Exploring the Determinants of Children's Loneliness and Designing Intervention Programs

Yunfei Cao, Haoyue Gao, Qing Wei

School of Teacher Education, Chengdu University, Chengdu, China

Abstract: Loneliness is a subjective emotional experience characterized by feelings of isolation, loneliness, loss, alienation, and discomfort that arises when an individual is dissatisfied with their social network. It is a pervasive and negative psychological state. If not promptly addressed, it can adversely affect children's psychological and physiological health. Research indicates that children's experiences of loneliness are influenced by factors such as parental conflict, attachment relationships, teacher-student relationships, and positive psychological qualities. This paper integrated the influencing factors of children's loneliness, focusing on improving relationships between children and their peers and parents, as well as cultivating positive psychological qualities. It explored the design of loneliness intervention programs based on theories related to peer interaction skills, parent-child communication, and positive psychological qualities, providing a reference for improving children's loneliness and mental health levels.

1. Introduction

Loneliness is a subjective experience that arises when an individual is dissatisfied with their social network, typically accompanied by negative emotional responses such as sadness or emptiness [1]. When it becomes a chronic and more persistent state, it can trigger neurobiological and behavioral mechanisms, leading to adverse health outcomes. Loneliness has been compared to established risk factors for morbidity, such as lack of physical activity, smoking, and obesity, and it has a significant negative impact on physical health and mortality. Additionally, loneliness can predict and exacerbate a range of mental health issues, including social anxiety, depression, eating disorders, and suicidal ideation and behavior [2]. As an important risk factor for suicidal ideation, loneliness has received significant attention. Mental health education in primary and secondary schools should follow the psychological and physical development patterns of students, effectively enhancing their psychological qualities and mental health levels. Loneliness, as a negative emotion closely related to mental health, is therefore a critical area of focus. This paper discusses the impact of various factors on children's loneliness, including parental conflict, attachment relationships, peer relationships, and positive psychological qualities. Based on these influencing factors, the paper explores improving peer relationships, parent-child relationships, and fostering positive psychological qualities, using theories related to self-esteem, psychological resilience, peer relationships, and parent-child communication as the theoretical foundation. The aim is to design a mental health education intervention program to provide a reference for improving children's loneliness and mental health

levels.

2. Influencing Factors of Children's Loneliness

2.1 Parental Conflict

Parental conflict refers to disagreements or physical aggression between parents due to divergent opinions or other reasons, as well as overt hostility between them, regardless of their relationship status (married, separated, divorced, etc.) [3]. In families with frequent parental conflicts, children affected by these disputes often make negative evaluations of the external world and internalize blame, feeling a strong sense of insecurity and lowering their self-worth. This leads to a tendency to escape reality and social interactions, thereby experiencing loneliness [4]. The relationships within a family affect other members of the family system; marital conflicts between parents can disrupt parent-child relationships. In families with frequent conflicts, parents often spend more time and energy resolving marital issues, reducing investment in the nurturing of their children's cognitive, emotional, and behavioral development, resulting in distant and impersonal parent-child relationships and a heightened sense of loneliness in children. Lastly, frequent verbal disputes, physical aggression, and overt hostility between parents also create a cold family atmosphere. The colder the family atmosphere children experience, the stronger their sense of loneliness becomes.

2.2 Attachment Relationships

According to attachment theory, the attachment relationship children establish with their primary caregivers (parents or guardians) during early childhood is a primary source of their sense of security and trust. However, insecure parent-child attachment can leave preschool children's psychological needs and desires unfulfilled, preventing them from building trust and a sense of security in their surroundings and leading to a range of adaptation issues, such as loneliness. Primary caregivers can create a safe and trustworthy environment for children by promptly meeting their physiological needs (appetite, sleep) and expressing love through affection, touch, and companionship, making the child feel "unconditionally loved." This helps establish a secure attachment style. Children with secure attachment typically have higher levels of interpersonal trust and social skills, making it easier for them to form healthy intimate relationships and experience less loneliness. Conversely, if primary caregivers do not provide enough companionship, fail to meet children's needs in a timely manner, or use love as a "condition," frequently change caregivers, or express love through aggressive communication, children may develop an insecure attachment style [5]. Insecure attachment mainly includes ambivalent and avoidant attachment. Children with high ambivalent attachment have a strong desire for close relationships but fear abandonment and are more prone to anxiety (e.g., separation anxiety). Children with high avoidant attachment generally lack trust in others and often maintain psychological distance to avoid the risk of rejection in social interactions, thus experiencing more loneliness [6]. Therefore, insecure attachment is a significant cause of loneliness.

