28	0.61	0.33	0.96
TRF87	0.20	0.43	0.48	0.96
TRF88	0.30	0.60	0.49	0.96
TRF89	0.35	0.60	0.53	0.96
TRF90	0.25	0.54	0.46	0.96
TRF91	0.35	0.58	0.51	0.96
TRF92	0.54	0.75	0.45	0.96
TRF93	0.65	0.87	0.63	0.97
TRF94	0.31	0.55	0.56	0.96
TRF95	0.41	0.57	0.36	0.96

TRF96	0.42	0.57	0.33	0.96
TRF97	0.42	0.59	0.50	0.96
TRF98	0.45	0.66	0.52	0.96
TRF99	0.44	0.68	0.33	0.96
TRF100	0.46	0.63	0.59	0.96
TRF101	0.42	0.63	0.32	0.96
TRF102	0.45	0.65	0.35	0.96
TRF103	0.36	0.62	0.46	0.96
TRF104	0.31	0.53	0.43	0.97
TRF105	0.30	0.48	0.31	0.96
TRF106	0.33	0.50	0.31	0.96
TRF107	0.38	0.57	0.32	0.96
TRF108	0.33	0.66	0.25	0.96
TRF109	0.27	0.55	0.41	0.96
TRF110	0.13	0.44	0.46	0.96
TRF111	0.42	0.63	0.49	0.96
TRF112	0.55	0.68	0.47	0.96
PAS1	1.03	1.07	0.65	0.87
PAS2	1.03	1.07	0.65	0.87
PAS3	1.08	0.90	0.34	0.88
PAS4	0.67	1.03	0.51	0.87
PAS5	1.03	1.07	0.65	0.87

PAS6	1.02	1.06	0.45	0.87
PAS7	1.13	1.24	0.45	0.87
PAS8	1.32	1.31	0.38	0.87
PAS9	1.07	0.97	0.43	0.87
PAS10	0.80	1.04	0.49	0.87
PAS11	0.98	1.11	0.46	0.87
PAS12	1.18	1.16	0.56	0.87
PAS13	0.75	1.11	0.44	0.87
PAS14	1.23	1.15	0.48	0.87
PAS15	1.03	1.17	0.32	0.88
PAS16	1.25	1.27	0.33	0.88
PAS17	0.90	1.40	0.36	0.88
PAS18	1.10	1.27	0.49	0.87
PAS19	1.08	1.07	0.49	0.87
PAS20	0.66	0.99	0.47	0.87
PAS21	1.32	1.09	0.55	0.87
PAS22	0.94	1.20	0.46	0.87
BIQ1	2.30	2.20	0.34	0.83
BIQ2	2.67	2.28	0.48	0.83
BIQ3	1.87	1.82	0.42	0.83
BIQ4	3.10	1.86	0.42	0.82
BIQ5	4.35	1.98	0.40	0.83

BIQ6	3.38	2.01	0.49	0.83
BIQ7	3.18	1.91	0.35	0.83
BIQ8	4.58	2.21	0.43	0.82
BIQ9	4.56	2.08	0.42	0.82
BIQ10	3.39	1.88	0.38	0.83
BIQ11	4.08	2.14	0.36	0.83
BIQ12	4.31	1.83	0.40	0.83
BIQ13	4.44	2.07	0.42	0.82
BIQ14	3.51	2.02	0.57	0.82
BIQ15	4.69	2.17	0.52	0.82
BIQ16	4.10	1.99	0.33	0.83
BIQ17	4.46	1.93	0.46	0.82
BIQ18	4.46	2.04	0.58	0.83
BIQ19	2.96	1.88	0.47	0.82
BIQ20	3.45	2.02	0.44	0.82
BIQ21	3.21	1.75	0.40	0.83
BIQ22	3.08	1.98	0.38	0.83
BIQ23	3.35	1.83	0.46	0.83
BIQ24	3.50	2.14	0.54	0.84
BIQ25	3.94	2.08	0.47	0.83
BIQ26	3.24	1.84	0.54	0.82
BIQ27	3.13	1.96	0.48	0.83

BIQ28	2.94	1.83	0.57	0.83

Note. PAS = Preschool Anxiety Scale, OCD= Obsessive Compulsive Disorder, BIQ = Behavioral Inhibition Questionnaire, CBCL= Child Behavior Checklist.

Table 5 shows the mean, SD, and item total correlation of CBCL, PAS, and BIQ. For CBCL, based on the data, the mean (M) for most of the items ranges between 0.4-0.8, standard deviation (SD) ranges between 0.5-0.9 and the item total correlation (ITC) ranges between 0.3-0.6. Findings suggest that all the items are highly correlated with the total score and that the internal consistency reliability coefficient would remain high even if any of the items were deleted. The Cronbach's Alpha if an item were deleted is consistently reported as 0.95, which suggests that the scale has high internal consistency and that removing any individual item would not significantly affect the overall reliability of the scale. For CBCL-TRF, the results in the table suggest that the test has good reliability, as the Cronbach's Alpha values are high, and the item total correlation values are all above 0.5, indicating that the items are strongly related to the overall construct being measured.

For PAS, the mean (M) for each item on the PAS scale is provided in the table. It ranges from 0.66 to 1.32, with most of the items having a mean close to 1. Furthermore, the results show that the PAS test has a high level of internal consistency as the Cronbach's Alpha if item deleted is high (around 0.87) for all items and the mean score is generally high for most items with a low standard deviation. This suggests that the test is measuring the construct it is intended to measure effectively. Lastly, for BIQ, the mean scores for the items range from 2.3 to 4.69, with a standard deviation ranging from 1.75 to 2.28. Overall, the mean scores are relatively close to each other, and standard deviation are consistent across

items. The item-total correlation values range from 0.34 to 0.57 which indicates moderate correlation between the items and the total score of the measure. This indicates that the items are measuring a similar construct and are likely measuring the same underlying trait. This suggests that the measure is relatively stable and consistent across all the items. Overall, the BIQ measure appears to have good reliability.

Factor Structure of SEDA

We initially run the CFA with same 5-factor structure model, however, the model showed inadequate fit to the Pakistani sample based on the chi-square goodness of fit test [χ^2 = 11.23 (*16, .795*)] and eigen values with only first three factors showing eigen values >1 with 55% total variance explained. We then identified a three-factor solution by exploratory factor analysis which accounted for cumulative variance of 66.13%. Factor loadings are presented in table 6. Furthermore, Table 7 shows confirmatory factory analysis model fit indices indicating that the ratios of the root mean square error of approximation (RMSEA), root mean square residual (RMSR), Tucker Lewis Index (TLI), goodness of fit index (GFI) and comparative fit index (CFI) evident good model fit (Hu & Bentler, 1999).

Table 6

Factor Loadings of SEDA

Items	Loadings		
	Self-Regulation	**Social skills**	**School belongingness**
3	0.745		
5	0.919		
8	0.597		
9	0.924		
11	0.892		
12	0.948		
1		0.683	
2		0.523	
4		0.828	
6		0.735	
7			0.739
10			0.676
Eigen values	**4.47**	**2.33**	**1.14**
Total Variance explained	**37.26%**	**19.40%**	**9.46%**

Table 6 shows the factor loadings of the Social Emotional Development Assessment Scale (SEDA). The table shows that there are three factors identified as self-regulation, social skills, and school belongingness. Each item on the questionnaire is associated with a loading

on each of these factors. Items with high factor loadings (e.g., 0.7 or above) are more strongly related to a specific factor, while items with low factor loadings (e.g., less than 0.5) are less strongly related. The Eigen values indicate the proportion of total variance in the data that is explained by each factor, the total variance explained by the three factors is 37.26%, 19.4% and 9.46% respectively, making total variance of 66%. These results suggest that the SEDA items are related to these three factors, and the factors explain a significant proportion of the variance in the data. Hence, the scale is valid to use for further assessment for this population.

Figure 8

Screeplot of Factor Model of Social Emotional Development Scale (EFA)

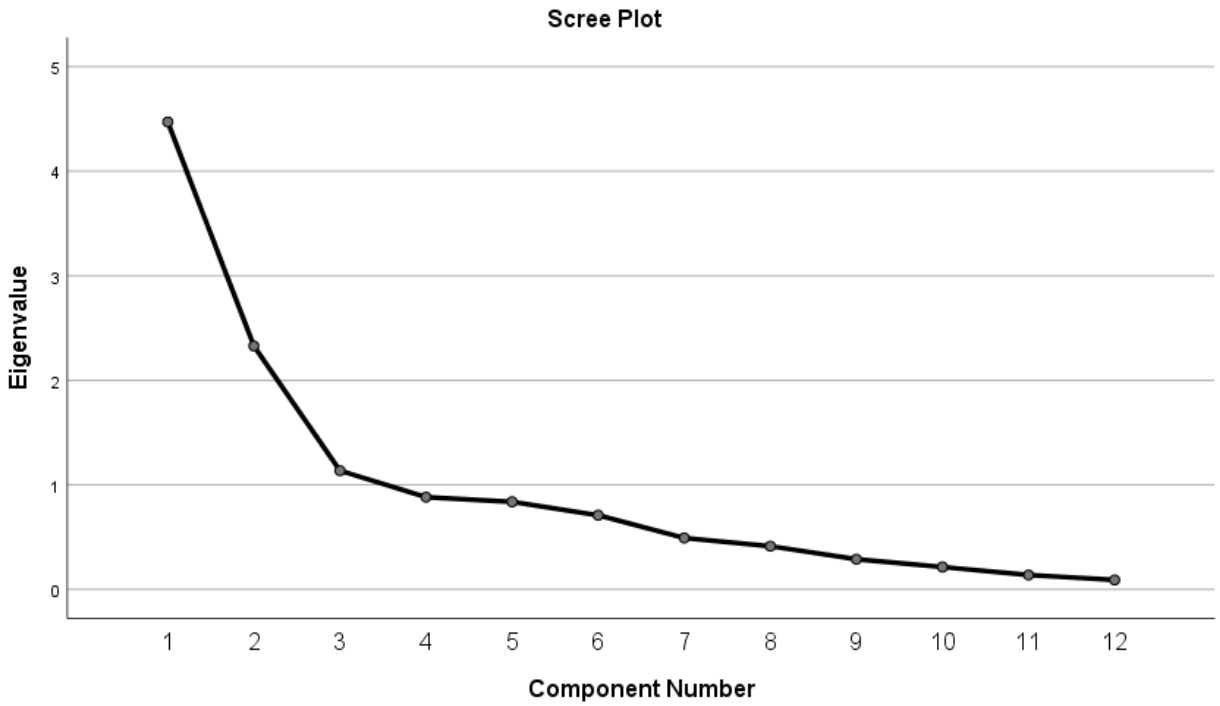


Figure 9

Factor Structure of The Urdu Version of Social Emotional Development Scale

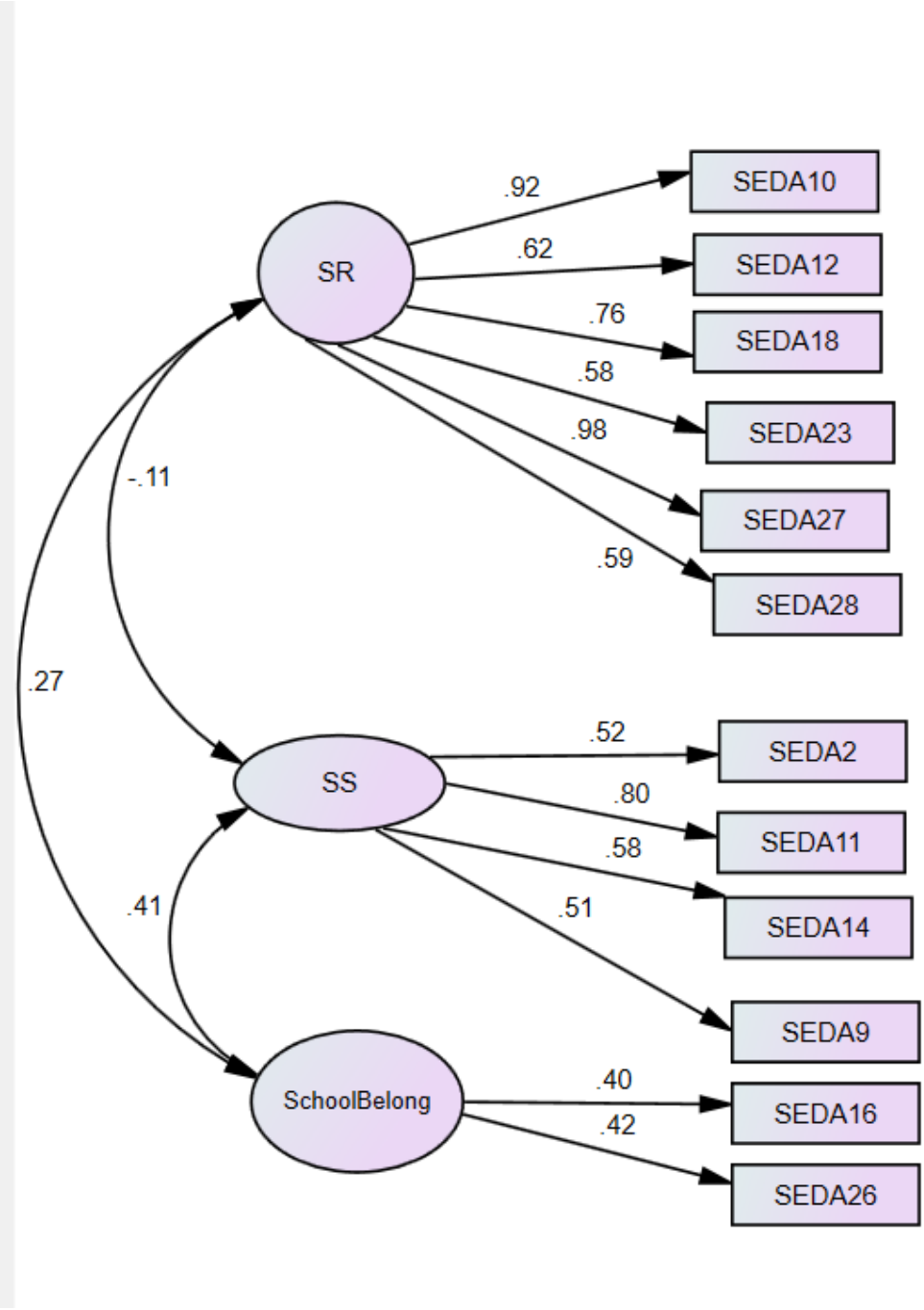


Table 7

Model Fit Indices for the Three Factor Model of SEDA

	χ^2	*Df (p value)*	χ^2/df	RMSEA	CFI	GFI	RMR	TLI
Three factor hierarchical model	249.25	*48(.000)*	5.19	.09	.93	.91	.04	.90

Note. χ2 = likelihood ratio chi-square statistic; df = degree of freedom; RMSEA = root mean square error of approximation; CFI = comparative fit index; RMR = root mean squared residual; GFI =Goodness of fit indices; TLI = Tucker Lewis Index

Table 7 presents the model fit indicators for the three-factor model of SEDA followed by CFA. The results in the table suggest that the three-factor hierarchical model provides a good fit to the data. The low χ2 value (249.25) indicates that the observed data is in close agreement with the expected data, suggesting that the model is a good representation of the underlying data. The low p-value (less than .000) suggests that the model's fit to the data is statistically significant and not likely due to chance. The χ2/df ratio (5.19) is a measure of the model's parsimony, with a ratio of less than 5 indicating that the model is parsimonious. The RMSEA (root mean square error of approximation) is a measure of the difference between the estimated and the true model, with a value of less than .05 indicating a good fit. A RMSEA of .09 is an acceptable value, it tells us that there's room for improvement in the model, but it's not far from being a good fit. The CFI (comparative fit index), GFI (goodness of fit index), TLI (Tucker-Lewis Index) and RMR (root mean square residual) are all

measures of model fit, with values greater than .90 indicating a good fit. The values that we have in the table are .93, .91, .90, and .04 respectively. These values suggest that the model fits the data well, and that the data is well-explained by the model. In summary, the results suggest that the three-factor hierarchical model is a good representation of the data, and that it fits the data well.

Divergent Validity of Social Emotional Development Assessment

Table 8 shows the correlations between SEDA and CBCL. The Urdu version of Social Emotional Development Assessment total score as well as its subscales showed significant negative correlations with internalizing and externalizing problems, with minimal correlation values, providing evidence for the divergent validity.

Table 8

Correlations Coefficients of The Urdu SEDA Scores with Internalizing and Externalizing Problems

Variables	Internalizing Problems	Externalizing Problems
SEDA total	-.144**	-.168**
Self-regulation	-.128**	-.166**
Social skills	-.056	-0.06
School belongingness	-.132**	-.137**

Note: ** = $p < 0.05$.

Table 8 shows the correlation between SEDA and its subscales and internalizing and externalizing problems. The correlation between Internalizing Problems and SEDA total is -.144**, which indicates a small negative correlation. This means that as scores on

Internalizing Problems increase, scores on SEDA total decrease. Similarly, the correlation between Externalizing Problems and SEDA total is -.168** which also indicates a small negative correlation. This means that as scores on Externalizing Problems increase, scores on SEDA total decrease.

The correlation between Self-regulation and Internalizing Problems is -.128** and the correlation between Self-regulation and Externalizing Problems is -.166**. These also indicate a small negative correlation, indicating that as scores on Self-regulation increase, scores on Internalizing and Externalizing Problems decrease. The correlation between social skills and Internalizing Problems is -.056 and the correlation between social skills and Externalizing Problems is -.06 which are close to zero, indicating no correlation or very weak correlation, this means that there is no relationship or a very weak relationship between social skills and Internalizing and Externalizing Problems. Lastly, the correlation between School belongingness and Internalizing Problems is -.132** and the correlation between School belongingness and Externalizing Problems is -.137**. These also indicate a small negative correlation, indicating that as scores on School belongingness increase, scores on Internalizing and Externalizing Problems decrease. Overall, the results suggest that there is a small negative correlation between Internalizing and Externalizing Problems and SEDA total, Self-regulation, and School belongingness.

Factor Structure of Preschool Anxiety Scale and Behavioral Inhibition Questionnaire

We conducted Confirmatory Factor Analysis (CFA) to verify the factor structures of and Behavioral Inhibition Questionnaire on a sample of 312 school children. The primary objective of evaluating these measurement models was to analyze the extent to which these

models get in line with the literature in hand. CFA analysis was completed by using AMOS-21 (Arbuckle & Wothke, 1999). Factor loadings of PAS and BIQ are presented in table 9 and 10 respectively. Furthermore, Table 11 shows CFA model fit indices for both Preschool Anxiety Scale and Behavioral Inhibition Questionnaire indicating that the ratios the root mean square error of approximation (RMSEA), root mean square residual (RMSR), Tucker Lewis Index (TLI), goodness of fit index (GFI) and comparative fit index (CFI) evident good model fit (Hu & Bentler, 1999).

