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Relationship between Social Support and Mental Health of Left-Behind Children among Middle School Students in Zigong City, China

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Abstract

There are over 68 million left-behind children in rural villages in China, with at least one parent working and staying in the city. Empirical evidence indicates that left-behind children endure many challenges concerning their welfare and education. The present study aims to examine the relationship between social support and mental health among middle school students under the background of left-behind children in Zigong City, China. The correlational research design was adopted in this study. Cluster sampling was used to recruit a sample size of 235 middle school students from Zigong City, China. The results indicated that the left-behind middle school students who reported receiving greater social support were led to report having better mental health. It also provides the suggestions for government, social workers, educators, and caregivers to provide sufficient care and support for left-behind families.

Keywords: Left-Behind Children, Social Support, Mental Health, Self-Esteem, Attachment

Introduction

The concept of social support is central to having a healthy mental state. Many mental health professionals advocate the importance of having an active network of social support (Cherry, 2020). There are four types of social support: emotional, esteem, informational, and tangible support. Although not all types of social support will benefit everyone, each person's age, personality, and environment determine the combination of social support that he or she requires (Scott, 2020).

In general, the concern for mental health is often associated with adulthood. However, one in five adolescents (aged 13 to 18) experienced a mental health condition that impacted their quality of life (National Association of Secondary School Principals, 2021). Students are affected by mental health disorders due to the following factors: family, academic stresses, politics, relationship issues, critical changes in life, and financial issues. Consequently, poor

mental health among students above 10 years old leads to suicide as the third primary cause of death (Accredited Schools Online, 2021). Furthermore, after the reformation of China, the country experienced some massive changes in its economic and social development. As a result, left-behind children, whose parents had migrated to the city for their jobs, raised an issue in terms of their well-being and education (Gu, 2021).

Left-behind children in China

According to Tong et al. (2019), there are almost 69.7 million children under the family background of the left-behind. They noted that China had grown the vulnerable subpopulation of left-behind children due to the country's economic reformation since the 1970s. Therefore, parents migrated to the urban areas for work and left their children behind in the rural villages. About 8.7 million left-behind children in China were located in urban areas because their parents would migrate between cities for their work. According to another study by Yeung and Gu (2016), the left-behind children population has been at a concerning growth rate since 2000, whereby 47% of them are living without both parents, 36% of them with an absent father, and 17% with an absent mother. The left-behind children accounted for 21.9% of the total population of children in China. A journal article by Ge, Song, Clancy, and Qin (2019), termed the Left-behind Children as 'Child-Parent Separation' because the child would receive less or none of the parental care. They also noted that China's economic and social issues forced the villagers to move to the cities to earn better incomes. Unfortunately, the policy of Hukou in China whereby children of the migrant workers are prevented from any social benefits such as education and medical care in the city, had left the parents no choice but to leave their children behind.

Social support for Left-behind children

The left-behind children have lost the necessary social support from their migrant parents. In most cases, nine out of ten children in China had to live with the prolonged absence of a parent caused by migration (The Economist, 2021). On top of that, they also lacked a proper education due to limited resources and ill-prepared educators. Ergo, close to 13% of left-behind children would drop out of the class by the end of their middle school year (Tan, 2020). To sum up, the matter may affect the country's development in the long term because these left-behind children could play a significant role in the future.

Rationale of the study

There are over 68 million left-behind children in rural villages in China, with at least one parent working and staying in the city. The impact would be the challenges these children need to endure concerning their welfare and education (Gu, 2021). According to Ge et al. (2019), parental migration could affect the left-behind children in terms of cognitive development, educational achievement, socio-emotional functioning, and physical and mental health which results in them being discriminated against. Additionally, almost 50% of mental health issues begin from the age of 14 (World Health Organization, 2020).

Previous studies about migration from rural areas to urban areas rarely include left-behind children. However, it has been included in many researches, especially in China. This topic of research is further aggravated by the lack of research on the effect of parental migration on children's well-being. Nevertheless, there has been an increase in awareness in recent years that indicates left-behind children should be investigated to ensure the well-being of these

children. Hence, this research focuses on the social support that is needed by left-behind children to promote their mental health.