2.3 Teacher-Student Relationships

For elementary school students, teachers are another authoritative figure besides parents. A good teacher-student relationship positively influences students' psychological health development. Children who actively build a good relationship with their teachers can gain emotional support through interaction and communication with their teachers, reducing feelings of loneliness. If students receive autonomous support from teachers, i.e., teachers solve problems from the students' perspective, provide support and encouragement, and encourage autonomy in decision-making,

students will feel respected and trusted, which is conducive to building secure interpersonal relationships and experiencing less loneliness. If teachers respect students' personalities, accept their differences, emotions, and immature behaviors without rejecting or belittling students for their shortcomings or mistakes, students will enhance their self-recognition and reduce feelings of loneliness [7].

2.4 Peer Relationships

Peer relationships refer to the connections formed through mutual interaction and growth among a group of individuals who are similar in age, status, or interests. Research has shown that children's loneliness is closely related to whether they have friends, although the number of friends has less impact [8]. Children typically consider individuals who are sincere, trustworthy, good at listening to their thoughts and emotions, and willing to share joys and sorrows as good friends. Children with good peer relationships can gain companionship and support through regular positive interactions with their friends. In the face of setbacks and difficulties, they can actively confide and share with trusted friends, thereby establishing an emotional connection that effectively alleviates feelings of loneliness.

2.5 Positive Psychological Qualities

Qualities such as gratitude, self-esteem, and psychological resilience as positive psychological traits can effectively alleviate children's feelings of loneliness. Gratitude refers to the psychological tendency to recognize and respond with gratitude to others' kindness when experiencing positive outcomes. Relevant studies have shown that gratitude can effectively reduce loneliness experienced by children due to the left-behind rural life [9]. Positive psychology emphasizes the practice of recording three good things each day, encouraging individuals to reflect on and appreciate positive events in their lives, thereby enhancing well-being through gratitude for small life events. Self-esteem is the belief that one can overcome difficulties and deserves happiness. Social interpersonal theory suggests that individuals with low self-esteem are more likely to have negative self-evaluations, lack confidence in interpersonal communication, experience higher levels of social anxiety, and are less willing to express themselves, leading to a tendency to escape reality and resulting in social loneliness. Psychological resilience refers to the ability to recover and adapt well after encountering adversity or setbacks. Research on migrant children has found that children with high resilience tend to positively adjust their emotional states, view setbacks as opportunities for growth, and utilize supportive social relationships to cope with adversity, thus enhancing self-recognition and reducing feelings of loneliness [10].

2.6 Personality Traits

Previous research has found that personality, as a typical individual difference variable, directly influences loneliness. Children with traits such as extraversion, agreeableness, conscientiousness, and openness experience less loneliness. Children with neuroticism experience more intense loneliness. Highly extraverted children are willing to actively express themselves and create opportunities for social interaction, thus increasing social contact and reducing feelings of loneliness. Agreeable children can empathize and consider others' interests and feelings in interpersonal interactions, making them popular among peers and resulting in satisfying social relationships. Conscientious children are responsible and cautious, rarely experiencing interpersonal conflicts. Open children display higher intelligence and creativity among peers, making them more popular. Conversely, individuals with neuroticism are prone to anxiety and impulsive behavior, which can disrupt social

relationships and result in a heightened sense of loneliness [11].

3. Intervention Study on Loneliness

Drawing upon previous research, children's feelings of loneliness are influenced by peer relationships, positive psychological qualities, and parental factors. Therefore, this study designs courses focusing on self-esteem (self-acceptance, persistence), resilience, peer communication skills (listening, refusal), and parent-child communication. The aim is to intervene through these courses to increase interaction with parents and peers, enhance self-esteem and resilience levels, thereby reducing internal experiences of loneliness, and provide theoretical references for improving children's loneliness.

3.1 Self-Esteem Course

According to Branden, an individual seeking good self-esteem must practice self-acceptance and self-persistence. Self-acceptance involves unreservedly accepting oneself entirely. Self-persistence entails having control and mastery over one's own principles and standards, without compromising due to others' expectations [12].