Table 9

Factor loadings on Confirmatory Factor Analysis of Preschool Anxiety Scale

Items	Factor Loadings				
	Generalized Anxiety	**Social Anxiety**	**Obsessive Compulsive Disorder**	**Physical Injury Fears**	**Separation Anxiety**
2	0.621				
5	0.792				
11	0.411				
21	0.463				
6		0.732			
9		0.871			
12		0.523			
15		0.772			
19		0.484			
3			0.581		
8			0.794		
14			0.712		
17			0.441		
20			0.623		
7				0.551	
16				0.402	

1					0.666
4					0.812
10					0.785
13					0.616
18					0.673
22					0.742
Eigen values	**4.32**	**3.41**	**2.32**	**1.54**	**1.21**
Total Variance explained	**27.3%**	**14.4%**	**12.3%**	**3.3%**	**9.2%**

Table 9 shows the factor loadings of the Preschool Anxiety Scale (PAS). The PAS is a 22-item scale designed to measure five different types of anxiety in children: Generalized Anxiety, Social Anxiety, Obsessive Compulsive Disorder, Physical Injury Fears, and Separation Anxiety. The factor loadings range from 0.35 to 0.86. The Eigen values column shows the amount of variance explained by each factor, the first factor explains 27.3% of the total variance, the second factor explains 14.4%, the third factor explains 12.3%, the fourth factor explains 3.3%, and the fifth factor explains 9.2%. The total variance explained by all the factors is 67.1% which is a high percentage, this indicates that the factor analysis was able to extract meaningful factors that explain a significant proportion of the total variance in the data. Overall, the results suggest that the items are associated with the five factors as intended, and that the five factors are able to explain a significant proportion of the total

variance in the data. This suggests that the factor structure of the PAS scale is valid, and that it can be used to measure the five types of anxiety in children.

Table 10

Factor Loadings on Confirmatory Factor Analysis of Behavioral Inhibition Questionnaire

Items	**Factor Loadings**					
	Adults	**Peers**	**Performance**	**Separation**	**New situations**	**Physical Challenges**
3	0.781					
15	0.392					
24	0.751					
28	0.410					
2		0.690				
6		0.810				
7		0.620				
11		0.730				
18		0.822				
19		0.460				
5			0.790			
9			0.660			
20			0.390			
26			0.700			
8				0.480		

10				0.620		
17				0.842		
25				0.766		
1					0.743	
13					0.526	
14					0.443	
21					0.778	
22					0.373	
23					0.815	
4						0.431
12						0.684
16						0.731
27						0.572
Eigen values	**5.21%**	**4.11%**	**3.52%**	**2.62%**	**1.21%**	**1.11%**
Total Variance	**26.20%**	**13.11%**	**16.45%**	**5.24%**	**3.21%**	**2.01%**

Table 10 shows the factor loadings of the Behavioral Inhibition Questionnaire (BIQ). The table shows that there are six factors identified: Adults, Peers, Performance, Separation, New Situations, Physical Challenges. Each item on the questionnaire is associated with a loading on each of these factors. Items with high factor loadings (e.g., 0.7 or above) are more strongly related to a specific factor, while items with low factor loadings (e.g., less than 0.5)

are less strongly related. The Eigen values indicate the proportion of total variance in the data that is explained by each factor, the total variance explained by the six factors is 26.20%, 13.11%, 16.45%, 5.24%, 3.21% and 2.01% respectively. These results suggest that the BIQ items are related to these six factors, and the factors explains a significant proportion of the variance in the data.

Table 11

Goodness-of-Fit Indicators for Five-Factor Model of Preschool Anxiety Scale and Six-Factor Model of Behavioral Inhibition Questionnaire (N=312)

	χ^2	*Df (p value)*	χ^2/df	RMSEA	CFI	GFI	RMR	TLI
Five Factor- Preschool Anxiety Scale hierarchical model	402.469	*176(.000)*	2.28	.06	.90	.89	.05	.86
Six Factor- Behavioral Inhibition Questionnaire hierarchical model	1139.573	*272(.000)*	4.19	.09	.88	.78	.39	.79

Note. χ2 = likelihood ratio chi-square statistic; df = degree of freedom for the likelihood ratio test of the model versus saturated; RMSEA = root mean square error of approximation; CFI = comparative fit index; RMR = root mean squared residual; GFI =Goodness of fit indices; TLI = Tucker Lewis Index.

Table 11 shows the model fit indicators followed by confirmatory factor analysis (CFA) of the Preschool Anxiety Scale (PAS) and Behavioral Inhibition Questionnaire (BIQ) show that the five and six factor hierarchical models fit the data well. The chi-square value ($\chi 2$) is significant, indicating that there is a difference between the observed and expected data, which is expected in a CFA. The degrees of freedom (df) and p-value are also significant, indicating that the model is a good fit for the data. The chi-square to degrees of freedom ratio ($\chi 2$/df) is 2.28 for PAS and 4.19 for BIQ, which is less than 5, indicating that the model is a good fit. The Root Mean Square Error of Approximation (RMSEA) is .06 for PAS and .07 for BIQ, which is less than .08, indicating a good fit. The Comparative Fit Index (CFI) and Goodness of Fit Index (GFI) are both above .90, indicating a good fit. Also TLI, RMR values suggest that the five and six factor hierarchical models of the PAS and BIQ fit the data well and provide a good representation of the underlying factor structure of the scales.

Convergent Validity of Preschool Anxiety Scale and BIQ

To determine the convergent validity of Preschool Anxiety Scale (PAS), Pearson Product Moment Correlation was computed between PAS, its subscales, and the internalizing subscale of Child Behavioral Checklist (CBCL). To determine the convergent validity of Behavioral Inhibition Questionnaire (BIQ) and its subscales were correlated with the internalizing and externalizing subscales of Child Behavioral Checklist (CBCL). Research evident the strong association between behavioral inhibition and internalizing and externalizing problems in children (Holzman, 2018). Results of the convergent validities for

both scales (Preschool Anxiety Scale and BIQ) are presented in tables 12 and 13 respectively.

Table 12

Correlations coefficients of the Preschool Anxiety Scale and Its Subscales with Internalizing Subscale of CBCL (N=312)

Variables	Internalizing Problems
Generalized Anxiety	.396**
Social Anxiety	.329**
Obsessive Compulsive Disorder	.360**
Physical Injury Fears	.309**
Separation Anxiety	.357**
Total PAS	.428**

Note: ** = $p < 0.05$.

The correlation matrix in table 12 shows the relationship between different internalizing problems and their correlation coefficients. A correlation coefficient (r) of .396 between Generalized Anxiety and Internalizing problems suggests that there is a moderate positive correlation between the two variables. This means that as the scores on Generalized Anxiety increase, the scores on Internalizing problems also tend to increase. Similarly, a correlation coefficient (r) of .329 between Social Anxiety and Internalizing problems suggests that there is a moderate positive correlation between the two variables. This means that as the scores on Social Anxiety increase, the scores on Internalizing problems also tend to increase. A correlation coefficient (r) of .360 between obsessive compulsive disorder and

Internalizing problems suggests that there is a moderate positive correlation between the two variables. This means that as the scores on obsessive compulsive disorder increase, the scores on Internalizing problems also tend to increase. A correlation coefficient (r) of .309 between Physical Injury Fears and Internalizing problems suggests that there is a moderate positive correlation between the two variables. This means that as the scores on Physical Injury Fears increase, the scores on Internalizing problems also tend to increase. A correlation coefficient (r) of .357 between Separation Anxiety and Internalizing problems suggests that there is a moderate positive correlation between the two variables. This means that as the scores on Separation Anxiety increase, the scores on Internalizing problems also tend to increase. A correlation coefficient (r) of .428 between Total Preschool Anxiety Scale and Internalizing problems suggests that there is a moderate positive correlation between the two variables. This means that as the scores on Total PAS increase, the scores on Internalizing problems also tend to increase.

Table 13

Correlations coefficients of the Behavioral Inhibition Questionnaire and Its Subscales with Internalizing and Externalizing Subscales of CBCL (N=312)

Variables	Internalizing Problems	Externalizing Problems
Adults	0.073	0.076
Peers	.124*	0.082
Performance	.129**	.109*
Separation	.148**	.138**
New situations	.211**	.179**
Physical challenges	.105*	0.024
BIQ TOT	.155**	.120*

Note: ** = $p < 0.05$; * = $p < 0.01$.

Table 13 shows that there is a positive correlation between Internalizing Problems and several other variables. For example, Internalizing Problems have a correlation coefficient of 0.155 with Behavioral Inhibition total score and 0.211 with new situations, indicating that as Internalizing Problems increase, so does Behavioral Inhibition and new situations. The correlation between internalizing problems and adults is 0.073, which is a weak positive correlation. This suggests that there is a slight association between internalizing problems and the presence of adults. The correlation between internalizing problems and peers is 0.124, which is a moderate positive correlation. This suggests that there is a moderate association between internalizing problems and the presence of peers. The correlation between internalizing problems and performance is 0.129, which is a

moderate positive correlation. This suggests that there is a moderate association between internalizing problems and performance. The correlation between internalizing problems and separation is 0.148, which is a moderate positive correlation. This suggests that there is a moderate association between internalizing problems and separation. The correlation between internalizing problems and new situations is 0.211, which is a moderate positive correlation. This suggests that there is a moderate association between internalizing problems and new situations. Furthermore, there is a moderate positive correlation between internalizing problems and performance ($r=0.129$, $p<0.01$) and BIQ TOT ($r=0.155$, $p<0.01$), indicating that children with higher levels of internalizing problems may also struggle with performance and overall behavioral issues.

Similarly, the table shows that there is a positive correlation between Externalizing Problems and several other variables such as Adults, Peers, Performance, Separation, New situations, and Physical challenges, but not all the correlations are significant. The variable "Adults" has a low positive correlation with externalizing problems ($r = 0.073$). This suggests that there is a weak positive relationship between externalizing problems and an individual's relationship with adults. The "Peers" has a moderate positive correlation with externalizing problems ($r = 0.124$, $p < .05$). This suggests that there is a moderate positive relationship between externalizing problems and an individual's relationship with peers. The "Performance" has a moderate positive correlation with externalizing problems ($r = 0.129$, $p < .01$). This suggests that there is a moderate positive relationship between externalizing problems and an individual's performance. The "Separation" has a moderate positive correlation with externalizing problems ($r = 0.148$, $p < .01$). This suggests that there is a

moderate positive relationship between externalizing problems and an individual's experience with separation. The "New situations" has a moderate to strong positive correlation with externalizing problems ($r = 0.211$, $p < .01$). This suggests that there is a strong positive relationship between externalizing problems and an individual's experience with new situations. The "Physical challenges" has a weak positive correlation with externalizing problems ($r = 0.105$, $p < .05$). This suggests that there is a weak positive relationship between externalizing problems and an individual's experience with physical challenges. The behavioral inhibition has a moderate positive correlation with externalizing problems ($r = 0.155$, $p < .01$). This suggests that there is a moderate positive relationship between externalizing problems and an overall score on the behavioral inhibition questionnaire.

Overall, these findings suggest that there are several variables that are positively correlated with externalizing problems, including relationships with peers, performance, separation, new situations, physical challenges, and overall behavioral inhibition score. These findings suggest that these variables may be important to consider when addressing externalizing problems in individuals. These findings provide evidence for the importance of considering both internalizing and externalizing problems in understanding individual differences in psychological functioning.

Discussion

The aim of this study was to translate, adapt, and evaluate the psychometric properties of all outcome measures. The study included the translation of social emotional competence measures, including the social emotional development assessment scale and Kusche emotion inventory labelling and recognition scales. Furthermore, two behavioral problem scales, the preschool anxiety and behavioral inhibition questionnaires, were also adapted. The psychometric properties of all the measures were evaluated using internal consistency, item total correlations, and convergent / discriminant validity. The results of the study showed that the translated and adapted measures had satisfactory psychometric properties, with Cronbach's alpha coefficients ranging from 0.67 to 0.95, all were greater from the minimum acceptable value of Cronbach's alpha coefficient (Cronbach, 1951). Item-total correlations ranging between 0.42 and 0.76, all of which were well above 0.3 (Ferketich, 1991). And correlation coefficients for the convergent and discriminant validity between 0.47 and 0.79. These findings indicate that the adapted measures can be used reliably to assess social-emotional competence among young schoolchildren in Pakistan. Overall, the research showed that the Urdu language measures had adequate psychometric properties. The analyses showed that the measures were reliable, valid, had a reasonable factor structure, and had an adequate goodness of fit, all of which lent creditability to their application in practice and research. The findings are further discussed in the general discussion of Chapter 6.

Chapter IV

Study II: Estimation of Behavioral Problems in School Children

This study was designed to estimate the prevalence of behavioral problems such as internalizing and externalizing problems in Pakistani school children.

Objectives

1. To estimate the prevalence of internalizing problems in young school children.
2. To estimate the prevalence of externalizing problems in young school children.
3. To explore the clinical and borderline ranges of behavioral problems in young school children.
4. To explore the relationship between internalizing, externalizing problems, and social emotional competence.
5. To investigate the association between internalizing, externalizing problems, gender, and age.
6. To explore the relationship between preschool anxiety and social emotional competence in Pakistani young school children.
7. To explore relationship between behavioral inhibition and social emotional competence in Pakistani young school children.

Hypotheses

1. Children exhibiting higher levels of internalizing and externalizing problems will have lower social emotional competence.

2. Girls will have more externalizing problems than internalizing problems in comparison to boys.
3. Younger children have more internalizing and externalizing problems than older children.
4. Older children have better social and emotional competence than younger children.
5. There will be negative relation between preschool anxiety, behavioral inhibition, and social emotional competence in Pakistani young school children.

Operational Definitions of Variables

Behavioral Problems of Children

Behavioral problems in children are generally classified into externalizing problems and internalizing problems (Achenbach, 1991). For the purpose of the current study, the analysis solely made use of the T scores for internalizing, externalizing and total scores of behavioral problems as measured using the Child Behavioral Checklist and as reported by teachers. Higher mean scores indicate that there is a greater level of behavioral problems. Scores on the T that were below 59 were considered as normal, and scores above 60 were indicative of borderline behavioral problems. T scores higher than 63 were regarded as problems in the clinical range.

Social Emotional Competence

Social-emotional competence is defined as the development of a child's ability to behave appropriately and respond effectively in social situations by regulating and understanding emotions and sustaining positive engagement (Campbell et al., 2016). For this study, the concept is measured through Social Emotional Development Assessment (SEDA)

(Brenchley, 2017; Najmussaqib et al., 2022) scale, where higher scores reflect high levels of social and emotional competencies.

Method

Sample

Two staged cluster sampling techniques were used to induct schools and study participants. School children were recruited from three grade levels, i.e., prep, grade one and two respectively. A statistical power analysis was conducted using the G-power software to estimate the sample size for the school-based prevalence studies assessing internalizing and externalizing problems in children. With an estimated small effect size (Cohen, 1988) of 0.25, an alpha = .05, and power = 0.80, the projected sample size was 98. The current study's sample consisted of 473 school children recruited from four public sector schools in Islamabad, Pakistan. Children were from 4-8 years of age (Mean age= 6.34 years, SD=0.87) belonging to three classes Kindergarten, grade one, and grade two, respectively. 15 teachers (nominated by school administration) completed the outcome measures.

Procedure

Initially, permission was sought from the Federal directorate of Education, Islamabad, to conduct the study. Nominations for schools were received, and teachers were later asked to provide the consent form and demographic information form to the parents. They were informed about the goal of the research and ensured that the information would only be utilized for research reasons. Class teachers who had been supervising the children for at least six months were asked to rate the children's behavior in class and during school hours using the respective scales followed by consent. All the information is coded, and all the

identifiable information has been removed from the dataset to protect the participants' individual privacy. Parents' consent was taken indirectly via school administration. They described the study's objectives and purposes. Furthermore, children data's confidentiality was ensured.

Analysis Plan

Preliminary and descriptive statistics were computed including frequencies, percentages for all problems for different categories (e.g., borderline, and clinical). We then examined bivariate correlations to assess the associations between study variables such as internalizing, externalizing, preschool anxiety and behavioral inhibition behavioral problems and social emotional competence and emotional knowledge. The initial analysis for each dependent variable examined the main effects for the four independent variables of age groups (1= 4+, 2= 5+, 3= 6+ and 4=7+ years) using univariate analysis of variance (ANOVA). Partial eta squared was selected for measuring the effect size. Then, multiple regression analyses were done to assess the associations between the internalizing and externalizing behavioral problems and social emotional competence.

Results

The result of this study describes the demographic characteristics of the sample. Later, the results present the analyses related to the estimates of behavioral problems based on clinical, borderline, and normal ranges. Additionally, the ANOVA and regression analysis presents the association between behavioral problems and social emotional competence.

Table 14

Demographic Characteristics of the Sample (N=473)

Demographics	**Frequency**	**Percentage (%) or Mean (SD)**
Child's age		6.34 (0.87)
Gender		
Males	230	48.6
Females	243	51.4
Class		
Prep	236	49.9
Grade 1	153	32.3
Grade 2	84	17.8
Father's education		
No Education (illiterate)	46	9.7
Primary (1-5)	123	26
Secondary (6-10)	175	37
Intermediate (11-12)	67	14.2
Graduation (14years)	42	8.9
Masters (16years)	20	4.2
Mother's education		
No Education (illiterate)	137	29
Primary (1-5)	106	22.4

Secondary (6-10)	152	32.1
Intermediate (11-12)	41	8.7
Graduation (14years)	25	5.3
Masters (16years)	12	2.5
Family structure		
Joint	168	35.5
Nuclear	305	64.5
Family income monthly (PKR)		25,112 (11,248)

Table 14 shows the demographics of the sample in this study including information on the child's age, gender, class, and the education level of both parents. The sample includes a total of 473 participants, with 48.6% of them being male and 51.4% being female. The children in the sample were primarily in Prep (49.9%) and Grade 1 (32.3%), with a smaller percentage in Grade 2 (17.8%). The education level of the fathers in the sample was diverse, with 9.7% having no education, 26% having completed primary education, 37% having completed secondary education, 14.2% having completed intermediate education, 8.9% having completed graduation, and 4.2% having completed Masters. Similarly, the education level of the mothers in the sample was diverse, with 29% having no education, 22.4% having completed primary education, 32.1% having completed secondary education, 8.7% having completed intermediate education, 5.3% having completed graduation and 2.5% having completed Masters. The family structure of the sample is primarily nuclear (64.5%), with

35.5% of the families being joint. The average family income monthly is PKR 25,112 (SD = 11,248) showing low family income background of the children.

Estimates of Children's Behavioral Problems

This section describes the estimates of behavioral problems in young school children. Behavioral problems were a main problem of children; therefore, it was essential to understand the overall picture of behavioral problems of young school children participating in this study. After cleaning the data, 426 participants information was utilized for further analysis. Table 15 shows the estimates of internalizing and externalizing profiles of both boys and girls.