There have been many studies that cover the topic of left-behind children in China whereby most of the literature focuses on the impacts of parental migration on their children such as the rise of emotional and behavioral problems. However, there are only a few literature that study the relationship between the coping strategies that children have and their mental health regarding parental migration. Thus, in this research, aside from studying the effect of parental migration on left-behind children, the relationship between social support and the mental health of the children concerning self-esteem and attachment style is being explored. As the parents of the left-behind children migrate to cities for work, these children are separated from their parents which hurts the children's mental health. The research found that children who separated early from their parents lack the social support they need to improve their psychosocial development. This has resulted in the manifestation of emotional and behavioral problems in left-behind children such as depression, anxiety, and severe school bullying (Tang et al., 2018).

Conceptual Framework

Furthermore, the children's mental health is further aggravated by the fact of being left behind. It is found that most of the left-behind children do not have social support which resulted in fewer left-behind children having a secure attachment type and relatively low scores in self-esteem (Wang et al., 2019; Cui et al., 2021). Hence, the disruption of parent-children communication may develop insecure attachment which causes the children to internalize their problems. In addition, as self-esteem is often related to mental health, left-behind children who have low self-esteem have a higher risk of developing mental illnesses (Mind Organization, 2019). Therefore, this study is important to signify how social support would affect the mental health of middle-schooled students in Zigong City, China concerning self-esteem and attachment style as shown in Figure 1.

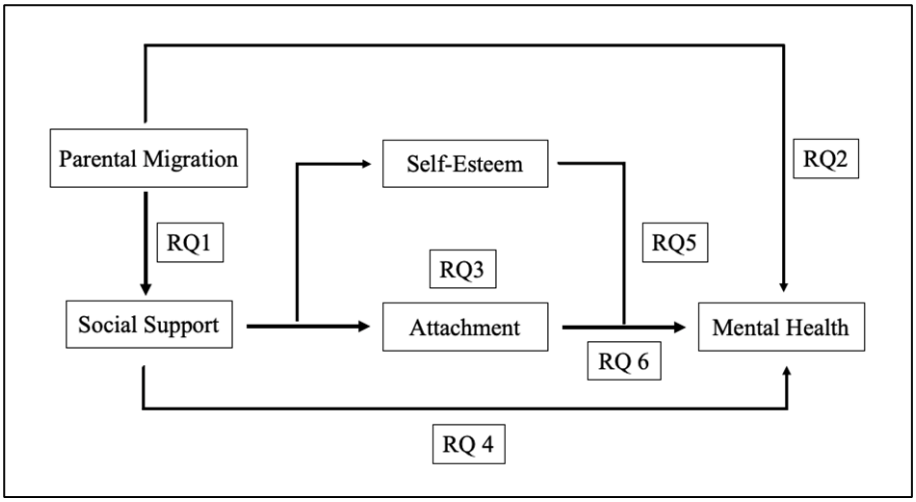

Figure 1: Conceptual Framework.

Research Objectives

The research goal is to find the significance between social support and mental health among middle-school students under the family background of left-behind children in Zigong City, China. Thus, the research objectives are as follows:

1. To determine the level of social support among middle school students under the family background of left-behind children in Zigong City, China.
2. To determine the level of mental health among middle school students under the family background of left-behind children in Zigong City, China.
3. To determine the levels of each type of attachment style among middle school students under the family background of left-behind children in Zigong City, China.
4. To examine the relationship between social support and mental health of middle school students under the family background of left-behind children in Zigong City, China.
5. To examine the relationship between mental health and self-esteem of middle school students under the background of left-behind children in Zigong City, China.
6. To examine the relationship between mental health and attachment of middle school students under the background of left-behind children in Zigong City, China.

Methodology

Study design

The paper adopts the method of quantitative research, specifically correlation design. The cluster sampling method was used to recruit a sample size of 235 middle school students from Zigong City, China. Criteria for sample selection were: middle school students from the family background of left-behind children. The variables of the study were mental health, self-esteem, social support, and attachment measured by four sets of questionnaires, which consisted of the General Health Questionnaire (GHQ), Rosenberg Self-Esteem Scale (SES), and Hazan-Shaver Attachment Self-Report (HS). The statistical correlation between social support, self-esteem, attachment, and mental health questionnaire scores was then analyzed using SPSS version 18.0.

Setting

The population of the study included in this research study is within the parameters of Zigong City, China and the survey participants are the middle school students from the following education establishments: Zigong City Number 3, Number 23, and Number 28 Middle School. As shown in Table 1 Sampling frame, the total study population of 1,660 students where samples was drawn from.