3.2 Resilience Course

Based on the 3I theory— "I have" refers to external resources and support available to help cope positively with stress or adversity. "I am" refers to one's internal strengths; "I can" pertains to what one can do, including problem-solving abilities, positive cognitions, and beliefs [13].

3.3 Parent-Child Communication

Family therapist Satir proposes that congruent communication styles allow for genuine expression of feelings, thoughts, and expectations, thereby fostering emotional connections and improving communication dynamics, leading to better parent-child relationships.

3.4 Peer Relationships

Marshall Rosenberg introduced the concept of nonviolent communication, noting that in listening to others, people often rush to offer advice, comfort, or express their own attitudes. Effective listening involves setting aside preconceived ideas and judgments to genuinely understand the other person's message. Additionally, Ernest Hend peck defines psychological boundaries as the personal limits one establishes to differentiate themselves from others. Learning to refuse is a crucial aspect of building and maintaining these boundaries, enabling protection of oneself while sustaining healthy relationships [14].

4. Intervention Programs design

Based on the aforementioned discussion regarding the influencing factors of children's loneliness, we have attempted to design an intervention program targeting this issue. Our intervention program comprises several key themes. Firstly, "self-Persistence " and "self-acceptance" are included. Through specific activities, children are assisted in building a better and more acceptable self-image. Secondly, the program also focuses on "parent-child communication" and "psychological resilience". The aim is to enhance communication skills and strategies for coping with setbacks. In addition, the theme of "peer relationships" teaches children the importance of listening and the art of refusal, with the goal

of fostering healthy interpersonal relationships. All of these elements are designed to reduce children's feelings of loneliness (for details, please refer to Table 1).

Table 1: Course Design

Theme	Lesson Plan	Teaching Arrangement	Activity Plan
Self-Persistence	Meet a Better Self	1.Understanding a "Better Self": Students will learn to define what constitutes a "better self" and not compromise their own expectations due to others' demands. 2.Self-Awareness: Students will gain awareness of their intrinsic strengths, potentials, and shortcomings.	Introduction: Present an incomplete title: Meeting a _____ Self Activity One: Becoming "Someone Else's Child" VS "A Better Self" Living by Others' Standards: Discuss how living according to others' standards can lead to compromising oneself. True Freedom: Explore the concept of knowing what one wants, doing what one enjoys using one's strengths, and achieving true freedom. Activity Two: My User Manual Self-Awareness: Students will identify their strengths in various areas: Cognitive Strengths: Analytical, innovative, learning Relational Strengths: Empathy, leadership, social skills Execution Strengths: Action-oriented, goal-oriented, driven Finding the Comfort Zone: Identify the intersection of passion and skill: Strengths Self-Observation Journal: Establish a journal to identify one's passions and flow states. Personal User Manual: Create a document addressing: My strengths My working mode What I excel at What I can achieve My weaknesses What support I need Design Intent: Through the process of interpreting "someone else's child" and "a better self," students learn self-persistence and not to compromise their feelings due to others' expectations. The creation of a user manual helps students become aware of their own strengths.
Self-Acceptance	Embrace Imperfect Self	1.Recognize that imperfection is the norm of life, accept one's own shortcomings, and enhance self-worth. 2.Learn methods to cultivate positive self-emotions.	Introduction: Watch the video "The Missing Piece" Activity 1: Selecting the Perfect Ambassador Aliens from another planet are visiting Earth and need to find the most outstanding child to serve as an ambassador to welcome them. Participants are invited to play a "Happy Dual Choice" game: High/Low attractiveness Excellent/Poor academic performance Tall/Short stature Dark/Light skin Polite/Rude behavior Ultimately, due to overly high requirements, the perfect child does not exist. Activity 2: The Colorful Black Dot An A4 paper with a small black dot is provided. Participants are free to create a drawing, incorporating the black dot into their artwork. Summary: Tips for Embracing the Self: Do not impose limits on yourself Accept yourself as you are Do not overly concern yourself with others' opinions Design Intention: Through the "Selecting the Perfect Ambassador" activity, participants become aware that imperfection is the norm. By transforming the black dot into a colorful part of a drawing, they learn to accept their own imperfections. Understanding and Embracing Imperfection Understanding that imperfection is a normal part of life, accepting one's own shortcomings, and enhancing self-worth. Learning methods to cultivate positive self-emotions. Introduction: Watch the video "The Missing Piece" Activity 1: Selecting the Perfect Ambassador Aliens from another planet are visiting Earth and need to find the most outstanding child to serve as an ambassador to welcome them. Participants are invited to play a "Happy Dual Choice" game: High/Low attractiveness Excellent/Poor academic performance Tall/Short stature Dark/Light skin Polite/Rude behavior Ultimately, due to overly high requirements, the perfect child does not exist, thus revealing the normalcy of imperfection. Activity 2: The Colorful Black Dot An A4 paper with a small black dot is provided. Participants are free to create a