Table 15

Estimates Of Internalizing and Externalizing Problems in Young School Children (N=426)

Variables	Normal			Borderline			Clinical		
CBCL (1 1/2-5)- CTRF	Boys n (%)	Girls n (%)	Total n (%)	Boys n (%)	Girls n (%)	Total n (%)	Boys n (%)	Girls n (%)	Total n (%)
Internalizing problems	12(15.4)	13(16.7)	25(32.1)	4(5.1)	3(3.8)	7(9)	21(26.9)	25(32.1)	46(59)
Emotionally Reactive	22(28.2)	22(28.2)	44(56.4)	7(9)	11(14.1)	18(23.1)	8(10.3)	8(10.3)	16(20.5)
Anxious / Depressed	24(30.8)	26(33.3)	50 (64.1)	5(6.4)	9(11.5)	14(17.9)	8(10.3)	6(7.7)	14(17.9)
Somatic Complaints	17(21.8)	15(19.2)	32(41)	3(3.8)	2(2.6)	5(6.4)	17(21.8)	24(30.8)	41(52.6)
Withdrawn	30(38.5)	24(30.8)	54(69.2)	3(3.8)	15(19.2)	18(23.1)	4(5.1)	2(2.6)	6(7.7)
Externalizing Problems	24(30.8)	15(19.2)	39(50)	4(5.1)	12(15.4)	16(20.5)	9(11.5)	14(17.9)	23(29.5)
Attention Problems	35(44.9)	34(43.6)	69(88.5)	1(1.3)	4(5.1)	5(6.4)	1(1.3)	3(3.8)	4(5.1)
Aggressive behavior	28(35.9)	32(41)	60(76.9)	8(10.3)	9(11.5)	17(21.8)	1(1.3)	0(0)	1(1.3)
Total	17(21.8)	10(12.8)	27(34.6)	2(2.6)	3(3.8)	5(6.4)	18(23.1)	28(35.9)	46(59)
CBCL (6-18)- TRF									
Internalizing Problems	96(27.6)	113(32.5)	209(60.1)	9(2.6)	21(6)	30(8.6)	64(18.4)	45(12.9)	109(31.3)
Anxious / Depressed	115(33)	138(39.7)	253(72.7)	18(5.2)	21(6)	39(11.2)	36(10.3)	20(5.7)	56(16.1)

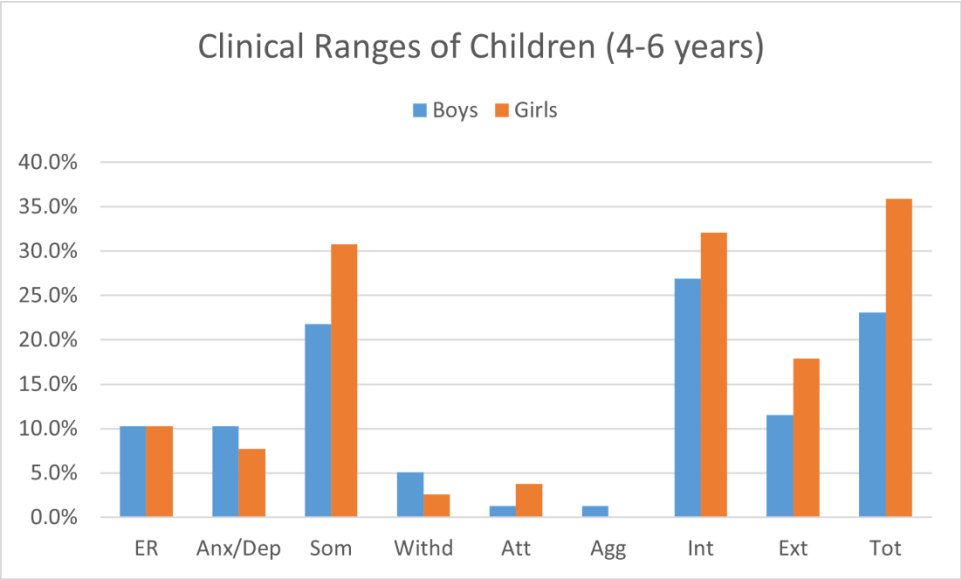
Withdrawn / depressed	139(39.9)	150(43.1)	289(83)	22(6.3)	20(5.7)	42(12.1)	8(2.3)	9(2.6)	17(4.9)
Somatic complaints	144(41.4)	162(46.6)	306(87.9)	22(6.3)	13(3.7)	35(10.1)	3(0.9)	4(1.1)	7(2)
Externalizing Problems	113(32.5)	104(29.9)	217(62.4)	15(4.3)	17(4.9)	32(9.2)	41(11.8)	58(16.7)	99(28.4)
Rule-breaking	131(37.6)	121(34.8)	252(72.4)	11(3.2)	23(6.6)	34(9.8)	27(7.8)	35(10.1)	62(17.8)
Aggressive behavior	133(38.2)	140(40.2)	273(78.4)	20(5.7)	17(4.9)	37(10.6)	16(4.6)	22(6.3)	38(10.9)
Social problems	115(33)	126(36.2)	241(69.3)	17(4.9)	21(6)	38(10.9)	37(10.6)	32(9.2)	69(19.8)
Thought problems	115(33)	123(35.3)	238(68.4)	16(4.6)	16(4.6)	32(9.2)	38(10.9)	40(11.5)	78(22.4)
Attention problems	164(47.1)	160(46)	324(93.1)	3(0.9)	11(3.2)	14(4)	2(0.6)	8(2.3)	10(2.9)
Total Problems	112(32.2)	110(31.6)	222(63.8)	20(5.7)	22(6.3)	42(12.1)	37(10.6)	47(13.5)	84(24.1)

Table 15 shows the estimates of boys and girls on the three categories of CBCL behavioral problems such as normal, borderline, and clinical. Further categorization of children was done based on the teacher's rating on CBCL scales. Among children aged 4-6 years, 6.4% were classified as having borderline behavioral problems, while 59% were rated in the clinical range in total problems. On the internalizing subscale, 9% of children were borderline, 59% were placed in the clinical range. On externalizing subscale, 20.5% of children were categorized as borderline, and 29.5% were reported in the clinical range. Additionally, boys showed higher abnormal (borderline and clinical) ratings in the overall internalizing domain (32%) with higher anxious/depressed domain, whereas; girls were found higher in the somatic and withdrawn behaviors. Both showed equal emotional reactivity. On the other hand, girls were reported as having higher abnormal (borderline and clinical) in both overall externalizing (33.3%) and total problem scores (39.7%).

Among children aged 6-8 years, 12.1% were classified as having borderline behavioral problems, while 24.1% were rated in the clinical range in total problems. On the internalizing subscale, 8.6% of children were borderline, and 31.3% were ranked in the clinical range. On externalizing subscale, 9.2% of children were categorized as borderline, and 28.4% were reported in the clinical range. According to teacher reports, Figure 10 and Figure 11 provides an illustrative view of percentages for clinical ranges of boys and girls.

Figure 10

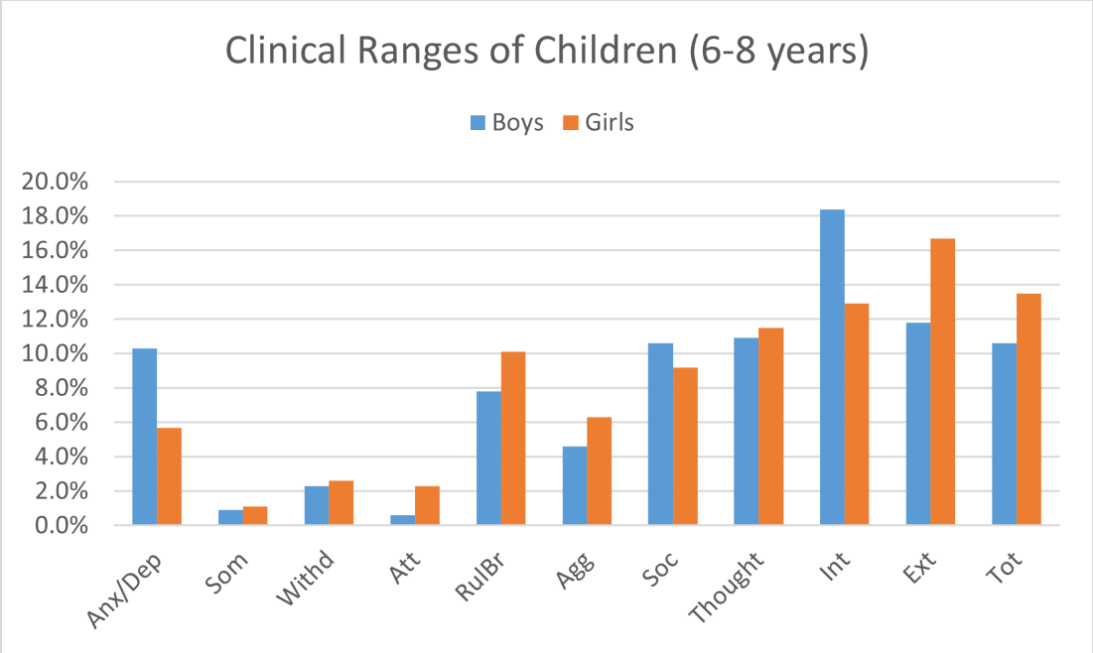
Clinical Ranges of Boys and Girls Aged 4-6 Years On CBCL- CTRF



Note: ER= Emotionally Reactive, Anx/Dep= Anxious/Depressed, Som= Somatic Complaints, Withd=Withdrawn, Att=Attention Problems, Agg= Aggressive, Int= Internal Problems, Ext= External Problems, Tot= Total Problems.

Figure 11

Clinical Ranges of boys and girls aged 6-8 years on CBCL- TRF



Note. Anx/Dep= Anxious/Depressed, Som= Somatic complaints, Withd=Withdrawn, Soc= Social problems, Though= Thought problems, Att=Attention problems, Rulbr= Rule breaking, Agg= Aggressive, Int= Internal problems, Ext= External problems, Tot= Total problems.

In the higher age group (6-8 years), boys again showed higher abnormal (borderline and clinical) ratings in the overall internalizing domain (21%) with higher anxious/depressed, somatic and withdrawn behaviors. Furthermore, boys showed slightly higher abnormal (borderline and clinical) ratings in the overall internalizing domain (21%) with more elevated anxious/depressed, withdrawn and somatic complaints subscales. On the other hand, girls

were reported as having higher abnormal (borderline and clinical) in both overall externalizing (21.6%) and total problem scores (19.8%). Girls were also reported to have higher abnormal ratings (borderline and clinical) in rule breaking (16.7%), aggressive (11.2%), thought (16.1%), and attention problems (5.5%) than boys.

Table 16

Comparison between Boys (n = 206) and Girls (n = 220) on Internalizing, Externalizing and Social Emotional Competence (N = 426)

Scales	Boys		Girls				*95% CI*		*Cohen's*
	M	*SD*	*M*	*SD*	*t (424)*	*p*	*LL*	*UL*	*d*
IP	58.47	13.00	56.04	12.23	1.98	.047	.02	4.83	0.19
EP	56.82	10.52	58.18	10.90	-1.31	.191	-3.40	.68	0.12
TP	56.90	13.59	58.19	12.59	-1.01	.312	-3.77	1.21	0.09
SEC	21.93	2.42	22.20	2.47	-1.13	.259	-.73	.198	0.11

Note: IP= internalizing problems, EP= externalizing problems, TP= total behavioral problems, SEC=Social Emotional Competence; LL= lower limit; UL= upper limit.

Table 16 shows the mean differences in the scores of internalizing, externalizing, total problems, and social emotional competence based on child gender. The sole noteworthy disparity emerges in internalizing issues, exhibiting a minor effect size, in accordance with Cohen's assertion (Cohen, 1988). This discrepancy reveals that boys exhibit considerably more pronounced internalizing problems compared to girls.

Table 17

Difference Among Age Groups on Internalizing, Externalizing and Social Emotional Competence (N=426)

	Age group 1 (4-4.11) (n=26)		Age group 2 (5-5.11) (n=103)		Age group 3 (6-6.11) (n=128)		Age group 4 (7-8) (n=169)					
Variables	M	SD	M	SD	M	SD	M	SD	F	*p*	ηp^2	Post hoc Analysis
IP	63.54	9.709	63.30	12.295	56.32	12.830	53.21	11.364	17.856	.000	0.11	1>3, >4; 2>3, >4; 3>4
EP	58.46	7.829	61.01	10.312	58.33	11.228	54.64	10.286	8.404	.000	0.05	2>3, >4
TP	63.42	11.243	63.32	13.253	56.91	13.707	53.65	11.146	14.850	.000	0.09	1>3, >4; 2>3, >4; 3>4
SEDA	23.08	1.262	21.84	2.656	21.59	2.874	22.40	1.989	4.510	.004	0.03	1>2, >3; 2<4; 3<4

Note. IP= internalizing problems, EP= externalizing problems, TP= total behavioral problems. *df* = 3; ηp^2 =Partial eta squared values are suggestive of significant effect size; F= variation between sample means.

Table 17 represents the mean differences between the age groups with Post hoc analyses (LSD). Age group 1 (4 years + age) has more internalizing problems than older children. For externalizing problems, children with age range 5-5.11 years have significantly high mean scores, 5+ aged children have more externalizing problems than 6 to 7+ age group. A post hoc Tukey test showed that the future alone and future belonging groups differed significantly at $p < .05$; the younger children have more behavioral problems than the older sample. Along with behavioral problems these children have good social emotional competency and with age the scores on social emotional competence decrease.

Table 18

Multiple Regression Analysis of Associations Between Social Emotional Competence and Externalizing and Internalizing Problems (N=426)

Variables	B	SE	*B*	*p*-Value
Constant (SEC)	24.28	.641		.000
Internalizing problems	-.004	.016	-.022	.785
Externalizing problems	-.034	.019	-.150	.068

Note. B = "unstandardized regression coefficient"; SE = "Standard error; β = "Standardized regression coefficient"; *p*-value = "level of significance; ** = $p < 0.01$; * = $p < 0.05$.

Table 18 shows the multiple regression analysis. Result shows the relationship between the variables of Social Emotional Competence (SEC) and both Internalizing and

Externalizing problems. The results of the analysis show that the SEC score is negatively associated with the externalizing problems score. The coefficient for the internalizing problems variable is not statistically significant (p-value=.785), indicating that there is no significant relationship between internalizing problems and SEC scores. Similarly, the coefficient for the externalizing problems variable is not statistically significant (p-value=.068), indicating that there is no significant relationship between Externalizing problems and SEC scores.

Preschool Anxiety, Behavioral Inhibition and Behavioral Problems

We further estimate the associations between children's internalizing, externalizing, total behavioral problems, preschool anxiety, and behavioral inhibition. Table 19 presents the correlation between these variables. Behavioral inhibition is found to be strongly correlated with preschool anxiety, internalizing, externalizing, and total behavioral problems. Similarly, preschool anxiety showed significant positive association with all other behavioral problems.

Table 19

Bivariate Correlation Matrix of Preschool Anxiety, Behavioral Inhibition, Internalizing, Externalizing and Total Behavioral Problems (N= 426)

	Variables	1	2	3	4	5
1	Internalizing	1	-	-	-	-
2	Externalizing	0.811**	1	-	-	-
3	Total Problems	0.918**	0.924**	1	-	-
4	Preschool Anxiety	0.422**	0.404**	0.411**	1	
5	Behavioral Inhibition	0.155**	0.120*	0.137**	0.434**	1

Note. ***p*<.05, **p*<.01.

Table 19 presents the correlation between all behavioral problems. In the table, the correlation coefficient between internalizing problems and externalizing problems is 0.811, which is a moderate positive correlation. This suggests that there is a moderate positive relationship between internalizing problems and externalizing problems. The correlation coefficient between internalizing problems and total problems is 0.918, which is a strong positive correlation. This suggests that there is a strong positive relationship between internalizing problems and total problems. The correlation coefficient between preschool anxiety and behavioral inhibition is 0.422, which is a moderate positive correlation. this suggests that there is a moderate positive relationship between preschool anxiety and behavioral inhibition. All these relationships are statistically significant.

Table 20

Differences Among Normal, Borderline and Clinical Groups of Internalizing Behavioral Problems on Preschool Anxiety and Behavioral Inhibition (N = 426)

Scales	Normal (n=234)		Borderline (n=37)		Clinical (n=155)				
	M	*SD*	*M*	*SD*	*M*	*SD*	F	*p*	ηp^2
Preschool Anxiety	14.62	14.44	20.16	11.53	27.95	13.05	43.889	.000	.17
Behavioral Inhibition	93.35	39.103	112.43	31.975	100.15	22.361	6.018	.003	.028

Note: *df* = 2; ηp^2 =Partial eta squared values are suggestive of significant effect size; F= variation between sample means.

The ANOVA results in table 20 show the mean and standard deviation (SD) for three different groups of children, classified as normal, borderline, and clinical, on two different scales, Preschool Anxiety and Behavioral Inhibition. The table also shows the results of the ANOVA, including the F-value, p-value, and eta-squared (ηp^2) for each scale. For the PAS, the results indicate that there is a significant difference between the group means (F (2, 426) = 43.889, p = .000), and the eta-squared (ηp^2) indicates that 17% of the total variance in the preschool anxiety scores is accounted for by the group. This suggests that the normal, borderline, and clinical groups have different mean scores on this scale and the difference is significant and clinically meaningful. For the BIQ, the results indicate that there is also a significant difference between the group means (F (2, 426) = 6.018, p = .003) and the eta-squared (ηp^2) indicates that 2.8% of the total variance in the behavioral inhibition scores is accounted for by the group. This suggests that the normal, borderline, and clinical groups have different mean scores on this scale and the difference is significant and clinically meaningful.

Table 21

Post Hoc Analysis of Normal, Borderline and Clinical Groups of Internalizing Problems on Preschool Anxiety and Behavioral Inhibition (N = 426)

Variables	Severity Groups (I)	Severity Groups (J)	Mean Difference (I-J)	(i-j)	SE	p	95% CI	
							UL	LL
Preschool Anxiety	Normal	Borderline	N < B	-5.54*	2.430	.023	-10.31	-.76
	Normal	Clinical	N < C	-13.32*	1.422	.000	-16.12	-10.53
	Borderline	Clinical	B < C	-7.79*	2.513	.002	-12.73	-2.85
Behavioral Inhibition	Normal	Borderline	N < B	-19.09*	5.898	.001	-30.68	-7.49
	Normal	Clinical	N < C	-6.80*	3.452	.049	-13.59	-.02
	Borderline	Clinical	B > C	12.28*	6.100	.045	.29	24.27

Note: **$p < .05$, *$p < .01$.

Table 21 shows the post hoc analysis. The post-hoc analysis of the table shows the results of pairwise comparisons between the severity groups for the two variables: Preschool Anxiety and Behavioral Inhibition. The "Mean Difference (I-J)" column shows the difference in means between the two groups being compared (I and J), with a negative sign indicating that the mean of group I is lower than the mean of group J and a positive sign indicating the opposite. The "(i-j)" column shows the direction of the difference, with "N < B" indicating that the mean of the Normal group is lower than the mean of the Borderline group and "B < C" indicating that the mean of the Borderline group is lower than the mean of the Clinical group.

For Preschool Anxiety, the results show that there are significant differences between the Normal, Borderline, and Clinical groups, with the mean scores of the Clinical group being significantly higher than those of both the Normal and Borderline groups. This suggests that children in the Clinical group have significantly higher levels of anxiety compared to those in the other two groups. For Behavioral Inhibition, the results show that there are significant differences between the Normal and Borderline groups, with the mean scores of the Borderline group being significantly higher than those of the Normal group. This suggests that children in the Borderline group have higher levels of behavioral inhibition compared to those in the Normal group. However, when compared the Borderline group with the Clinical group the results show that the mean scores of the Clinical group are significantly lower than those of the Borderline group, suggesting that children in the Clinical group have lower levels of behavioral inhibition compared to those in the Borderline group.