Table 1
Sampling Frame

	Education Institutions	Population
Middle School	Zigong City Number 3 Middle School	717
Middle School	Zigong City Number 23 Middle School	483
Middle School	Zigong City Number 28 Middle School	460
Total Population		**1,660**

Sample Size

The research sampling technique implemented in this study was cluster sampling. According to Thomas (2020), the researchers will classify a population into a cluster of small groups, then, the researchers will select participants from the formed clusters at random to create a sample. The suitability of the sampling methods is accurate for this research because the method often involved the study of a large population, especially studies with geographic distribution, and the random selection proved to have great external validity since the sample studied generalized the findings to the overall population. The cluster sampling method would group the students by which they share a similar characteristic or have met the criteria of this research: middle school students from a family background of left-behind children.

In Cochran's formula, there are two different factors estimated in the calculation, which are the margin of error and the alpha level. The margin of error refers to the statistics that expressed the amount of error in a random sampling research (Pollfish, 2021), thus, the rule of thumb of margin error for educational research in categorical variables is 5%, while the alpha level is at 0.05 to 0.10. Although 0.05 is the most common, 0.10 and below is used when the research can be used as an original for further studies. Hence, this research study will utilize 0.10 as the alpha level to accommodate future research. Furthermore, Cochran's formula would find the standard normal deviation, in which the confidence level is one minus the alpha level (Kibuacha, 2021). A confidence level is to determine that if the survey were repeated, it would generate a similar result. A 100% confidence level signifies that the research has zero doubt that the same results can be obtained when the survey is repeated (Glen, 2021).

According to Cochran's formula, for a population of 1,660, the sample size is 273. However, the sample size exceeded the 5% of the research population by 190, in which Cochran's Formula corrected the figure by another calculation. According to an article by Bullen (2021), the minimum score for sample size in research is 100, unless the population is below 100 people, thus every response is needed to fulfill the research objectives. On the other hand, the maximum score is 10% of the total population because the amount will give a fair and accurate result. Thus, the final sample size for this research study is 235.

Measurement

The General Health Questionnaire (GHQ) and Social Support Rating Scale (SSRS) were used to measure and analyze the subject to obtain the research outcomes. The GHQ is used to conduct a self-reporting screening and it is a measurement tool to detect a potential psychological disorder among the general population (GL Assessment, 2021). There are four questionnaires with 12, 28, 30, or 60 questions respectively, however, this particular research will utilize the GHQ-12 instrument that was proposed by Goldberg and Hillier (1979) which consists of 12 items to assess the level of severity among the common mental issues (Sanchez-Lopez & Dresch, 2008). Participants were to respond to the statements based on a 4-point Likert Scale, ranging from "0" as being "always" and "3" being "never" where higher scores indicated worse health. Items "1, 3, 4, 7, and 8 were reverse-coded, such as " Felt constantly under strain?"

The GHQ is used to conduct a self-reporting screening and it is a measurement tool to detect a potential psychological disorder among the general population (GL Assessment, 2021). There are four questionnaires with 12, 28, 30, or 60 questions, however, this particular research will utilize the GHQ-12 instrument that was proposed by Goldberg and Hillier (1979). The GHQ-12 questionnaire consists of 12 items such as "Been able to concentrate on what

you're doing?" to assess the level of severity among the common mental issues (Sanchez-Lopez & Dresch, 2008). Participants were to respond to the statements based on a 4-point Likert Scale, ranging from "0" as being "always" and "3" being "never" where higher scores indicated worse health. Items "1, 3, 4, 7, and 8 were reverse-coded, such as " Felt constantly under strain?"

In addition, the Social Support Self-Rating Scale (SSRS) has 3 dimensions of social support with 10 items: subjective, objective, and support-seeking behavior (Ke et al., 2010) whereby there are 4 items in the subjective support, 3 items in the objective support, and 3 items in the support-seeking behavior support. The scale will be used in two methods; raw and item scorings. Raw scoring allows a range of 8-32 in subjective, a range of 1-22 in objective, and a range of 3-12 in the support-seeking behavior scale. The SSRS consisted of 10 items and the scores were added up to measure the level of social support. Item scoring total support scores within the range of 12-66, while will be categorized the total support score into low, moderate, and high levels of support (Xiao et.al, 2017).

Moreover, there are additional 2 constructs that are linked to the relationship between mental health and social support; they are self-esteem and attachment. Both the constructs will be measured concerning mental health and social support as the subject: The self-esteem construct was measured using the instrument developed by Rosenberg (1965) named the Rosenberg Self-Esteem Scale (SES). The SES includes 10 statements that measure adolescents' self-worth and self-acceptance. The reliability of SES was rated highly in areas such as internal consistency of 77%, thus generating a 90% coefficient of reproducibility (Statistics Solution, 2021). The measurement scale contains 10 items with options from Strongly Disagree to Strongly Agree. The resulting score may range from 0 to 30, in which 15 to 25 are considered normal self-esteem and below 15 would suggest that the individual experience low self-esteem (W.W Norton &Co., 2021).