			drawing, incorporating the black dot into their artwork. Summary: Tips for Embracing the Self: Do not impose limits on yourself Accept yourself as you are Do not overly concern yourself with others' opinions Design Intention: Through the "Selecting the Perfect Ambassador" activity, participants become aware that imperfection is the norm. By transforming the black dot into a colorful part of a drawing, they learn to accept and embrace their own imperfections.
Parent-Child Communication	Communication Without Barriers	1.Recognize that communication is a two-way process and different communication styles can lead to varying outcomes. 2.Learn and master techniques for reasonable communication with parents, thereby enhancing emotional connection with them.	Introduction: Paper Folding Game Students are instructed to fold a piece of paper while keeping their eyes closed, following the teacher's directions. At the end, it is observed that different students have folded their papers into different shapes. Main Activity 1: Conflict Theater Scenarios of conflicts arising in daily life between children and parents are set up. Students are asked to role-play both parents and children, demonstrating how different communication styles lead to different outcomes. Main Activity 2: Brainstorming Session Students discuss effective communication methods they use in their daily lives with their parents. Design Intent: 　　Through the paper folding game, students understand that communication is a two-way process. By participating in role-plays, they experience the different feelings evoked by various communication styles. Through discussion, they summarize techniques for communicating with parents, thereby increasing the social support they receive from their parent-child relationships.
Psychological Resilience	Fearless Adversity, Unbroken by Setbacks	1.Recognize that setbacks are inevitable and learn to accept them. 2.Learn to master and apply the "3I strategy" to actively cope with setbacks.	Introduction: The story of Tu Youyou's discovery of artemisinin 　Activity 1: Life Mystery Box 　Randomly draw positive and negative events from the Life Mystery Box to recognize that setbacks are an objective and unavoidable part of life. 　Activity 2: Psychological Exploration Sheet 　Write down the frustrating moments you have experienced on the Psychological Exploration Sheet, and learn the "3I strategy" to find ways to actively cope with setbacks: What are my inherent strengths? - What external support and resources do I have (family, school, society)? - What solutions do I have? 　Design Intent: By drawing from the Life Mystery Box, participants recognize that setbacks are inevitable. Combining their own experiences on the Psychological Exploration Sheet, they master the "3I strategy" to positively cope with challenges.
Peer Relationships	Learn to Listen	1.Recognize the positive impact of listening on peer relationships. 2.Specifically master the methods of patient listening from expressions, body language, and verbal aspects.	Introduction: Black Swan vs. White Swan Follow the teacher's instructions to perform different actions when hearing "Black Swan" and "White Swan." Main Activity 1: Case Analysis - "Chinese Restaurant" Dialogue Analyze why the domineering CEO in the variety show dialogue cannot reach a consensus with other members on the event package requirements. Main Activity 2: Watch Interview Video Play video clips of a host's interviews and summarize the listening techniques, paying attention to the host's body language, expressions, gestures, and verbal actions. Design Intent: Through the game of following instructions, introduce the theme of "listening." In analyzing the dialogue from a variety show, recognize the importance of listening. By watching the video, summarize listening techniques to improve interpersonal relationships and reduce feelings of loneliness.
	Courage to Say "No"	1.Understand that saying no is an art and that reasonable refusal is important for maintaining relationships. 2.Learn specific techniques and methods for reasonable refusal.	Introduction: Dilemma Scenario Present "dilemma" situations in daily life where a person has to refuse a peer. Main Activity 1: Role Play Set up scenarios where one group of students uses a rude method to refuse a peer, and another group uses a polite method. Have both groups perform and share their feelings. Main Activity 2: The Art of Saying No Teacher and students interact to summarize effective methods for refusal: Express understanding of the other person's needs. Explain your own situation and the reasons for your refusal. Offer alternative help that you can provide. Pay attention to the tone and posture during communication, maintaining a gentle yet firm attitude. 　　Design Intent: By presenting dilemmas from daily life, introduce the theme of learning how to refuse. Through role-playing different refusal methods and sharing feelings, students become aware of the significance of reasonable refusal. Teacher and student interaction helps to discuss and summarize the techniques for effective refusal.