Table 22

Differences among Normal, Borderline and Clinical Groups of Externalizing Behavioral Problems on Preschool Anxiety and Behavioral Inhibition (N = 426)

Scales	Normal (n=256)		Borderline (n=48)		Clinical (n=122)				
	M	*SD*	*M*	*SD*	*M*	*SD*	F	*p*	ηp^2
Preschool Anxiety	15.66	14.13	22.48	13.01	27.98	14.25	32.654	.000	.134
Behavioral Inhibition	94.43	37.492	108.77	27.019	99.44	25.990	4.002	.019	.019

Note: *df* = 2; ηp^2 =Partial eta squared values are suggestive of significant effect size; F= variation between sample means.

The ANOVA results for table 22 show that there is a significant difference in mean scores for preschool anxiety and behavioral inhibition among the three severity groups (normal, borderline, and clinical). The F-values are 32.654 and 4.002 for Preschool Anxiety and Behavioral Inhibition, respectively, indicating that the differences between groups are statistically significant ($p < .05$). The effect size is also provided by eta squared (ηp^2) .134 for Preschool Anxiety and .019 for Behavioral Inhibition. This can be interpreted as moderate and small effect size respectively, indicating that there is a moderate relationship between the

severity groups and the Preschool Anxiety and a small relationship between severity groups and Behavioral Inhibition.

Table 23

Post Hoc Analysis of Normal, Borderline and Clinical Groups of Externalizing Behavioral Problems on Preschool Anxiety and Behavioral Inhibition (N = 426)

Variables	Severity Groups (I)	Severity Groups (J)	Mean Difference (I-J)	(i-j)	SE	*p*	95% CI	
							UL	LL
Preschool Anxiety	Normal	Borderline	N < B	-6.82	2.209	.002	-11.17	-2.48
	Normal	Clinical	N < C	-12.32	1.545	.000	-15.36	-9.28
	Borderline	Clinical	B < C	-5.50	2.393	.022	-10.20	-.79
Behavioral Inhibition	Normal	Borderline	N < B	-14.35	5.268	.007	-24.70	-3.99
	Normal	Clinical	N < C	-5.02	3.685	.174	-12.26	2.23
	Borderline	Clinical	B > C	9.33	5.706	.103	-1.89	20.54

Note: **p<.01, *p<.05; SE = standard error.

We further performed post hoc to understand the detailed difference between groups. Analysis in table 23 shows that for preschool anxiety, there is a statistically significant difference between normal and borderline (N < B) with a mean difference of -6.82, and between normal and clinical (N < C) with a mean difference of -12.32. This suggests that the

mean scores of preschool anxieties are higher in the borderline and clinical groups compared to the normal group. There is also a statistically significant difference between borderline and clinical (B < C) with a mean difference of -5.50.

For behavioral inhibition, the post-hoc analysis shows that there is a statistically significant difference between normal and borderline (N < B) with a mean difference of -14.35. This suggests that the mean scores of behavioral inhibitions are higher in the normal group compared to the borderline group. However, there is no statistically significant difference between normal and clinical (N < C) with a mean difference of -5.02 and between borderline and clinical (B > C) with a mean difference of 9.33. The results are statistically significant, it's important to look at the effect size, as well as the practical significance of the results. In this case, the effect sizes for both preschool anxiety ($\eta p^2 = .134$) and behavioral inhibition ($\eta p^2 = .019$) are small.

In summary, the ANOVA results and post-hoc analysis suggest that there are significant differences in preschool anxiety and behavioral inhibition scores among the three severity groups. These differences are more pronounced for preschool anxiety than for behavioral inhibition, and the scores are higher for the borderline and clinical groups compared to the normal group.

Table 24

Differences Among Normal, Borderline and Clinical Groups of Total Behavioral Problems on Preschool Anxiety and Behavioral Inhibition (N = 426)

Scales	Normal (n=249)		Borderline (n=47)		Clinical (n=130)				
	M	***SD***	***M***	***SD***	***M***	***SD***	**F**	***p***	**ηp²**
Preschool Anxiety	14.86	14.271	22.87	12.257	28.65	13.132	44.271	.000	.173
Behavioral Inhibition	93.55	38.972	113.96	26.804	99.05	20.983	7.678	.001	.035

Note: *df* = 2; ηp^2 =Partial eta squared values are suggestive of significant effect size.

The ANOVA table 24 shows the results of an analysis of variance (ANOVA) comparing the mean scores of preschool anxiety and behavioral inhibition among three groups of participants: "normal" (n=249), "borderline" (n=47), and "clinical" (n=130). The results indicate that there are significant differences in both preschool anxiety and behavioral inhibition scores among the three groups. The F-value for preschool anxiety is 44.271, which is significant

(p =.000), indicating that there is a large difference in mean scores among the groups. The effect size of the result, as represented by ηp^2, is .173, indicating a small effect. Similarly, the F-value for behavioral inhibition is 7.678, which is also significant (p=.001), indicating that there is a large difference in mean scores among the groups. The effect size of the result, as

represented by ηp^2, is .035, indicating a small effect. Overall, these results suggest that there are significant differences in both preschool anxiety and behavioral inhibition among normal, borderline, and clinical groups.

Table 25

Post hoc analysis of Normal, Borderline and Clinical Groups of Total Behavioral Problems on Preschool Anxiety and Behavioral Inhibition (N = 426)

Variables	Severity Groups (I)	Severity Groups (J)	Mean Difference (I-J)	(i-j)	SE	*p*	95% CI	
							UL	LL
Preschool Anxiety	Normal	Borderline	N < B	-8.01	2.182	.000	-12.30	-3.72
	Normal	Clinical	N < C	-13.78	1.485	.000	-16.70	-10.86
	Borderline	Clinical	N < C	-5.77	2.336	.014	-10.36	-1.18
Behavioral Inhibition	Normal	Borderline	N < B	-20.41	5.282	.000	-30.79	-10.03
	Normal	Clinical	N < C	-5.51	3.593	.126	-12.57	1.56
	Borderline	Clinical	B > C	14.90	5.652	.009	3.79	26.01

Note: **p<.01, *p<.05; N = normal; B= borderline; C= Clinical; SE= standard error.

The Post Hoc analysis table 25 shows the results of multiple comparisons between the three groups (Normal, Borderline, and Clinical) to determine where the significant differences lie. For Preschool Anxiety, the post-hoc analysis shows that there is a statistically significant difference between the mean scores of the Normal group and the Borderline group, and between the Normal group and the Clinical group. There is also a statistically significant difference between the Borderline group and the Clinical group. For Behavioral Inhibition, the post-hoc analysis shows that there is a statistically significant difference between the mean scores of the Normal group and the Borderline group, and between the Borderline group and the Clinical group. But there is no statistically significant difference between the Normal group and the Clinical group.

In summary, the results show that there is a significant difference in the mean scores of Preschool Anxiety and Behavioral Inhibition among Normal, Borderline, and Clinical groups. Furthermore, the post-hoc analysis indicates that the differences are mainly between the Normal group and the Borderline and Clinical groups, with the Clinical group having the highest mean scores for both Preschool Anxiety and Behavioral Inhibition.

Discussion

The study aimed to evaluate internalizing and externalizing behavioral issues in young school children aged 4 to 8 years. The results showed a concerning number of children (41.5%) with borderline and clinical levels of behavioral problems as measured by the Child Behavioral Checklist. There were more internalizing problems (45.1%) than externalizing problems (39.9%), with externalizing issues being more prevalent in girls and internalizing problems being more prevalent in boys. This highlights the importance of considering gender differences when addressing behavioral problems in children. Higher estimates in our study were similar to previous findings with parental reports in Pakistan (Inam & Zaman, 2014; Malik et al., 2019). The possible reason for high prevalence rates may be attributed to data collection during the pandemic period. Multiple studies demonstrated that limitations such as school closures, parental stress, financial concerns, stress on teachers due to high workload and demands, and limited access to play activities all contributed to an increase in children's behavioral problems (Akmal et al., 2020; Liu et al., 2020; Naseem et al., 2022; Răducu & Stănculescu, 2022; Sun et al., 2022). Furthermore, the transition to online learning methods added stress for both students and teachers which may have contributed to behavioral issues among children (Shaukat et al., 2022; Zar et al., 2020). The higher estimates highlight the need for early intervention and support (Barlas et al., 2022; Jones & Doolittle, 2017).

Additionally, the study found a significant negative association between externalizing problems and social emotional competence. This shows that children with

more externalizing problems struggle with emotional regulation, social skills, and relationships with others. These difficulties can further exacerbate behavioral problems and create a vicious cycle. Findings further revealed that the children having high scores in preschool anxiety and behavioral inhibition have significantly higher internalizing, externalizing and total behavioral problems. The results are further discussed in relation to cultural and literary context in chapter 6.

Chapter V

Study III: Effectiveness of Fun FRIENDS Program

Objectives

1. To determine the efficacy of Fun FRIENDS program in developing social emotional competence (social emotional skills and emotional knowledge) and in reducing behavioral problems (internalizing and externalizing, preschool anxiety, and behavioral inhibition) in Pakistani young school children.
2. To determine the impact of the Fun FRIENDS program on the social emotional competency of Pakistani young school children in both the intervention and control groups.
3. To examine the impact of Fun FRIENDS program on behavioral problems of Pakistani young school children in the intervention and control group.
4. To compare the impact of intervention on gender and age differences.

Hypotheses

1. Children of the intervention group will demonstrate better social and emotional competence than children in the control group at the posttest.
2. Fun FRIENDS Program will significantly decrease the behavioral problems in children in intervention group than control group at the posttest.
3. Children exhibiting higher levels of internalizing and externalizing problems will have lower social emotional competence.
4. Children exhibiting higher levels of anxiety will have lower social emotional competence.

5. Children exhibiting higher levels of behavioral inhibition will have lower social emotional competence.
6. Girls of the intervention group will demonstrate better social and emotional skills than boys at the posttest.

Research Design

A cluster Randomized Control Trial (RCT) with pre- and post-testing was used in the study. The waitlist control group and the intervention group were formed and the allocation sequences for each class was digitally generated. At the pretest, the classes were randomized into an intervention (n=8) and waitlist control group (n=7) within each school. The CONSORT flow diagram shows how participants were selected, randomized, and assigned to both groups (see Figure 12). Figure 13 further explains classification of research groups in terms of classes. Teachers and students reported the frequency and severity of behavioral issues in the classroom for both the intervention and control groups, and the results were compared. The children in the intervention group participated in classroom sessions of a modified Urdu version of the Fun FRIENDS program designed for Pakistani youngsters, whereas those in the control group did not. However, after the intervention project was completed, the control groups received self-management lessons as requested by the school administration.

The research was completed as follows: pretest in the prior spring session of 2021, followed by staff training in the summer, intervention implementation, and post-test

evaluations in the fall of 2021. This indicates that pretest evaluations were conducted during the previous academic year.

Figure 12

Consort Figure: Flowchart of Sampling Distribution

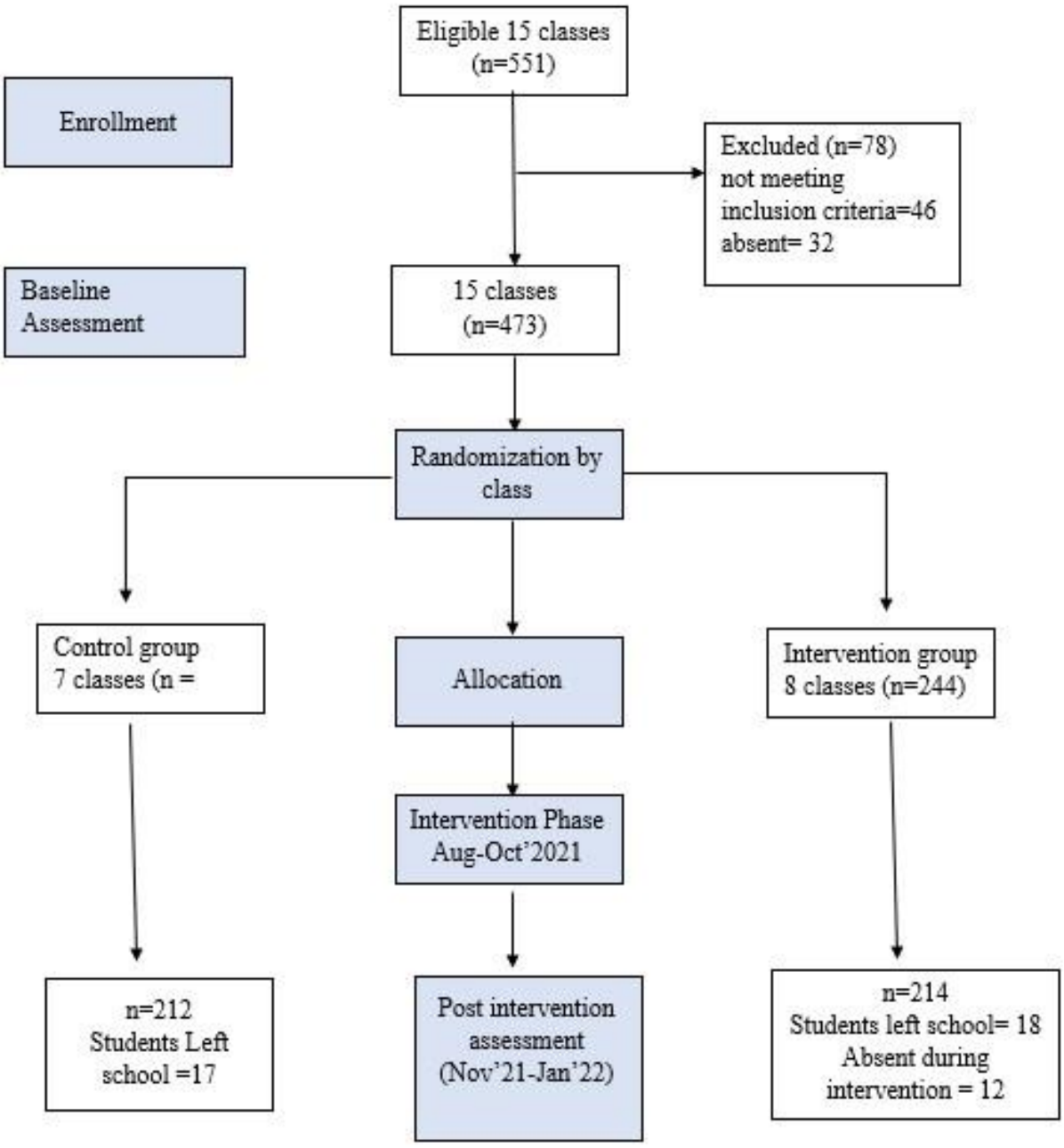
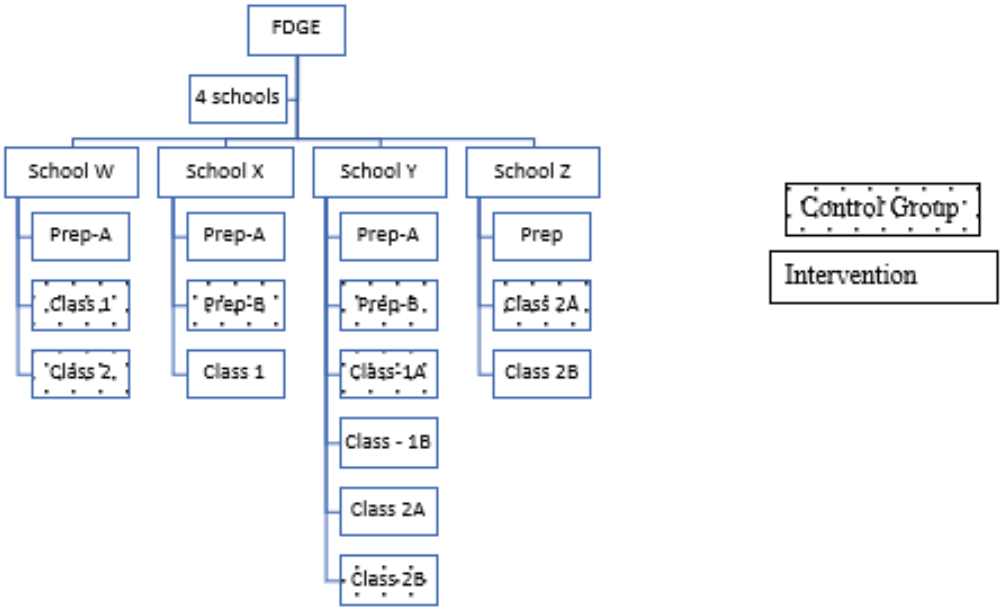


Figure 13

Classification of Randomization of Classes



Sample

School children between the ages of 4 to 8 years (as per the Fun FRIENDS age group) were recruited from three grade levels, i.e., prep, grade one and two respectively. A statistical power analysis was conducted using G-power software to determine an appropriate estimation of sample size, based on results of a meta-analysis (Werner-Seidler et al., 2021), comparing school-based studies for depression and anxiety programs. With an estimated small effect size (Cohen, 1988) of 0.25, an alpha = .05, and power = 0.80, the projected sample size was 98. Initial sample was drawn from 15 classes and consisted of 551 (boys=259, girls=292) school children (see Fig. 1). The classes were randomized as intervention and control groups within each school (see Fig. 2). There were 8 classes and 244

children in the intervention group and 7 classes with 229 children in the control group. At posttest, there were 426 children remained in the sample (boys=206, girls=220), 214 in the intervention group and 212 in the control group.

Since data were collected during the covid restrictions period, reasons for the attrition included absenteeism due to covid concerns and migration of children to other schools in a new academic year. Out of 47, 17 were in the control group and 30 were in the intervention group. Attrition was not statistically significant in relation to intervention ($\chi^2(1) = 3.13$, p =.077). Out of 30 children in the intervention group, 7 received 1-3 sessions only of the intervention, therefore, they were not included in the analysis as they were absent during most of the intervention. Children in the control group received two booster sessions on emotions and anxiety management post intervention. Furthermore, children having ages more than 8 years were included in the class activities to get the maximum benefit and learn needed skills since its universal intervention, however, due to academic limitation of the study, they were excluded from the final analysis. Sample characteristics are presented in table 10.

Table 26

Demographic Characteristics of the Study Sample (N=473)

Demographics	**Frequency *(F)***	**Percentage (%) or Mean (SD)**
Child's age		6.34 (0.87)
Males	230	48.6
Females	243	51.4
Class		
Prep	236	49.9
Grade 1	153	32.3
Grade 2	84	17.8
Father's education		
No Education (illiterate)	46	9.7
Primary (1-5)	123	26
Secondary (6-10)	175	37
Intermediate (11-12)	67	14.2
Graduation (14years)	42	8.9
Masters (16years)	20	4.2
Mother's education		
No Education (illiterate)	137	29
Primary (1-5)	106	22.4

Secondary (6-10)	152	32.1
Intermediate (11-12)	41	8.7
Graduation (14years)	25	5.3
Masters (16years)	12	2.5
Family structure		
Joint	168	35.5
Nuclear	305	64.5
Family income monthly (PKR)		25,112 (11,248)

Above table 26 shows the demographics of the sample include the child's age, gender, class, education level of the parents, family structure, and family income. The child's age has a mean of 6.34 with a standard deviation of 0.87. The sample is evenly divided between males (48.6%) and females (51.4%). Most of the children are in prep class (49.9%) or grade 1 (32.3%), with a smaller proportion in grade 2 (17.8%). The education level of the parents is also provided. The majority of fathers (37%) have completed secondary education (6-10), while a smaller proportion have no education (9.7%), primary education (26%), intermediate education (14.2%), or graduation (8.9%) or master's education (4.2%). Similarly, most of the mothers (32.1%) have completed secondary education (6-10), while a smaller proportion have no education (29%), primary education (22.4%), intermediate education (8.7%), graduation (5.3%), or master's education (2.5%). The family structure is described as either

joint (35.5%) or nuclear (64.5%). Finally, the average monthly family income is provided as PKR 25,112 with a standard deviation of PKR 11,248.