The attachment construct was measured using the instrument developed by Hazan and Shaver (1987) known as the Hazan-Shaver Attachment Self-Report (HS). This instrument measures the type of attachment style of the participants ranging from avoidant, anxious/ambivalent, and secure attachment style. The HS questionnaires include three brief statements, designed to classify participants into three attachment styles, thus the measurement scale could only result in three categories: avoidant, anxious/ambivalent, or secure (Sperling et al., 1996). A study by Pistole (1989) found an average internal consistency (Cronbach's $\alpha = .60$).

Statistical methods

The quantitative data based on the descriptive and inferential studies is collected and analyzed in this study. Firstly, the research approach uses descriptive study, in which it is applied to characterize the fundamental features of the research data and present the quantitative data conveniently (Trochim, 2021). Apart from that, descriptive analysis is used to describe the research population or occurrence accurately and systematically, whereby, it could provide the answer to what, when, where, and how the research questions are directed (McCombes, 2019). The second approach is the use of inferential study that is implemented to ascertain research sample data and develop a conclusion that goes beyond the actual data (Trochim, 2021). The purpose of inferential analysis is to help the researcher understand the research phenomenon and generate several conclusions based on the data collected (Bhandari, 2020).

Result nd Discussion

Respondent Profile

The majority of the samples are represented by middle school students aged 13 years old (n = 94, 40.0%) while 16 years old accounted for the lowest proportion of samples (n = 2, 0.9%). In terms of gender differences, the number of male participants (n = 125, 53.2%) was slightly greater than females (n = 110, 46.8%) but the gender ratio was relatively balanced. All participants indicated to be studying in either one of the three schools in Zigong City: No. 3 Middle School, No. 23 Middle School, and No. 28 Middle School. Many participants reported to be studying at No.3 Middle School (n = 81, 34.5%). On the other hand, the results reported an equal number of participants who studied at No. 23 Middle School and No. 28 Middle School respectively (n = 77, 32.8%). Besides, a substantial number of respondents indicated living with other guardians such as maternal grandparents, paternal grandparents, aunty, uncle, or brother instead of their parents. The results reported that most of the respondents indicated staying with their paternal grandparents (n = 193, 82.1%) and reported living in rural areas (n = 222, 94.5%). This indicated that samples who reside in the rural area are larger than those living in the urban household. Moreover, the respondents have the majority of two children in the family (n = 160, 68.1%). Report the level of each variable.

Table 4
Frequency for Demographic Characteristics.

Variable	Sample (*n*)	Percentage (%)
Age		
12 years old	**31**	**13.2**
13 years old	**94**	**40.0**
14 years old	**77**	**32.8**
15 years old	**31**	**13.2**
16 years old	**2**	**0.9**
Gender		
Male	**125**	**53.2**
Female	**110**	**46.8**
School Name		
No. 3 Middle School	**81**	**34.5**
No. 23 Middle School	**77**	**32.8**
No. 28 Middle School	**77**	**32.8**
Living Status		
Other guardians	**14**	**6.0**
Maternal grandparents	**8**	**3.4**
Maternal grandmother	**8**	**3.4**
Maternal aunty	**2**	**0.9**
Self	**1**	**0.4**
Paternal uncle and aunty	**1**	**0.4**
Mother	**1**	**0.4**
Mother and paternal grandparents	**1**	**0.4**
Parents	**1**	**0.4**
Parents and paternal grandparents	**1**	**0.4**
Father and paternal grandparents	**2**	**0.9**
Paternal grandparents	**193**	**82.1**
Paternal grandparents and brother	**1**	**0.4**
Paternal and maternal grandparents	**1**	**0.4**
Number of Children in the Family		
1	**59**	**25.1**
2	**160**	**68.1**
3	**14**	**42.1**
4	**1**	**0.4**
6	**1**	**0.4**
Household Registration		
Urban	**13**	**5.5**
Rural	**222**	**94.5**

The correlation between social support and mental health

The result showed that there is a significant correlation between social support and the mental health of middle school students under the family background of left-behind children in Zigong City, China. The Kendall's tau value and significance value between social support

and mental health were τ(233) = .09 and *p* = .048. Hence, the first hypothesis that stated a correlational relationship between social support and mental health was supported.