5. Conclusion

Loneliness, as a negative mood, significantly impacts children's mental health. This paper explores the factors influencing loneliness from perspectives such as parental conflicts, attachment relationships, peer relationships, and psychological qualities. Drawing from these factors, the study designs intervention courses based on theories related to resilience, self-esteem, parent-child communication, and peer interaction. The aim is to cultivate children's positive psychological qualities, teach interpersonal communication skills, improve relationships with peers and parents, increase social interactions, and ultimately enhance children's level of loneliness. These interventions provide a reference basis for improving children's feelings of loneliness and their overall mental health.

References

[1] Bahr HM, Peplau LA, Perlman D. Loneliness: A Sourcebook of Current Theory, Research and Therapy. Contemp Sociol. 1984; 13: 203.

[2] Hickin N, Käll A, Shafran R, Sutcliffe S, Manzotti G, Langan D. The effectiveness of psychological interventions for loneliness: A systematic review and meta-analysis. Clin Psychol Rev. 2021; 88: 102066.

[3] CHEN Wu, ZHOU Zong-kui, WANG Ming-zhong. Interparental Conflict and Depression in High School Students: Mediating Effect of Self-esteem. Chin J Clin Psychol. 2013; 21: 136–138, 113.

[4] QING Zai-hua, WU Caihong, CAO Jian-ping, LIU Xiao-qun, QIU Xiao-yan. Inter-parental Conflict and Mobile Phone Addiction: a Chain Mediating Model. Chin J Clin Psychol. 2017; 25: 1083–1087.

[5] Lyann Li. The relationship between attachment avoidance and preschool children's loneliness: The mediating role of peer rejection and moderating role of teacher-child relationship. J Psychol Sci. 2021; 44: 598–604.

[6] FAN Xinghua, HE Miao, CHEN Fengju. Effect of Hope on the Relationship between Parental Care and Loneliness in Left-behind Children in Rural China. Chin J Clin Psychol. 2016; 24: 702–705, 643.

[7] Li Ruoxuan, Liu Hongrui, Yao Meilin. The roles of autonomy support from parents and head teacher in adolescents' subjective well-being and loneliness: a person-centered perspective. J Psychol Sci. 2019; 42: 827–833.

[8] Liu Xu, Liu Yuxiao, Chen Qian, Cao Min, Peng Ji, Zhou Zongkui. Bidirectional associations between friendship quality, subjective well-being and loneliness among children: a longitudinal study. J Psychol Sci. 2024; 47: 819–828.

[9] FAN Zhiyu, WU Yan. Relationship between parent-child relationship, loneliness and depression among the left-behind rural children: Gratitude as a mediator and a moderator. Psychol Dev Educ. 2020; 36: 734–742.

[10] YE Zhi, CHAI Xiaoyun, GUO Haiying, WENG Huanhuan, LIN Danhua. The relationship between mobility, educational settings, resilience and loneliness among migrant children: a longitudinal study. Psychol Dev Educ. 2017; 33: 595–604.

[11] ZHANG Yong-xin, SUN Xiao-jun, DING Qian, CHEN Wu, NIU Geng-feng, ZHOU Zong-kui. The Effect of Personality Traits on Loneliness in Children: Friendship as a Mediator. Chin J Clin Psychol. 2016; 24: 60–63.

[12] Branden N. The Six Pillars of Self-Esteem: The Definitive Work on Self-Esteem by the Leading Pioneer in the Field. Bantam; 1995.

[13] Grotberg E. A guide to promoting resilience in children: strengthening the human spirit. Bernard van Leer Foundation; 1995.

[14] Rosenberg MB. Nonviolent Communication: A Language of Life. Puddledancer Press; 2003.