Inclusion and Exclusion Criteria

Since the study was based on RCT design, intact classes were part of the intervention and control groups. However, the inclusion criteria of students in each class were based on age group 4-8 years at pretest as per the requirement of the intervention program.

Sampling Procedure

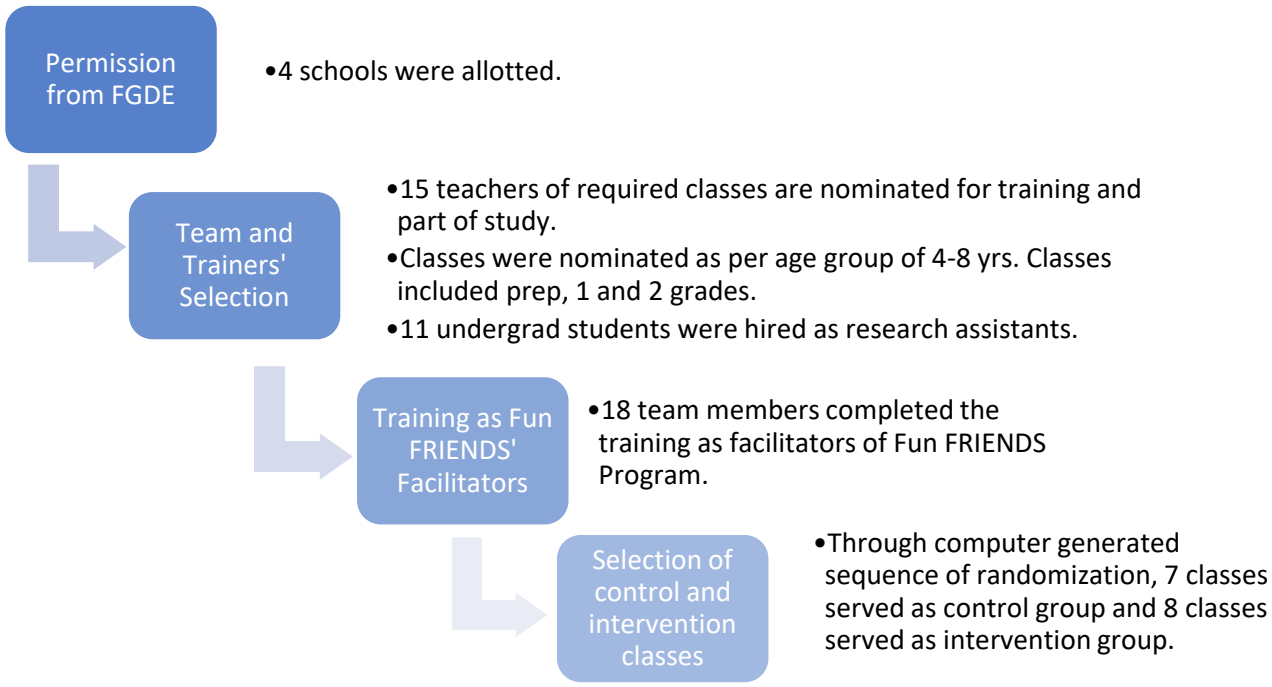
As a first step, permissions were sought from the Federal Directorate of Education (FDE), Islamabad. The permission application took 6.5 months due to covid-19 as initial lockdowns were occurring all over Pakistan, including Islamabad. Multiple in-person meetings were conducted with the directors from the communication and outreach wing and training department, FDE, Islamabad, to brief the research project's scope and how it will benefit both teachers and school children. Written materials regarding Fun FRIENDS intervention program were also shared. The key benefit for schools of this research was to provide free training to the teachers about social and emotional skills and mental health awareness in general, which is not a part of teachers' training in Pakistan. It was assured that no funding was required from FDE, schools, or teachers at any stage of the research project, and the researcher would provide all the required materials for assessments and intervention. Permission was granted in November 2020 to conduct the study, and FDE nominated four public primary schools in Islamabad.

As a second step, meetings were arranged with school principals to discuss the administrative requirements. They nominated fifteen teachers from respective classes for the training and facilitation during the research project. Written consent was taken from the teachers, and due to covid restrictions of social and public meetings, parents were approached through letters from the schools. All the teachers were briefed about the RCT research project and their participation in either intervention or control group. Additionally, 11 psychology undergraduates were recruited as research assistants who provided intervention lessons and completed pre- and post- intervention evaluations.

Following that, each child at their school was administered a battery of assessments by trained research assistants. Another set of assessment protocols was completed by teachers for each child. A designated space was provided by school principals to complete the child's assessment in a quiet environment. Intervention was delivered in small groups (10-15 children). Figure 3 provides a flowchart of sampling and program training procedures.

Figure 14

Sampling and Training Procedure



Fun FRIENDS' Training and Procedure

The URDU version of Fun FRIENDS programs originally developed by Paula Barret (2007) was used in this study. Online manual versions were used for facilitators and worksheets were prepared to be used for children during the sessions. The Fun FRIENDS curriculum consisted of 12 lessons delivered once a week. Each lesson was 45-60 minutes duration. Each session has a different learning objective (e.g., emotional knowledge, self-regulation, problem solving strategies (see table 1) which were taught through a variety of

play-based activities. It was important to follow the structure and sequence of the lessons, however, the pace of delivery could be modified based on the specific needs of the children. All the facilitators completed the Fun FRIENDS program in a total of 12 weeks.

The Fun FRIENDS program was delivered by the facilitators from August 2021-October 2021. Delivering of Fun FRIENDS intervention required certification as a facilitator. Therefore, all the nominated teachers and research associates who were part of the intervention team had to complete this online training. Eighteen facilitators including 7 teachers and 11 undergraduate students completed an 8-hour online training through the Fun FRIENDS official website. This training provided the theoretical background of Fun FRIENDS program and self-management strategies for social and emotional behaviors. This training also included detailed instructions for each session of Fun FRIENDS program and strategies for maximizing engagement of students. Additionally, one day training was provided for all the trainers prior to intervention which was delivered by the researcher (licensee) in Urdu language. All participants received certifications at the end of the training.

Weekly planning sessions with facilitators were also held during intervention to prepare lessons for the coming week. Initially, two meetings were conducted one-on-one with facilitators at the university campus, but these transitioned to Zoom due to covid-19. A WhatsApp group was also formulated to keep in touch with the facilitators and monitor the implementation and respond to any query during the week. The sampling procedure of schools and trainers is explained (see figures 12, 13 and 14).

Measures

Children's social emotional competence was assessed using two child reported measures, Social Emotional Development Assessment (SEDA) (Brenchley, 2017) and Kusche Emotional Inventory (KEI) (Kusche, 1984) and behavioral and emotional problems were assessed using teacher reported Child Behavioral Checklist (CBCL) (Achenbach & Rescorla, 2000), Preschool Anxiety Scale (PAS; Spence et al., 2001), and Behavioral Inhibition Questionnaire (BIQ; Bishop et al., 2003).

Demographic Information

Based on the literature and expert opinion, a 10-item form was created to collect information about the sample's various characteristics. This form requested information such as the child's age, gender, birth order, siblings, monthly family income, family type, and father's and mother's education.

Social Emotional Development Assessment (SEDA)

Social Emotional Development Assessment (SEDA) scale consisting of 12 self-report items rated on a 1-3 (i.e., "not true or rarely true" as indicated by a thumbs down clip art, "sometimes true" as indicated by a sideways thumbs clip art, "usually or always true" as indicated by a thumbs up clip art) that are used to assess social emotional skills in children from kindergarten to second grade across five domains: *self-regulation, social skills, school belongingness, social responsibility, and optimism.* Where, school belongingness and optimism have 3 items each and rest of the domains have 2 items (e.g., *I wait my turn in line, I invite kids to play with me, I like myself*). The psychometric properties for Urdu version of

SEDA were found adequate with internal consistency ($\alpha = 0.81$)and divergent validity coefficients with CBCL ranging from .14 to .16 ($p < .01$) (Najmussaqib et al., 2022).

Kusche Emotion Inventory (KEI)

The Kusche Emotion Inventory, also known as the KEI (Kusche, 1984), was designed to assess the ability of preschool-aged children to differentiate between a variety of emotions. Labels for emotions range from the simple "happy," "sad," "angry," and "scared" up to the more complex "confused," "love," "surprise," "pride," "disappointment," "embarrassment," and "tired". Kusche Emotion Inventory has two subtests i.e., recognition (KEI-Rec) and label (KEI-Lab) tests. For the present study, the adapted Pakistani Urdu versions for children were used. Emotion labels include four basic emotions of happy, sad, mad, and scared, as well as the more complex emotions of confused, love, surprised, proud, disappointed, embarrassed, and tired. The KEI-Recognition subtest consisted of 30 stimuli pages each having four cartoon figures depicting different emotions. Out of these four carton figures, one depicted the target emotions while the three were distracters. Children were asked to identify the correct emotion from the given booklet. There was adequate internal consistency of KEI in various studies with a Cronbach's alpha coefficient of .69 to .73 (A. Kusche, 1984; Rhoades et al., 2009). The convergent validity coefficient between KEI total score and Emotional Matching Task demonstrated satisfactory results, with a coefficient of r = .70 (Morgan et al., 2010). In the present study the internal consistency for Urdu KEI-Rec was 0.82 (Najmussaqib, 2023).

The KEI-Labelling subtest ($\alpha = 0.70$) consisted of 40 stimuli pages each having one figure with four different options where one is the correct answer. Children were asked to name the correct emotion from the booklet. For each stimulus, a score of 2 was given for the correct response and 0 for incorrect response. If children identified the valence of the target emotion correctly (e.g., happy for excited expression), they got a score of 1. The reliability coefficient of Urdu KEI-Lab in the present study was 0.81 (Najmussaqib, 2023).

The Preschool Anxiety Scale (PAS)

The Preschool Anxiety Scale (PAS; Spence et al., 2001), is a 22-item teacher-rating scale developed to assess childhood anxiety symptoms. The Preschool Anxiety Scale was developed from the Spence Children's Anxiety Scale, which is normed for use with young children ages 4–6 years-old. A total score is computed from five subscales: separation anxiety, physical injury fears, social anxiety, obsessive- compulsive disorder and generalized anxiety. The measure has good psychometric properties, such as an established factor structure and high convergent validity with other measures of internalizing problems (Achenbach & Rescorla, 2000).

Behavioral Inhibition Questionnaire

The Behavioral Inhibition Questionnaire (BIQ; Bishop et al., 2003) is a 28-item teacher report questionnaire that assesses the frequency of behaviors associated with behavioral inhibition (BI) on a 7-point Likert scale. The scale includes a total score as well as six behavioral inhibition specific scores: peer situations, physical challenges, separation/preschool, performance situations, unfamiliar adults, and general new situations.

Child Behavior Checklist (11/2-5)-CTRF

Children (aged 4-5 years) behavior problems were measured through the Teacher Reported Urdu Version of Child Behavior Checklist (CBCL-CTRF) (Achenbach & Rescorla, 2000), 99 items. It has six empirically based syndrome scales: Emotionally Reactive, Anxious/Depressed, Somatic Complaints, Withdrawn, Attention Problems, and Aggressive Behavior. These syndrome scales broadly form two subcategories of behavioral problems, namely “internalizing” and “externalizing.” Scoring is done on a 3-point scale, where 0 = not true, 1 = sometimes true, and 2 = often true or very true. Raw scores were converted to T scores and percentiles as per the scoring criteria. The original measure's Cronbach's alpha coefficient was .88 for the overall problem scale, .89 for the externalizing subscale, and.77 for the internalizing subscale.

Child Behavior Checklist (16-18)-TRF

This teacher reported Urdu version of CBCL- TRF (Achenbach & Rescorla, 2000) was used for children above five years of age. It was also a Likert-type scale comprised of 112 items scoring on a 3-point scale, where 0 = not true, 1 = sometimes true, and 2 = often true or very true. There are eight empirical-based syndrome scales named Anxious/Depressed, Withdrawn/Depressed, Somatic Complaints, Social Problems, Thought Problems, Attention Problems, Rule Breaking Behavior, and Aggressive Behavior. This scale also has two broader categories of internalizing and externalizing problems. Raw scores were converted to T scores and percentiles as per the scoring criteria. The original measure's

Cronbach's alpha coefficient was 0.97 for the total problem scale and 0.95 and 0.90 for the externalizing and internalizing subscales, respectively.

Table 27

Details Of Outcome Measures, Source of Information, and Time

Measures	Informant	Time
Social Emotional Competence		
Social Emotional Development Assessment Scale	Child	T1, T2
Kusche Emotion Inventory- Labelling Scale	Child	T1, T2
Kusche Emotion Inventory- Recognition Scale	Child	T1, T2
Behavioral Problems		
Child Behavioral Checklist	Teacher	T1, T2
Preschool Anxiety Scale	Teacher	T1, T2
Behavior Inhibition Questionnaire	Teacher	T1, T2
Social Validity		
Primary Intervention Rating Scale	Facilitator	T2

Note. T1=Pre-test; T2=Post-test.

Procedure

As a first step, permissions were sought from Federal Directorate of Education, Islamabad in November 2020 to conduct study in Federal Government schools of Islamabad. Also, teachers were nominated from the same school who participated as trainers for the intervention. The research project didn't begin until the spring of 2021 because of covid-19 restrictions and school vacations. In April-June 2021, we conducted the initial round of baseline child assessments. A combination of evaluation techniques was employed for this

goal. Teachers were provided with a common set of protocols for assessing students' progress on measures of internalizing and externalizing behavioral problems.

Second, children's social and emotional competence was assessed in private spaces within schools through the use of standardized tests. The demographic information form was sent home with students with an accompanying letter from the school outlining the research and assuring parents that their children's data would be kept confidential.

From August 2021 through October 2021, the intervention group engaged in the Fun Friends program. All post-treatment testing for the intervention and control groups was done between November 2021 and January 2022. To evaluate the program's social validity, we employed the same battery of tests administered both before and after the intervention. The only exceptions were the demographic information sheet (only pretest) and the PIRS scale (only posttest). Teachers who were directly involved in the curriculum's implementation were also surveyed about the improvements they have seen in students' behavior as a result of the program.

Analysis Plan

The present study is an effectiveness trial based on randomized controlled trial (RCT) with waitlist control group design, where intervention group was taught Fun FRIENDS curriculum, while the control group was used for comparison purpose. All analyses were conducted using Stata version 17.0 (Statacorp, 2021) and SPSS version 26 (Corp, 2019). Descriptive statistics were computed including demographics and outcome measures. The psychometric properties of all the outcome measures were established through internal

consistency indices. We then examined bivariate correlations to assess the associations between study variables such as behavioral problems and social emotional competence.

To evaluate the intervention effects, between subject gender, group status and time (pre and post) effects were assessed within the intervention group through repeated measures Analysis of Variance (ANOVA) and Analysis of Covariance (ANCOVA). Furthermore, since the data is nested at school level and randomized, multilevel modeling was used to control nested nature of the data. We used maximum likelihood estimation with robust standard errors clustering for participants by classrooms (N = 15) to provide less biased estimates (Acock, 2012). After pre assessments, the two groups were compared to assess possible baseline differences between the groups on demographic variables and outcome measures.

To address our primary aim of the research regarding the effect of the Fun FRIENDS intervention program on social emotional competence and behavioral problems, age, gender (0 = male, 1 = female), family income, family system (0 = nuclear, 1 = joint), group assignment (0 =control, 1 = intervention), and class (dummy codes for Grade 1 and Grade 2) were included as covariates. The intervention effects were observed by controlling time 1 measures. All the outcome variables were standardized before estimating the model so that the intervention effect represents the difference in standard deviation units. Estimation model is presented in figure 14.

All analyses were conducted using Stata 17.0 (Statacorp, 2021). Although there was not a statistically significant difference between intervention and control groups for gender,

there were statistically significant differences at baseline for child's age, class, family system and family income (see Table 1). These group differences at pretest and posttest based on t-tests and chi-squared tests are presented as a reference point before estimating the more sophisticated structural equation models that account for covariates and non-independence of observations. We ran models using the structural equation modeling command that allows for full information maximum likelihood estimation. To adjust for the non-independence of observations, we used the vce(cluster) option which is a generalized Huber/White/sandwich estimator. Thus, the model accounted for the non-independence of observations and treats the intervention condition as a level 2 variable as defined by the cluster specification (i.e., it only varied between clusters and not within).

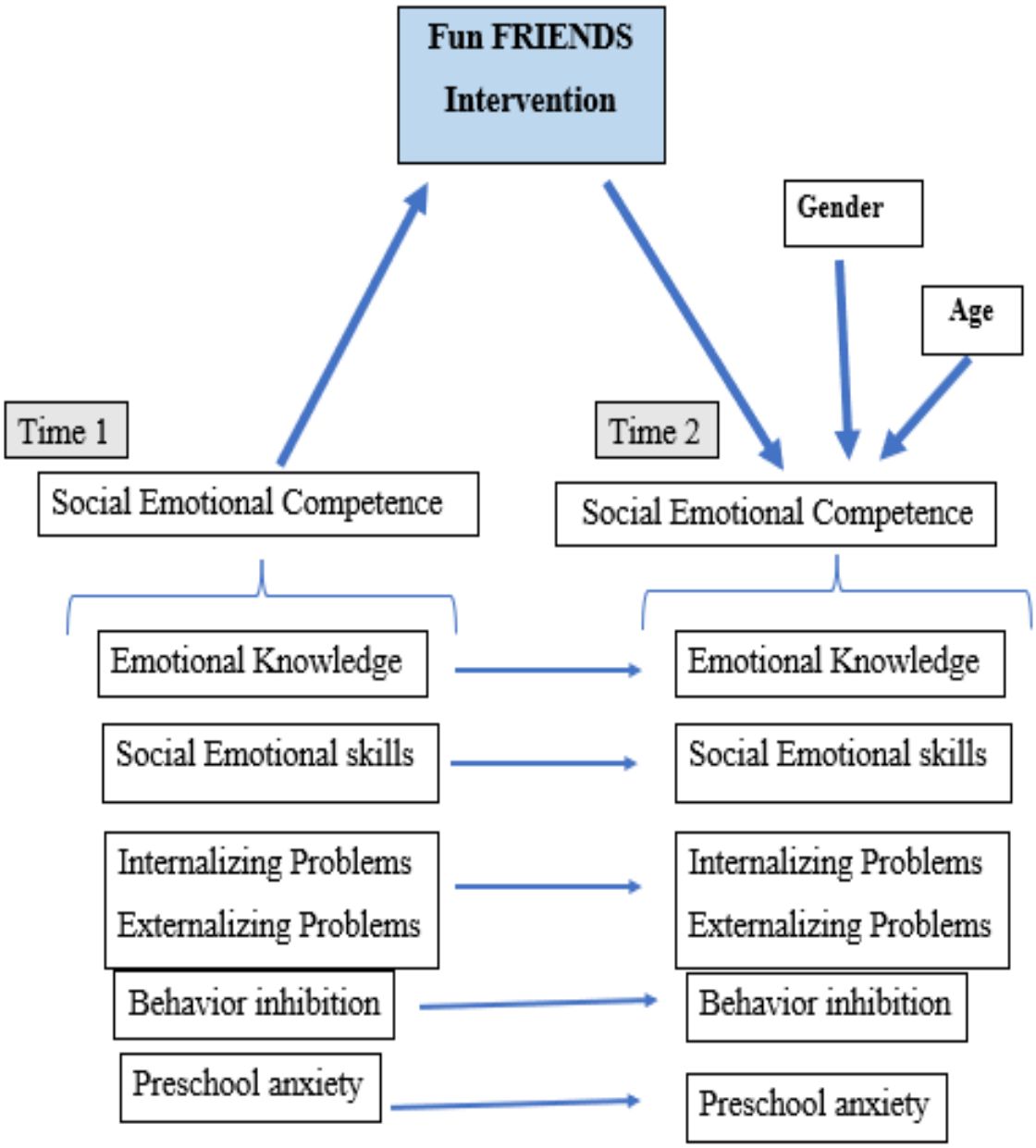
To address our primary aim regarding the effect of the Fun FRIENDS intervention program on child report (SEDA and KEI) and teacher report measures (CBCL) of SEF, we included age, gender (0 = male, 1 = female), family income, family system (0 = nuclear, 1 = joint), group assignment (0 =control, 1 = intervention), and class (dummy codes for Grade 1 and Grade 2) as covariates. Additionally, for child reported outcomes, we controlled for child report measures at pretest and for teacher-reported outcomes, we controlled for teacher reports at pretest. All the outcome variables were standardized ($M = 0$; $SD = 1$) before estimating the model so that the intervention effect represents the predicted difference in standard deviation units of the sample.