The results in the present study indicated that the middle school students under the family background of left-behind children in Zigong City, China who reported receiving greater social support were led to report having better mental health. This meets one of the current research objectives and supports the first hypothesis, which was that social support would be positively correlated with mental health. These findings were aligned with the research by Zhang and his colleagues (2019), which reported that the left behind children who received greater frequency of communication with their parents or alternate caregivers experienced fewer mental health issues.

Similarly, several empirical findings found that left behind children who reported having negative parent-child relationships due to parental migration were more likely to exhibit psychological issues such as depression, anxiety, and risks of self-injury (Wang et al., 2020; Guo et al., 2015). Zhao et al. (2018) conducted a qualitative in-depth interview to explore the impact of parental migration on the psychosocial well-being of left-behind children. They found that parental migration has led to inadequate support for left-behind children and as a result, it has led to emotional distress such as sadness and frustration.

The correlation between self-esteem and mental health

The result showed that there is a significant correlation between self-esteem and mental health of middle school students under the family background of left-behind children in Zigong City, China. Kendall's tau value and significance value between self-esteem and mental health were τ (233) = .24 and p < .001. Therefore, the second hypothesis that stated a correlational relationship between self-esteem and mental health was supported.

Moreover, based on the current research results, showed a significant correlation between self-esteem and mental health among middle school students under the family background of left-behind children in Zigong City, China. The second hypothesis is supported. In other words, the participants displayed a greater level of self-esteem when they reported having better mental health. The present research findings were consistent with past literature that explored the relationship between mental health and self-esteem. Several past studies have suggested that left-behind children displayed a higher risk of low self-esteem as a result of unhappiness and anxiety due to the separation from their parents (Cui et. al., 2021; Tang et.al., 2018).

Dai and Chu (2018) surveyed middle school students in China has suggested that left-behind children who displayed a greater risk of psychological problems such as anxiety reported having lower self-esteem. Correspondingly, the present study showed that the middle school students under the family background of left-behind children in Zigong City, China recorded lower scores in the Rosenberg Self-Esteem Scale which indicated low self-esteem when they reported having unsatisfactory levels of mental health. Overall, current findings were consistent with past literature that suggested a correlation between self-esteem and mental health (Cui et. al., 2021; Tang et.al., 2018; Dai & Chu, 2018).

The correlation between attachment and mental health

As shown in Table 9, Kendall's tau value and significance value between attachment and mental health were τ (233) = .03 and p = .580. This showed that there is no significant correlation between attachment and mental health of middle school students under the family background of left-behind children in Zigong City, China. Thus, the third hypothesis that

stated a correlational relationship between attachment and mental health was not supported.

However, the present research revealed no significant correlation between attachment and mental health. Put differently, participants did not indicate improved mental health when reporting a high level of secure attachment. Consequently, the third hypothesis proposing a connection between attachment and mental health lacked support.

While the attachment theory offers a valuable framework for comprehending the mental well-being of left-behind children in the context of the parent-child relationship, the present study did not identify a noteworthy correlation between attachment and mental health. In accordance with the family system theory, the family is comprised of a intricate system involving the parent subsystem and the parent-child subsystem. The change in the stability and harmony of the family subsystem would impact the child's development (Bronfenbrenner, 1986; Liu et.al., 2020). In the context of left-behind children, the family system, particularly the parent-child subsystem was disrupted by parental migration which has been indicated to affect the mental, physical, social, and emotional development of left-behind children (Wang et al., 2020; Tang et.al., 2018).

Besides, Liu and colleagues (2020) highlighted that emotional attachment is the basis of parent-child relations. The parents could form this type of attachment through communicating, parenting, assisting, and interacting with their children. Although the samples in our study reported establishing secure attachments with caregivers such as grandparents, relatives, and siblings, they do not report having better mental health. Many researchers have also emphasized that the father and mother are commonly the main influence on their children's mental health and behaviors (Liu et.al., 2020; Yu et.al., 2019; Braza et.al., 2015). Therefore, this could potentially explain why the secure attachment formed among the left-behind children could not offset the absence of parent-child relations. As a result, their mental health and well-being did not improve.