In order to test the robustness of our treatment estimates from these primary models, we ran two additional sets of analyses. First, we used an inverse-probability-weighted

regression adjustment (IPWRA) method for estimating treatment effects (StataCorp, 2021). This approach is typically used with quasi-experimental designs when baseline non-equivalence is assumed, but because we observed some baseline differences in our study it may better estimate the causal effect of the intervention in our RCT. The approach is considered doubly-robust because it estimates 2 models, and only 1 needs to be correct for the treatment estimates to be unbiased. The model first predicts the probability of being in the treatment group (i.e., Fun FRIENDS) based on the baseline covariates and computes inverse probability weights for the treatment. Then the model estimates the treatment effect on the outcomes based on the weighting, while also controlling for all baseline covariates. The second set of analyses we used for testing the robustness of the treatment estimates was to run a multilevel mixed model (i.e., ‘mixed’ in Stata). The model was identically specified as the primary structural equation model, including all baseline covariates as predictors along with the treatment condition, with a classroom-level random intercept.

Figure 15

Model of Estimation for Multilevel Modeling



Results

The results are broken down into two sections, and this one explains how the primary study was divided down into its individual components for analysis. The first section consists of exploratory analyses to compare demographic and outcome characteristics between the intervention and control groups at baseline. In the following section, we will discuss the analysis performed to determine the effectiveness of the interventions. In order to determine whether or not the Fun FRIENDS program is successful, multivariate analyses of covariance (MANCOVAs) were carried out. Effect sizes were calculated after a series of repeated-measures multivariate analyses of variance (MANOVAs) were performed to investigate the interactions between variables. Since the nature of the data was nested into 15 classes, we, therefore, carried out the multilevel modeling analysis to determine the effectiveness of the intervention program.

Table 28

Psychometrics Properties of Outcome Measures (N=473)

Variables	No of items	M	SD	α	Range		Skew	Kurt
					Potential	Actual		
SEDA								
Self-Regulation	6	11.20	1.34	0.58	0-12	2-12	-2.67	11.05
Social skills	3	5.47	0.76	0.05	0-6	2-6	-1.30	1.11
School belongingness	3	5.42	1.03	0.57	0-6	1-6	-1.72	2.03
Total	12	22.09	2.44	0.69	0-24	9-24	-1.81	4.29
KEI								
Labeling	40	48.90	9.54	0.76	0-80	28-72	.05	-0.45
Recognition	30	38.86	7.29	0.70	0-60	15-56	-0.28	0.28
CBCL								
Internalizing	CTRF-32	19.72	9.32	0.834	0-64	3-48	0.13	-0.02
	TRF- 27	8.94	8.935	0.827	0-54	0-38	1.09	0.47
Externalizing	CTRF-34	19.52	10.34	0.58	0-68	2-52	0.58	1.04
	TRF- 32	9.73	11.75	0.91	0-64	0-52	1.41	0.906
Total	CTRF-100	58.73	28.61	0.88	0-200	9-148	0.33	0.07
	TRF- 112	37.05	37.74	0.79	0-224	0-163	1.28	0.80
PAS								

Generalized Anxiety	4	3.42	3.03	0.70	0-16	0-15	1.09	1.24
Social Anxiety	5	5.18	3.69	0.67	0-20	0-17	0.52	-0.29
OCD	5	4.12	3.83	0.76	0-20	0-18	1.10	0.78
Physical Injury Fears	2	2.26	2.00	0.55	0-8	0-8	0.86	0.13
Separation Anxiety	6	4.10	4.29	0.77	0-12	0-22	1.20	1.17
BIQ	28	102.51	30.70	0.91	1-196	28-193	0.03	0.63
Social Novelty Inhibition								
Adult	4	13.94	5.65	0.58	1-28	4-28	0.46	-0.43
Peers	6	20.94	7.34	0.70	1-42	6-42	0.37	0.05
Performance	4	15.81	5.49	0.53	1-28	4-28	0.07	-0.33
Situational Novelty Inhibition								
Separation	4	13.92	5.83	0.64	1-28	4-28	0.31	-0.43
New situations	6	22.46	7.94	0.73	1-42	6-42	-0.09	-0.47
Physical challenges	4	15.45	4.88	0.53	1-28	4-28	-0.03	0.24

Note. M= mean; SD= standard deviation; α=reliability coefficient; Skew= skewness; Kurt= Kurtosis; PAS = Preschool Anxiety Scale; BIQ = Behavioral Inhibition

Questionnaire, KEI= Kusche Emotion Inventory, SEDA= Social Emotional Development Assessment.

* Scores are based on T-scores.

The above table 28 provides psychometrics of all the scales on the present data. The SEDA scale has a range of 0-24, with a potential score range of 9-24. The mean score for the scale is 22.09, with a standard deviation of 2.44. The scale has a high internal consistency, with a Cronbach's alpha coefficient of 0.69. The scale also has a moderate negative skew (-1.81) and moderate kurtosis (4.29), indicating that the scores are somewhat peaked and heavy-tailed.

The KEI (Kindergarten Entry Inventory) is a measure of children's readiness for school. It consists of two sub-scales: Labeling and Recognition. Labeling has 40 items and Recognition has 30 items. The KEI has a range of 0-80, with a potential score range of 28-72. The mean score for the KEI is 48.90, with a standard deviation of 9.54. The scale has a high internal consistency, with a Cronbach's alpha coefficient of 0.76. The scale also has a small positive skew (0.05) and low kurtosis (-0.45), indicating that the scores are relatively symmetric, and light tailed. The Child Behavioral Checklist (CBCL) is a measure of children's behavioral and emotional functioning. It consists of two sub-scales: Internalizing and Externalizing. The CBCL has a range of 0-200, with a potential score range of 9-148. The mean score for the CBCL is 58.73, with a standard deviation of 28.61. The scale has a high internal consistency, with a Cronbach's alpha coefficient of 0.88. The scale also has a

small positive skew (0.33) and low kurtosis (0.07), indicating that the scores are relatively symmetric, and light tailed.

The Preschool Anxiety scale is a measure of anxiety in children aged 3-5. It consists of five sub-scales: Generalized Anxiety, Social Anxiety, OCD, Physical Injury Fears, and Separation Anxiety. The Preschool Anxiety scale has a range of 0-20, with a potential score range of 0-18. The mean score for the scale is 4.12, with a standard deviation of 3.83. The scale has a high internal consistency, with a Cronbach's alpha coefficient of 0.76. The scale also has a positive skew of 1.10 and kurtosis of 0.78, indicating that the scores are relatively peaked and heavy-tailed. The Behavioral Inhibition scale is a measure of children's tendency to be shy or hesitant in new or unfamiliar situations. The Behavioral Inhibition scale has 28 items and has a range of 1-196, with a potential score range of 28-193. The mean score for the scale is 102.51, with a standard deviation of 30.70. The scale has a high internal consistency, with a Cronbach's alpha coefficient of 0.91. The scale also has a small positive skew (0.03) and kurtosis (0.63), indicating that the scores are relatively symmetric, and light tailed.

Part I: Comparisons of Demographic and Outcome Measures of the Study at Baseline for the Intervention and Control Groups

In this part of the study, we conduct equivalency analyses of the intervention and control groups on outcome and demographic variables. To have a complete picture of both groups post-randomization and to identify potential covariates for subsequent analysis was the goal of this section of analyses. Significant differences were found

between the intervention group and the control group on the baseline assessment, as measured by both the chi-square test for categorical variables and the t-test for continuous variables. In addition, t-tests were run on the data gathered from the various outcome assessments.

Table 29

Bivariate Correlation Matrix of All Study Outcome Measures (N= 473)

	Variables	1	2	3	4	5	6	7
1	SEDA	1	-	-	-	-	-	-
2	KEI Labelling	.275**	1	-	-	-	-	-
3	KEI Recognizing	.229**	.614**	1	-	-	-	-
4	Internalizing	-.050	.189**	.174**	1	-	-	-
5	Externalizing	-.055	.195**	.171**	.963**	1	-	-
6	PAS	-.100*	.072	-.058	.234**	.235**	1	
7	BIQ	.057	-.029	-.043	-.069	-.097	.373**	1

Note. **p<.05, *p<.01; PAS = Preschool Anxiety Scale; BIQ = Behavioral Inhibition Questionnaire, KEI= Kusche Emotion Inventory, SEDA= Social Emotional Development Assessment.

Table 29 shows the correlations analyses between all the main study outcome variables. Some significant associations were observed between the social emotional development and emotional knowledge labeling (r= .275, p=.01), emotional knowledge recognition (r= .229, p= .01) and preschool anxiety (r= -.100, p=.05). Furthermore, emotional knowledge labelling was significantly associated with internalizing (r= .189, p=.01) and externalizing (r= .195, p=.01) behavioral problems and emotional knowledge recognition (r=

.614, p=.01). Whereas recognition of emotional knowledge was correlated with both internalizing (r= .174, p=.01) and externalizing (r= .171, p=.01) behavioral problems. Preschool anxiety was found correlated with behavioral problems only including internalizing (r= .234, p=.01), externalizing (r= .235, p=.01) and behavioral inhibition (r= .373, p=.01).

Table 30

Pre- and Post- Intervention Correlations Between Social Emotional Competence and Emotional and Behavioral Problems (N=426)

	1	2	3	4	5	6	7
Post-test correlations							
SEDA(C)	.430**	.191**	.175**	-.152**	-.095*	0.007	0.047
KEI-Lab (C)	.125**	.401**	.287**	0.004	0.003	-.173**	-0.011
KEI-Rec(C)	.157**	.322**	.448**	-0.041	-0.072	-.217**	-0.014
Internalizing (T)	-0.049	0.072	0.093	.529**	.496**	-0.058	0.022
Externalizing (T)	-0.087	0.012	-0.009	.401**	.507**	-0.031	0.004
PAS (T)	-.121*	-0.022	-0.053	.275**	.293**	.313**	.217**
BIQ (T)	0.035	.106*	0.080	.124*	.169**	0.023	.468**

Note. Correlations along the diagonal are the pre-test and post-test correlations of an outcome.

T teacher report, C child self-report

**$p<.05$, *$p<.01$; PAS = Preschool Anxiety Scale; BIQ = Behavioral Inhibition Questionnaire, KEI= Kusche Emotion Inventory, SEDA= Social Emotional Development Assessment.

Table 30 shows the correlation coefficients between different measures of child behavior and social emotional development. In general, the results show moderate to strong correlation between the different measures of child behavior problems and social emotional development. For example, there is a moderate positive correlation between the SEDA(C) and KEI-Lab (C) measures (r = .401), and a moderate positive correlation between the Internalizing (T) and Externalizing (T) measures (r = .496). It also appears that there is some negative correlation between SEDA(C) and emotional knowledge measures such as (KEI-Lab (C) and KEI-Rec (C)) and the internalizing and externalizing problems Internalizing (T) and Externalizing (T)) and the PAS (T) suggesting that children with higher social emotional competence may have less internalizing and externalizing problems and better Preschool anxiety levels. Lastly, it is worth noting that the BIQ (T) and the PAS (T) have a moderate positive correlation (r=.468) suggesting that preschool anxiety among children is positively related to their perceptions behavioral inhibition.

Table 31

Baseline Comparisons Between Control and Intervention Group on Demographics Variables (N=426)

Variables	Mean or %	SD	t-test or Chi sq.
Age	6.31	0.84	t (424)= 2.79**
Family Income	25112	11247.84	t (424)= -2.02**
Nuclear Family	62.4%	-	$\chi^2(1) = 7.16$**
Males	46.48%	-	$\chi^2(1) = 2.75$
Prep	52.6%	-	$\chi^2(2) = 19.77$***
Grade 1	31.2%	-	
Grade 2	16.2%	-	

Note. t-test is an independent sample *t*-test estimate based on baseline comparisons of control and intervention groups.

*p<.01, **p<.05, ***p<.000.

Table 31 shows baseline comparisons for demographic between control and intervention groups. The variables include age, family income, family structure, gender, and grade level. For age, the mean is 6.31 years old with a standard deviation of 0.84. Mean age for the control group (6.6 years) was higher (t (424)= 2.79**) than the intervention group (6.4) years. There are more females in the control group (53.5%) than in the intervention group (46.5%). Furthermore, the family income was higher (t (424) = -2.02**) for children in the intervention group (26,483 PKR) than the control group (24,235 PKR). For grade level,

52.6% of the sample is in prep, 31.2% is in grade 1, and 16.2% is in grade 2. There were more children from prep classes in both groups. The results also indicate that these variables are significantly different from each other, which is important to consider when interpreting the results of any subsequent analyses that use these variables.

Table 32

Baseline Comparisons Between Control and Intervention Group on Outcome Measures (N=426)

	Mean	SD	t-test or Chi sq.
SEDA(C) ^{T1}	22.07	2.451	*t* (424) = -0.23
KEI-Lab (C) ^{T1}	48.75	9.577	*t* (424) = 1.61
KEI-Rec(C) ^{T1}	38.73	7.266	*t* (424) = 0.34
Internalizing (T) ^{T1}	57.22	12.65	*t* (424) = -0.29
Externalizing (T) ^{T1}	57.52	10.729	*t* (424) = 1.45
PAS (T) ^{T1}	19.45	15.05	*t* (424) = 3.46***
BIQ (T) ^{T1}	97.48	33.72	*t* (424) = -0.42

Note. t-test is an independent sample *t*-test estimate based on baseline comparisons of control and intervention groups; T teacher report, C child self-report; ^{T1} Pretest.

*p<.01, **p<.05, ***p<.000.

Table 32 shows baseline comparisons between intervention and control group on outcome measures. Non-significant differences were found on scales of social emotional competence, emotional knowledge, child behavior checklist and behavior inhibition. However, a significant difference was found for preschool anxiety between control and intervention group *t* (424)=3.46, p= .000) at baseline. Children from control group have higher anxiety than intervention group children.

Part II: Effectiveness of Fun FRIENDS Program

In this section, we assess the efficacy of the Fun FRIENDS program by comparing pre- and post-study data on variables of the study from the intervention and control groups. Differences in intervention's effect by demographic categories including age, socioeconomic status, and gender are also discussed. In this stage, we also give multilevel modelling findings to evaluate the effectiveness of the intervention program. Table 15 shows the mean differences of control and intervention group on outcome measures from pre to post assessments.

The intervention effects of Fun FRIENDS program were calculated on two domains of outcome variables. These two domains included: (1) “Social emotional competence” (consists of three subgroup variables; social emotional development assessment, labeling of emotions and recognition of emotions), (2) “behavioral problems domain” (consists of four subgroup variables; internalizing and externalizing problems, preschool anxiety, and behavioral inhibition).

To evaluate the efficacy of the intervention while accounting for demographic and other covariates of interest, the researchers employed General Linear Modeling (GLM) with multivariate analysis of covariance (MANCOVA). In tables 17 and 19, the findings of MANCOVA with demographic covariates are shown. In addition, a MANCOVA was computed to examine the intervention's impacts, with the dependent variables being the pre- and post-intervention outcomes, the covariates being age and family income, and the fixed factor being the condition (intervention versus control group). Intervention status

(intervention, control) served as the between-subject independent variable, while time served as the within-subject independent variable (pre-intervention, post- intervention). The "Cohen's d" effect size index was calculated by dividing the post-test mean difference (the numerator) between two groups by the pooled standard deviation (the denominator) (Cohen, 1988).

General Linear Model (GLM) with repeated measures multivariate analysis was used to obtain interaction effects and to investigate within-group tendencies for additional verification. To examine the before-and-aftereffects of the treatments, a series of repeated-measures MANOVAs were conducted on the intervention group and the control group independently. Prior to and after treatment effects in the control and intervention groups were given their own "Cohen's d," and the interaction effect was given its own "partial eta" (Time x Condition).

Table 33

Means and Standard Deviations at Pre- and Post- by Groups (N=426)

	Pre-test mean		Post-test mean	
	Control M (SD)	Intervention M (SD)	Control M (SD)	Intervention M (SD)
SEDA(C)	22.03(2.62)	22.09(2.26)	22.70(2.78)	23.15(1.87)
KEI-Lab (C)	49.5(9.42)	48(9.69)	51.20(10.75)	52.93(13.44)
KEI-Rec(C)	38.85(6.96)	38.60(7.56)	40.78(7.87)	42.50(9.13)
CBCL-Int (T)	57.04(11.80)	57.39(13.46)	54.84(12.43)	56.94(12.66)
CBCL-Ext (T)	58.28(10.31)	56.77(11.09)	55.94(10.21)	57.79(10.50)
PAS (T)	22.45(1.14)	17.47(0.87)	21.29(1.20)	20.50(1.11)
BIQ (T)	96.78(2.52)	98.17(2.08)	104.25(1.59)	107.20(1.13)

Note. T teacher report, C child self-report; PAS = Preschool Anxiety Scale; BIQ = Behavioral Inhibition Questionnaire, KEI= Kusche Emotion Inventory, SEDA= Social Emotional Development Assessment; CBCL= Child behavioral checklist.

Table 33 presents the mean and standard deviation (in parentheses) of several outcome measures social emotional competence, emotional knowledge scales, CBCL, PAS and BIQ for both the control group and the intervention group at both pre-test and post-test. The table shows that the intervention group had higher mean scores on SEC(C) and BIQ(T) at post-test compared to the control group, indicating that the intervention may have had a

positive effect on these measures. The intervention group also had higher mean scores on KEI-Lab(C) and KEI-Rec(C) at post-test compared to pre-test, indicating an improvement from the intervention. Additionally, the intervention group had lower mean scores on PAS(T) at post-test compared to pre-test, indicating a reduction in problems associated with PAS. Overall, it appears that the intervention had a positive effect on several of the outcome measures.

Social Emotional Competence Domain

This domain consists of social and emotional skills. The multivariate analysis of variance (MANCOVA) for the social and emotional competence variables revealed significant intervention effects on both labeling and recognition of emotions knowledge in the intervention group. The repeated measure multivariate analysis of variance (MANOVA) showed a significant Time and Time x Condition interaction effects F (1, 424). Table no. 34 and 35 present the results of MANOVA.

Table 34

Repeated Measures Multivariate Analysis of Variance (MANOVA) (Within Subject Effects) For Control and Intervention Group for Pre and Post Treatment Social Emotional Competence Measures (N=426)

Measures	Groups	n	Pretreatment		Post treatment		Time			Time * Condition		
			M	SD	M	SD	F	*p*	Cohen's d	F	*p*	np^2
SEDA	Intervention group	214	22.09	2.27	23.15	1.87	40.692	0.000	0.51	2.319	.129	0.005
	Control group	212	22.04	2.62	22.72	2.71	13.612	0.000	0.25			
KEI-Lab	Intervention group	214	48.00	9.69	52.93	13.4	26.568	0.000	0.42	7.66	.006	0.018
	Control group	212	49.50	9.42	51.21	10.74	6.683	0.10	0.16			
KEI-Rec	Intervention group	214	38.61	7.56	42.5	9.13	33.94	0.000	0.46	5.894	.016	0.014
	Control group	212	38.85	6.96	40.79	7.87	18.327	0.000	0.26			

Note. KEI= Kusche Emotion Inventory, SEDA= Social Emotional Development Assessment; p= level of significance; np^2= partial eta squared.

Table 34 presents the results of a repeated measures multivariate analysis of variance (MANOVA) on three outcome measures: SEDA, KEI-Lab, and KEI-Rec. The design included two groups (intervention and control) and two time points (pre- and post-treatment). The MANOVA test was used to assess the main effects of time and group, as well as the interaction between time and group on the four outcome measures. The results indicate that there were significant main effects of time on all three measures, with post-treatment scores being higher than pre-treatment scores. This suggests that the intervention had a positive impact on all three measures. Additionally, there was a significant interaction effect between time and group on KEI-Rec and KEI-Lab, which suggests that the intervention had a greater effect on the intervention group than the control group on emotional knowledge and recognition. The effect size is moderate for KEI-Lab and KEI-Rec. It is worth noting that there is no significant difference between the groups for SEDA and no significant interaction effect for it. This suggests that the intervention did not have a differential effect on social competence between the intervention and control groups.

Table 35

MANCOVA for Social Emotional Competence at Pre and Post treatment (N=426)

	Intervention group				Control group						
	Pretreatment		Post treatment		Pretreatment		Post treatment				
Measures	M	SD	M	SD	M	SD	M	SD	F	p	η_p^2
SEDA	22.09	2.27	23.15	1.87	22.04	2.62	22.72	2.71	2.295	0.131	0.005
KEI-Lab	48	9.69	52.93	13.4	49.5	9.42	51.21	10.74	5.962	0.015	0.014
KEI- Rec	38.61	7.56	42.5	9.13	38.85	6.96	40.79	7.87	4.823	0.029	0.011

Note. KEI= Kusche Emotion Inventory, SEDA= Social Emotional Development Assessment; p= level of significance; np^2= partial eta squared.

Table 35 presents the results of a repeated measures multivariate analysis of covariance (MANCOVA) on three outcome measures: SEDA, KEI-Lab, and KEI-Rec. The MACNOVA test was used to assess the main effects of time and group, as well as the interaction between time and group on the four outcome measures. The results indicate that there were significant main effects of time on all three measures, with post-treatment scores being higher than pre-treatment scores. This suggests that the intervention had a positive impact on all three measures. Additionally, there was a significant interaction effect between time and group on KEI-Rec and KEI-Lab, which suggests that the intervention had a greater effect on the intervention group than the control group on emotional knowledge and recognition. The effect size is moderate for KEI-Lab and KEI-Rec. It is worth noting that there is no significant difference between the groups for SEDA and no significant interaction effect for it. This suggests that the intervention did not have a differential effect on social competence between the intervention and control groups.

Behavioral Problems Domain

This domain consists of behavioral problems in school children. The multivariate analysis of variance (MANCOVA) for the behavioral problems variables revealed nonsignificant intervention effects on all variables of behavioral problems except externalizing and preschool anxiety. The repeated measure multivariate analysis of variance (MANOVA) showed a significant Time and Time x Condition interaction effects F (1, 424).

Table 11

Repeated Measures Multivariate Analysis of Variance (MANOVA) (Within Subject Effects) For Control and Intervention Group for Pre and Post Treatment Behavioral Problems Measures (N=426)

Measures	Groups	n	Pretreatment		Post treatment		Time			Time * Group		
			M	SD	M	SD	F	*P*	Cohen's d	F	*p*	ηp^2
Internalizing problems	IG	214	57.39	13.46	56.94	12.66	0.215	0.644	0.034	2.169	0.142	0.005
	CG	212	57.04	11.8	55.94	10.21	10.957	0.001	0.099			
Externalizing problems	IG	214	56.77	11.09	57.79	10.5	1.522	0.219	0.094	11.235	0.001	0.026
	CG	212	58.28	10.31	55.94	10.21	17.588	0.000	0.22			
Preschool Anxiety	IG	214	17.47	0.87	21.29	1.2	5.761	0.017	0.64	5.389	0.021	0.013
	CG	212	22.45	1.14	21.29	1.2	0.807	0.37	0.99			
Behavioral inhibition	IG	214	98.17	2.08	107.2	1.13	20.501	0.000	0.39	0.284	0.595	0.001
	CG	212	96.78	2.52	104.25	1.59	12.218	0.001	0.54			

Note. IG= Intervention group; CG= control group; *p* = level of significance; np^2= partial eta squared.

Table 36 presents the results of a repeated measures multivariate analysis of variance (MANOVA) on four outcome measures: internalizing, externalizing, PAS and BIQ. The design included two groups (intervention and control) and two time points (pre- and post-treatment). The MANOVA test was used to assess the main effects of time and group, as well as the interaction between time and group on the four outcome measures. The results indicate that there were significant main effects of time on all two measures i.e., PAS and BIQ with post-treatment scores being higher than pre-treatment scores. Additionally, there were significant interaction effect between time and group on externalizing and PAS measures. However, the BIQ interaction effects was positive for intervention group. This suggests that the intervention did not have a differential effect on behavioral problems for intervention groups except BIQ.

Table 36

MANCOVA for Behavioral Problems at Pre and Post treatment (N=426)

	Intervention group				Control group						
	Pretreatment		Post treatment		Pretreatment		Post treatment				
Measures	M	SD	M	SD	M	SD	M	SD	F	*P*	np^2
Internalizing problems	57.39	13.46	56.94	12.66	57.04	11.8	55.94	10.21	2.339	0.127	0.006
Externalizing problems	56.77	11.09	57.79	10.5	58.28	10.31	55.94	10.21	9.784	0.002	0.023
PAS	17.47	0.87	21.29	1.2	22.45	1.14	21.29	1.2	5.689	0.018	0.013
BIQ	98.17	2.08	107.2	1.13	96.78	2.52	104.25	1.59	0.229	0.633	0.001

Note. PAS = Preschool anxiety scale; BIQ = Behavioral inhibition questionnaire; *p* = level of significance; np^2= partial eta squared.

Table 37 presents the results of a repeated measures multivariate analysis of covariance (MANCOVA) on four outcome measures: internalizing, externalizing, PAS and BIQ. The design included two groups (intervention and control) and two time points (pre- and post-treatment). The results of a MANCOVA show that there were significant changes in both group's scores on the externalizing, and PAS measures from pre-treatment to post-treatment. The means of both groups decreased from pre-treatment to post-treatment. The F values and corresponding p-values suggest that these changes were statistically significant.

Multilevel Modeling

The multivariate analysis of variance and multivariate analysis of covariances cannot control the nested nature of the data and produced non-significant results of the study. Therefore, to control the nested nature of data at school level and randomization, multilevel modeling was used. We applied maximum likelihood estimation with robust standard errors clustering for participants by classrooms (N = 15) to provide less biased estimates. All the outcome variables were standardized before estimating the model so that the intervention effect represents the difference in standard deviation units.

Table 37

Child Estimated Effects for the Fun FRIENDS program on Social Emotional Competence (N=426)

	SEDA(C)			KEI-Lab(C)			KEI-Rec(C)		
	β	SE	P value	B	SE	P value	B	SE	P value
Pretest score	0.42	0.10	0.000	0.33	0.09	0.000	0.39	0.06	0.000
Intervention	0.19	0.07	0.009	0.19	0.24	0.43	0.25	0.24	0.30
Gender	0.11	0.09	0.213	0.02	0.05	0.63	0.00	0.06	0.95
Age	-0.05	0.06	0.355	-0.07	0.08	0.38	-0.02	0.09	0.83
Family Income	-2.99	4.29	0.486	8.87	2.59	0.001	4.29	4.71	0.36
Family System	-.16	0.07	0.020	0.04	0.13	0.74	0.08	0.14	0.55
Grade 1	0.12	0.13	0.361	-0.09	0.22	0.66	-0.05	0.26	0.85
Grade 2	0.25	0.12	0.044	0.18	0.18	0.31	0.24	0.21	0.26
SEDA ^{T1}	0.42	0.10	0.000	0.07	0.05	0.13	0.07	0.05	0.14
KEI-Lab ^{T1}	-0.02	0.05	0.602	0.33	0.09	0.000	0.03	0.06	0.66
KEI-Rec ^{T1}	0.06	0.05	0.189	0.10	0.06	0.12	0.39	0.06	0.000

Note. Estimates are from structural equation model with Maximum Likelihood estimators and robust standard errors clustering for 15 classrooms; SEDA= social emotional development scale; KEI=Kusche emotion inventory; B = "unstandardized regression coefficient"; SE = "Standard error; β = "Standardized regression coefficient"; *p*-value = "level of significance.

^{T1} pretest scores

Table 38 shows the results of multilevel modeling on child reported measures of social and emotional competence. Results show that the children in the intervention group performed 0.19 standard deviations better in SEDA than children in the control group at posttest, controlling for baseline levels and covariates. Furthermore, children in the intervention group also showed positive effects on both KEI-Rec (b = 0.25, p = 0.30) and KEI-Lab (b = 0.19, p = 0.43). However, these results were insignificant. Furthermore, children in grade 2 showed significantly better SEDA scores than prep grade children. And children living in the joint family system performed worse on SEDA than children living in the nuclear family system.

In general, children in the intervention group demonstrated a significant increase in social competence. The intervention group demonstrated greater enhancement of social skills including self-regulation, optimism, school belongingness, and social responsibility, compared to children in the control group at posttest.

Table 38

Teacher Estimated Effects for the Fun FRIENDS Intervention on Behavioral Problems (N=426)

	Internalizing Problems			Externalizing Problems			Behavioral Inhibition			Preschool Anxiety		
	β	SE	*p* value	*β*	SE	*p* value	*β*	SE	*p* value	*B*	SE	*p* value
Pretest score	0.53	0.09	0.000	0.30	0.06	0.000	0.444	0.05	0.000	-0.10	0.08	0.000
Intervention	0.08	0.23	0.70	0.17	0.19	0.369	0.14	0.08	0.099	-0.04	0.21	0.84
Gender	-0.03	0.07	0.71	0.29	0.05	0.000	-0.02	0.10	0.780	-0.09	0.06	0.15
Age	-0.11	0.06	0.044	0.006	0.05	0.904	-0.00	0.06	0.896	0.01	0.09	0.92
Grade 1	0.18	0.31	0.58	-0.17	0.27	0.521	-0.07	0.12	0.547	-0.73	0.32	0.023
Grade 2	-0.32	0.19	0.108	-0.55	0.18	0.003	0.02	0.14	0.878	-0.82	0.28	0.004
Family Income	6.22	4.53	0.206	6.34	4.12	0.115	-1.53	4.21	0.717	-5.29	3.29	0.107
Family System	0.20	0.07	0.004	0.21	0.06	0.001	-0.04	0.06	0.454	-0.19	0.14	0.16
Internalizing ^{T1}	0.53	0.09	0.000	0.18	0.10	0.072	-0.07	0.09	0.461	-3.26	0.08	0.000
Externalizing ^{T1}	-0.07	0.10	0.530	0.30	0.06	0.000	-0.01	0.08	0.881	0.03	0.13	0.790

Behavioral inhibition [T1]	0.06	0.06	0.36	0.11	0.06	0.101	0.444	0.05	0.000	-0.10	0.08	0.24
Preschool anxiety [T1]	0.03	0.05	0.56	-0.38	0.06	0.704	0.06	0.06	0.273	0.41	0.07	0.000

Note. Estimates are from structural equation model with Maximum Likelihood estimators and robust standard errors clustering for 15 classrooms; B = "unstandardized regression coefficient"; SE = "Standard error; β = "Standardized regression coefficient"; *p*-value = "level of significance.

[T1] pretest scores

Table 39 shows the results of multilevel modeling on teacher reported measures of behavioral and emotional problems. Results did not show any significant effect on internalizing, externalizing and preschool anxiety problems. However, the children in the intervention group performed 0.14 standard deviations better in behavior inhibition than children in the control group at posttest, controlling for baseline levels and covariates. Furthermore, females were predicted to be 0.29 SD significantly higher on externalizing problems than males. And children in grade 2 had significantly lower externalizing problems than the children in prep grade. Children living in joint family systems had significantly more internalizing and externalizing problems than children in nuclear family systems.

Sensitivity Analyses

Both sets of sensitivity analyses were consistent with our primary results reported. Specifically, for the propensity weighting analyses, only the SEDA outcome had a statistically significant treatment effect (b = .21, p = .002). This effect was very similar to the result reported in Table 38, and treatment effects that were not statistically significant reported in Tables 38 and 39 were replicated in the propensity weighting analyses. Likewise, for the multilevel mixed models, only the SEDA outcome had a statistically significant treatment effect (b = .19, p = .029). Again, this effect is the same in magnitude as the one reported in Table 38 but has a slightly larger standard error and p-value. Further, all treatment effects that were not statistically significant reported in Tables 38 and 39 were replicated in these multilevel mixed models. Thus, we have no evidence that model type (i.e., structural equation model with cluster adjustment, inverse probability weighting, or multilevel mixed models) influence our statistical conclusions regarding the treatment effects.

Discussion

The purpose of this study was to examine the effectiveness of a school-based delivery of the Fun FRIENDS program in promoting social emotional competence (SEC) in Pakistani school children aged 4 to 8 years. For this study, social emotional competence is defined as a combination of social competence, knowledge of emotions, and behavioral problems (internalizing and externalizing). A randomized controlled trial was used to assess changes from pre to post intervention on multiple social emotional competence constructs. The main hypothesis was that the Fun FRIENDS program would be effective in promoting social emotional competence and it was predicted that children in intervention group would improve in measures of social skills, emotional knowledge, as well as internalizing and externalizing problems at posttest. The results provide encouraging support for a model of early intervention for developing social emotional competence in this sample. Children in the intervention group demonstrated a significant increase in social competence, as evaluated by the Social Emotional Development Assessment at posttest, compared to those in the waitlist control group. Findings also revealed that children in the intervention group improved in emotional knowledge, as measured in Kusche Emotion Inventory subscales, however these scores were not significant. Furthermore, inconsistent with our hypotheses, children in the intervention had increased on internalizing, externalizing and preschool anxiety problems, though neither of these effects were significant. The findings are discussed in detail with cultural and literary relevance in chapter 6.

Chapter VI

General Discussion

Study was planned in three phases. There discussion are as follows:

Study 1: Translation and Pilot Study of Outcome Measures

Study 1 aimed to translate, adapt, and evaluate the psychometric properties of a range of measures used to assess social emotional competence and behavioral problems in Urdu-speaking children. The results of the study showed that all the measures demonstrated adequate properties, with good reliability and validity. The factor structure of the measures was also supported by the results of confirmatory and exploratory factor analysis, and goodness of fit tests indicated a good fit of the measures to the data.

The analysis of the measures included psychometrics which were assessed through Pearson alpha coefficients, means, standard deviations, actual and potential ranges, skewness, and kurtosis. Furthermore, reliability analysis was performed for all the measures. The scales demonstrated good reliability, with coefficient alpha values ranging from 0.30 to 0.75 (Cronbach, 1951). This suggests that the measures are consistent and that individuals' scores on the scales do not vary greatly over time. The validity of the measures was also assessed, including both divergent and convergent validity. Furthermore, Confirmatory factor analysis (CFA) and Exploratory factor analysis (EFA) were also conducted to assess the factor structure of the measures. The results of the CFA and EFA supported the factor structure of the measures, indicating that the measures were measuring the intended constructs. Furthermore, the factor loadings support the factor analysis with values ranging

from 0.36 to 0.87. Finally, goodness of fit tests was used to assess the overall fit of the measures to the data. The results of the goodness of fit tests indicated that the measures had a good fit to the data (Hu & Bentler, 1998), with low chi-square values and high values of goodness of fit indices such as ratios of the root mean square error of approximation (RMSEA), root mean square residual (RMSR), Tucker Lewis Index (TLI), goodness of fit index (GFI) and comparative fit index (CFI).

Overall, the study provides evidence for the use of these measures in research and practice with Urdu-speaking children and can inform future research in this area. The findings support the use of the Social Emotional Development Assessment Scale, Kusche Emotion Inventory Labeling and Recognition Scales, Preschool Anxiety Scale, and Behavioral Inhibition Questionnaire as valid and reliable measures for Pakistani school children.

Study II: Estimation of Behavioral Problems in Pakistani School Children

The present study was conducted with the primary goal of assessing internalizing and externalizing behavioral problems in young school children between 4 and 8 years. Findings related to behavioral problems among children revealed alarming borderline and clinical ranges on Child Behavioral Checklist scale. The study shows that 41.5% of all children were categorized as “abnormal” as in borderline and clinical ranges, with higher internalizing problems (45.1%) than externalizing problems (39.9%). Furthermore, externalizing problems are found higher in girls, whereas boys had more internalizing

problems. Study findings also showed significant positive relation between externalizing behavioral problems and social emotional competence.

The prevalence of total problems (41.5%) is similar to the earlier preschool and school children studies conducted in Pakistan such as preschoolers (46.5%, assessed with CBCL) (Inam & Zaman, 2014) and school children (34.4%, assessed with SDQ) (Malik et al., 2019) and also to US national survey (41%) (Whitney & Peterson, 2019). The prevalence was higher than in Norway (7.1%, assessed through SDQ) and Turkey (11.9%, assessed through CBCL) (Erol et al., 2005). The differences could be partly explained by the different measurement tools, income levels or varied cultural representations of behavioral and emotional problems in different countries or to the teacher reports, which are considered pervasive in education research and have considerable potential as child assessments (Cramer et al., 2019; Kariuki et al., 2017).

Another possible explanation of higher rates of behavioral problems can be explained by the data collection during pandemic period. Since the data is collected in Covid-19 pandemic, where schooling, limited social activities, and no outside play rules have already disrupted daily life for school children. These restrictions may have increased children's behavioral problems. Recent studies have also reflected an increase in emotional and behavioral problems in school aged children around the globe especially during pandemic (Lopez-Serrano et al., 2021; Sun et al., 2022). Numerous studies have found age and gender differences in the severity and frequency of children's behavioral problems. However, these observations are rather inconsistent (Erol et al., 2005; Yang et al., 2019). Moreover,

teachers in Pakistani government schools, in particular, were suffering from burnout and elevated stress levels because of their heavy workloads, difficulties adjusting to the distance learning mode, and difficulties managing online classrooms (Răducu & Stănculescu, 2022; Shaukat et al., 2022) and lack of digital literacy particular in Pakistani government school teachers (Naseem et al., 2022). During a pandemic, Liu and coworkers (Liu et al., 2020) studied gender disparities in stress and its effects. The results showed that female teachers were more likely to have symptoms of anxiety, depression, and poor sleep quality during the pandemic than their male colleagues. Teachers in our study were all women, and we suggested that several stressors during the pandemic may have influenced their evaluations of students' behaviors.

Furthermore, our study found gender differences with girls having higher externalizing problems whereas boys found more in internalizing problems. In girls, the problem of rule breaking and thought problems in young childhood may be associated with occurrence of externalizing problems such as conduct disorders and disobedience. Such problems in girls will be seen as severe stigmatization in our culture. For boys, increased levels of anxiousness, depressed characteristics and emotionally reactivity may be associated with internalizing and emotional problems which is also consistent with the cultural representation of males' behavior. However, it may lead to more confusion and lack of self-awareness. There are several factors that contribute to these findings with reference to Pakistan. Firstly, child development differs across genders in terms of cognitive, emotional, and social aspects (Christov-Moore et al., 2014; Jayachandran, 2021). Second, differences in

problems may reflect real behavioral differences caused by child-rearing practices that may include social and environmental factors as well as gender role attribution. In Pakistan, trends of gender norms are changing; girls are now expected to perform and excel in academia and to represent themselves in society autonomously, instead of limiting to household chores and being dependent on male figures. According to a recent survey in Pakistan, 53% parents support and desire their daughters working (Minardi et al., 2021), indicating that gender related social roles are shifting.

It is also worth noting that younger children had overall more behavioral problems than older children. Internalizing problems are more prevalent than externalizing problems in younger children. Furthermore, there is a strong association found between low family income and children's behavioral problems as consistent in previous studies (Inam & Zaman, 2014; Malik et al., 2019).

In our study, there is noticeable correlation found between child's social emotional competence and behavioral problems. Children who have better social emotional competence levels have showed significantly lower levels of externalizing problems. Particularly, children with high levels of externalizing problems predict low social emotional competence than internalizing problems. Externalizing problems are easily observable and noticed by teachers in the classroom environment such as rule breaking, aggressive behavior and hyperactivity and these problems are related with impulsiveness, lack of self-control, emotional knowledge and understanding and interpersonal skills.

Furthermore, younger children (4-6 years) showed better social and emotional competence than older children (6-8 years). These findings can be better explained with the concept of children's emotional understanding and development concepts. With growing age, complexity of emotions increased, and children are required to attach meanings to emotion, whereas in preschool age, children are developing their ability to regulate and learn emotional expressions without struggling with emotional masking (Ahmad et al., 2019; Denham, 2006; Halberstadt et al., 2001).

The strength of this study is based on representation of community sample based on cluster sampling that is adequately powered to estimate prevalence of behavioral problems and to make study generalizable. The assessment was done using the formally adapted and locally validated tool of CBCL, which is an internationally established measure. The research evidence on internalizing and externalizing problems of young children in Pakistan is scarce. Previous studies have focused more on parents' reports and older children. In Pakistan, the behavior problems of young school children have not been studied for this age group. The present study is unique in this regard because it used teacher reports and sample represented public school's children from low-income group as recommended in a recent telephonic survey (Malik et al., 2019). Moreover, results also showed significant abnormal (borderline and clinical) markers in young children, which further required immediate attention and intervention plans at school levels. Studies have (Tillmann et al., 2018) established that mental health problems manifest at an early age could endure into adulthood, putting additional strain on the individual, family, friends,

and the healthcare system. Therefore, early interventions play a critical role in their development (Brenchley, 2017).

Study III: Effectiveness of Fun FRIENDS program

This study examined the effectiveness of a school-based delivery of the Fun FRIENDS program in promoting social emotional competence (SEC) in Pakistani school children aged 4 to 8 years. A randomized controlled trial was used to assess changes from pre to post intervention on multiple social emotional competence constructs. Results showed that children in the intervention group demonstrated a significant increase in social competence, as evaluated by the Social Emotional Development Assessment at posttest, compared to those in the waitlist control group. However, the results were not significant on internalizing, externalizing and preschool anxiety problems.

Intervention Effects on Social Emotional Competence

The study found that the adapted version of the Fun FRIENDS program was effective in promoting social emotional competence in Pakistani children. The intervention group demonstrated greater enhancement of social skills, including self-regulation, optimism, school belongingness, social responsibility, and optimism, compared to the control group. However, the effects on emotional knowledge were not statistically significant. It is important to note that the expression of emotions may vary across cultures, and that cultural context should be taken into consideration when interpreting these findings. The results also suggest that more training may be needed for children to understand and recognize complex emotions. Furthermore, the study highlights the importance of early education programs in building the foundations for social and emotional skills. However, access to such programs is

limited in Pakistan, which may limit children's social emotional competence in comparison to children from other cultural backgrounds.

The findings show that the adapted version of Fun FRIENDS program was effective at promoting one assessment of social emotional competence in Pakistani children. The intervention group demonstrated greater enhancement of social skills including self-regulation, optimism, school belongingness, and social responsibility compared to children in the control group at posttest. This positive intervention effect is consistent with the previous literature using Fun FRIENDS program with young children (Gallegos-Guajardo et al., 2020; Pahl & Barrett, 2010), which showed increase in intrapersonal, interpersonal, and prosocial skills. Our research indicates that the universal implementation of the Fun FRIENDS program has a modest effect size. A recent meta-analysis demonstrates that universally delivered prevention programs have smaller effect sizes than their targeted counterparts (Werner-Seidler et al., 2021). In addition, it is important to note that the effect magnitude of universal school-based SEL programs can differ based on program delivery methods and outcome measures (Durlak et al., 2011). Larger sample sizes are recommended to increase the robustness of findings in the context of universal prevention programs (Muñoz et al., 2010). Researchers also noted negligible to minor effects in studies involving Fun FRIENDS in various cultural contexts, suggesting that extended program implementation may be necessary to detect statistically significant outcomes (P. Barrett et al., 2015; Gallegos-Guajardo et al., 2020; Rivero et al., 2020). It is essential to note that the present study

represents preliminary evidence on the effectiveness of the Urdu version of Fun FRIENDS in Pakistan.

Another aspect of social emotional competence was knowledge of emotions manifested through labeling and recognition. For both domains, we found positive effects comparable to social skills but neither of them was statistically significant. Thus, although the magnitude of the intervention effects was encouraging for the emotional scales, the lack of statistical significance means there is uncertainty if they are real or not. Expression of emotions may vary across cultures. Therefore, it is important to look at these findings within a cultural context. For example, in Western countries or individualistic cultures, children are encouraged to acquire autonomy and assertive social skills, whereas social initiation is not highly appreciated in group-oriented or collectivistic cultures. Alternately, children are appreciated and perceived as well-behaved by elders, because it may undermine harmony and group cohesiveness (Chen & French, 2008). Hence, children are expected to comply and obey external demands which may influence their emotional understanding and expression.

Furthermore, children may require more training to understand and recognize complex emotions. Literature suggests that young children find it difficult to differentiate between negative emotions or complex emotions such as disgust, jealousy, or regret than positive emotions such as happiness (Gao & Maurer, 2010; Herba et al., 2006). Similar findings were reported in another Pakistani study (Inam, 2016) using the PATHS program, where the intervention group showed higher scores in emotional recognition but results were nonsignificant. In another cultural adaptation study of Coping Power Program for Pakistani

children (Mushtaq et al., 2017), an additional lesson on identification and labeling of different feeling states was suggested due to children's struggle in understanding of complex emotions (e.g., annoyed and furious). Thus, keeping in view the cultural needs of children, more lessons on understanding emotions may be added in Fun FRIENDS Urdu version. Thomas and co-authors (Thomas et al., 2021) recently compared the social and emotional skills of preschoolers in Pakistan and Sweden. The Pakistani sample performed worse than the Swedish group on measures of both social competence and academic skills.

Given the lack of statistically significant results for emotional knowledge, it may be that children require more training to understand and recognize complex emotions than was provided. Literature suggests that young children find it difficult to differentiate between negative emotions or complex emotions such as disgust, jealousy, or regret than positive emotions such as happiness (Gao & Maurer, 2010; Herba et al., 2006). Similar findings were reported in another Pakistani study using the PATHS program, where the intervention group showed higher scores in emotional recognition but results were also nonsignificant (Inam, 2016). In another cultural adaptation study of Coping Power Program for Pakistani children, an additional lesson on identification and labeling of different feeling states was suggested due to children's struggle in understanding of complex emotions (e.g., annoyed and furious; Mushtaq et al., 2017). Thus, keeping in view the cultural needs of children, more lessons on understanding emotions may be useful to add to the Fun FRIENDS Urdu version to help increase its potential effectiveness.

Additionally, early education programs build the foundations for social and emotional skills to interact or move into regular schools. Exposure to early education is associated with higher social emotional development in LMIC (Renwick et al., 2022), whereas, less than 10% Pakistani children have access to such programs (Tran et al., 2017). This lack of resources may limit children's social emotional competence in comparison to the children from other cultural backgrounds where Fun FRIENDS was found more effective.

Intervention Effects on Behavioral Problems

Another aspect of social emotional competence is based on behavioral problems including internalizing and externalizing problems revealed unexpected findings. The intervention did not show significant results in reducing any behavioral problems. Instead, children in the intervention group had marginally significantly higher internalizing problems than the control group at posttest. These findings are inconsistent with most of the previous work (Fisak et al., 2018; Pahl & Barrett, 2010), where significant reduction in anxiety and depression symptoms was reported. This may be explained by the use of different outcome measures and target population. Studies reporting reduction in behavioral problems used both teachers' and parents' measures with clinical sample (Anticich et al., 2013; Fisak et al., 2018; van der Mheen et al., 2020), whereas our study focused on a community sample of young children and teachers' reports of behavioral problems.

Furthermore, no significant intervention effect on externalizing problems was observed and this finding is comparable with a Dutch open trial of the same program (van der Mheen et al., 2020) in which there was no effect reported. The plausible reason for this

finding may be linked to family involvement in the program. Parental role is linked to better emotional regulation, prosocial behaviors and reducing aggression in Pakistan (Mushtaq, 2015). Family engagement is also recommended for social emotional learning intervention success (McClelland et al., 2017), which helps ensure developing skills both at school and at home. Furthermore, enhancing parents' resilience and knowledge on child's social emotional competence provided support for the argument that effectiveness of Fun FRIENDS program enhanced with an adult resilience building program for parents (Fisak et al., 2018). For example, established programs such as Coping Power Universal which includes a parenting component in developing social emotional skills and reducing externalizing problems in children (Muratori et al., 2019), could be linked with Fun FRIENDS to enhance child's social emotional competence.

In previous literature, it is well documented that enhancing social skills and emotional knowledge reduced behavioral problems in children such as aggression, hyperactivity, inattention, anxiety or depression (Corcoran et al., 2020; Durlak et al., 2011), if programs are implemented for at least six months. We observed positive but insignificant results in our study. However, to attain similar results, we suggest longer implementation of the intervention for at least 6 to 12 months to see the significant change in children's internalizing and externalizing behaviors. With longer exposure of learning emotional knowledge and skills, we presume children will be able to make associations between emotional regulation and behavioral problems. Similar recommendations are reported by other researchers (Anticich et al., 2013; Pahl & Barrett, 2010).

Furthermore, this study found that an intervention did not show significant results in reducing any of behavioral problems, with children in the intervention group having marginally significantly higher internalizing problems than the control group at posttest. This is inconsistent with previous work, which reported significant reduction in anxiety and depression symptoms. Additionally, no significant intervention effect on externalizing problems was observed. The plausible reason for this finding may be linked to family involvement in the program, as parental role is linked to better emotional regulation, prosocial behaviors and reducing aggression in Pakistan. Family engagement is recommended for social emotional learning intervention success, as well as enhancing parents' resilience and knowledge on child's social emotional competence.

Previous literature has shown that enhancing social skills and emotional knowledge reduced behavioral problems in children. To attain similar results, we suggest longer implementation of the intervention for at least 6 to 12 months to see the significant change in children's internalizing and externalizing behaviors. Similar recommendations are reported by other researchers.

Limitations and Future Directions

Regarding our first study based on estimation of behavioral problems in school children. We examined the estimates of behavioral problems in young school children from public schools in Islamabad. As a result, we found alarming frequencies of borderline and clinical ranges of internalizing and externalizing problems and gender differences. In females, the problem of rule breaking and thought problems in young childhood may be

associated with occurrence of externalizing problems such as conduct disorders and disobedience. Such problems in females will be seen as severe stigmatization in our culture. For males, increased levels of anxiousness, depressed characteristics and emotionally reactivity may be associated with internalizing and emotional problems which is also consistent with the cultural representation of males' behavior. However, it may lead to more confusion and lack of self-awareness.

The cross-sectional study collected data from public sector schools in Islamabad metropolitan area. Therefore, the generalizability of findings of present study are only for public sector schools. In future work, to increase reliability, data from private schools can be obtained using both parent and self-report measures (where applicable). Later age groups 8-16 years may also be included to perform comparative analysis and predict developmental progression of behavioral problems. Multi-informant data sets with more demographic information shall provide better understanding of cultural factors of behavioral problems. In addition, a nationwide study is suggested to conduct to get more adequate prevalence estimates for Pakistani children.

As emotional and behavioral problems in young childhood are likely to persist in adulthood, early identification and assessment would help teachers, clinicians, counselors, and parents to take better steps in devising management plans. We suggest that it is necessary for clinicians and teachers to consider the background of behavioral problems at school age and take immediate preventive means to teach coping strategies such as universal social

emotional learning programs or targeted interventions. Furthermore, the development of screening system for early intervention is required for school-aged children.

Regarding our main study evaluating the effectiveness of Fun FRIENDS program in promoting social emotional competence in Pakistani school children. Our study has several strengths and a few limitations. Our study was based on randomized control trial (RCT) design which allows for casual interpretation. However, we observed some baseline differences in the control variables, which were included in the model to adjust for their differences. RCTs with more classrooms are necessary for the most rigorous evaluation and test of causality (which will also increase the power to detect small effect sizes). Furthermore, this study was likely underpowered to detect small, classroom-level treatment effects. Thus, this would likely increase the type II error rate and therefore certain results that are not statistically significant may reflect small effect sizes that were not detected in this study design (e.g., KEI subscales).

Another limitation is the timeline of the study. Our study was conducted in two different academic years including summer break which may have affected children's skills over varied two time points. Therefore, future studies may complete study in a single academic year to observe social emotional competence in children. Furthermore, our results involving behavioral problems are solely determined on teacher's reports (CBCL). It would be helpful to complement this with parental assessments of a child's behavior problems and social emotional skills. Since results are based on children's self-reports of social and emotional skills and teachers' reports of behavioral problems, the interpretation of the results

may have been affected by social desirability and subjectivity, as a behavior is best measured when multiple informants and methods are included.

In addition, the adapted version of Fun FRIENDS showed positive effect on social emotional competence, however based on previous literature, these results could be improved if certain adaptation would be made, such as addition of more culturally based activities and lessons related to understanding of feelings and emotions and use of children activity books in hard forms. Similarly, due to resources' limitation, we could not arrange parents' sessions. Thus, parents' involvement in the intervention program should be emphasized to guide the children's social emotional competence for the learned skills to be generalized to multiple contexts. Also, another parental resilience program can be paired with Fun FRIENDS to enhance its effectiveness.

Since this is an initial study to examine the Urdu version of Fun FRIENDS program in Pakistan, it is vital to conduct further scaled-up studies with diverse samples and protocols across the country to draw more robust assumptions related to program's efficacy. Also, our findings had promising support for its effectiveness but needs more research and development, possibly with modifications to the program to make it more effective, particularly for enhancing emotional knowledge and reducing behavioral problems.

Social emotional competence may precede academic performance and prevent behavioral problems, and, as documented in previous research, the benefits may be observed for up to one year after the intervention and adulthood (Blair & Raver, 2015; McClelland et al., 2017; Pahl & Barrett, 2010). Therefore, future studies may include long term follow-ups

of 6 months or one year to draw definite conclusions related to the effectiveness of the Fun FRIENDS program.

The data was collected from public sector schools in Islamabad metropolitan area. Therefore, the generalizability of findings of present study are only for public sector schools. In future work, to increase reliability, data from private schools can be obtained using both parent and self-report measures (where applicable). Later age groups 8-16 years may also be included to perform comparative analysis and predict developmental progression of behavioral problems. Multi-informant data sets with more demographic information shall provide better understanding of cultural factors of behavioral problems. In addition, a nationwide study is suggested to conduct to get more adequate prevalence estimates for Pakistani children. As emotional and behavioral problems in young childhood are likely to persist in adulthood, early identification and assessment would help teachers, clinicians, counselors, and parents to take better steps in devising management plans.

Implications of the Study

Our study findings have strong implications for early intervention and provide evidence for the beneficial effects of the Fun FRIENDS program on the social emotional competence of young school-aged children in Pakistan. First, this study contributes to the growing body of research demonstrating the effectiveness of the Fun FRIENDS program in several cultural contexts and the general benefits of similar practices for school children around the world, especially from Pakistan.

Another promising implication is related to the development of social emotional competence of children at school level. The use of evidenced based program in schools will not only improve social emotional competence of children but also may enhance academic performance and future life outcomes. Additionally, such programs also fulfill the requirements for teacher training in understanding the importance of mental health and supporting children's development in learning environments. Policy makers and educators must incorporate such programs into the regular curriculum for children at national and provincial level for implementation in schools.

Conclusion

In conclusion, our study suggests preliminary evidence that Fun FRIENDS program benefit school-aged children in Pakistan. Due to the universal approach, children's social emotional competence has been greatly enhanced. The promising result of SEL program in Pakistan's public schools should be an inspiration to educators everywhere and a compelling argument for making the same investments in their own institutions. The increase in SEC is proof that they are effective in helping students develop the emotional intelligence and social skills necessary for future success. Therefore, it is suggested that all schools in Pakistan incorporate SEL programs into their curricula to encourage the healthy growth of future generations.

We further conclude that it is necessary for clinicians and teachers to consider the background of psychological problems at school age and take immediate preventive means to teach coping strategies such as universal social emotional learning programs or targeted

interventions. Furthermore, the development of screening system for early intervention is required for school-aged children. The results of this study highlight the importance of providing students with programs that promote social and emotional functioning from an early age. The Fun FRIENDS program is one of the very few cognitive behavioral treatment programs for young school children. The current study shows promising results as to the outcomes after participating in the Fun FRIENDS program. Further research is suggested to continue evaluating the impact of this program with different measures and research designs, including a larger sample size and longer follow up periods from different regions of the country and socioeconomic levels. Focusing on the development of social emotional competence is a high priority, because fostering these skills in the early years is critical to mental health and well-being across the lifespan. Furthermore, such skills-based programs improve child learning behaviors and offer support for their personal and social development and promote well-being in schools.

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