Furthermore, past literature has indicated that insecure attachments may be formed after prolonged or repeated separations between migrant parents and left-behind children, especially for those who experienced at the age of 3 and below. In this context, the children faced more difficulty in adapting to changes and also reported displaying intense distress and hopelessness in life (He et al., 2011; Su et al., 2013). Thus, there is a possibility that the left-behind children's negative experiences due to parental separation cannot be compensated by secure attachments with other caregivers due to the lack of capability to adapt to change.

The correlation between attachment and social support

Furthermore, the current investigation revealed a notable association between attachment and social support in middle school students with a background of being left behind in Zigong City, China. Findings indicated a significant positive correlation between attachment and social support, with $\tau(233) = .13$, $p = .006$. The higher the level of social support received, the more pronounced the displayed attachment.

Additionally, the present study reported a significant correlation between attachment and social support among middle school students under the family background of left-behind children in Zigong City, China. Thus, participants who received a greater level of social support reported having a more secure level of attachment. The correlational relationship found between social support and attachment in the present study was corresponding with past literature. It has been suggested that most of the left-behind children do not receive social support which resulted in a lower number of left-behind children reporting having a secure

attachment style and displaying lower levels of self-esteem (Wang et al., 2019; Cui et al., 2021).

It was suggested that teachers' support and peer support positively impact the social adaptation of left-behind children with the mediating factor, a sense of school belongingness (Wei et. al., 2016). Many studies have recognized the role of attachment in influencing one's social support level. A study by Li et al. (2021) suggested that students who reported low levels of attachment closeness tend to display depression due to the absence of social support. With high levels of social support, individuals will be more willing to come into contact with others and build relationships. As a result, the attachment closeness will gradually increase. Thus, the findings of is present study are worth further explorations on measuring social support and attachment as possible interventions to cope with the negative impacts of parental migration.

The correlation between self-esteem and social support

Furthermore, the present study also reported a significant correlation between self-esteem and social support among middle school students under the family background of left-behind children in Zigong City, China. Results showed that there was a significant positive correlation between self-esteem and social support, $\tau(233) = .38$, $p < .001$. The greater the level of social support received, the greater the self-esteem displayed. Hence, the participants displayed a greater level of self-esteem when they reported receiving a greater level of social support. The current findings were consistent with the study conducted by Tang et al. (2018). They have found that there was a greater risk of mental health problems such as self-esteem and depression among left-behind children in China, specifically those who reported having longer separations from their parents. Theoretically, the surroundings of an individual such as receiving support from others would affect his or her self-esteem (Rosenberg, 1965). The empirical literature has also proposed that social support can maintain or enhance one's self-esteem in the face of negative events (Cui et.al., 2021; Cohen, 2004). Social support plays a significant role in children's self-development which influences how children express themselves and understand others (Wang et.al., 2014). If the issues of social withdrawal are not taken care of for children who live without their parents, it has been suggested that it would impair the self-concept of the left-behind children and may also result in mental health issues (Zhao et al. 2012; Riina & McHale, 2012).

Conclusion

The results revealed that individuals receiving higher levels of social support reported improved mental health. Additionally, the current study highlighted a substantial correlation between self-esteem and mental health in middle school students. Moreover, the investigation identified significant correlations between the variables of attachment and self-esteem with social support among middle school students with a family background of being left behind in Zigong City, China.

To bridge the long-distance relationship between the parents and left-behind children, the government and social workers should organize a virtual communication program to encourage migrated parents to be "virtually present" in their children's lives with the use of digital communication devices. Moreover, it is also crucial to create awareness among individuals who work with left-behind children in understanding and managing the mental well-being of this population.

Implications

When considering potential interventions to meet the needs of left-behind children, it is significant to note that about 89% of the subjects in the present study were entrusted to the care of their grandparents or other relatives. Research indicates that left-behind children placed in kinship care often experience challenges such as inadequate nutritional status, substandard living conditions, and emotional distress (Luo et.al., 2008). Besides, the participants in current research findings have reported receiving low social support and displaying insecure attachment styles, which would indirectly affect their mental well-being. Thus, the present findings show the significance for relevant authorities to pay a greater level of attention to improving the well-being of the respondents.

In the age of vast technology usage, these interventions will be effective in improving the communications between the respondents and their loved ones (e.g., parents) who were separated due to parental migration. As mentioned, a strong and secure attachment between child and parent would be formed through communicating, parenting, assisting, and interacting with their children. To ensure the better mental health of the respondents, their parents need to take note of the proposed interventions to boost their self-esteem and strengthen their parent-child bond. Furthermore, it is essential to raise awareness of the negative impacts or psychological challenges faced by left-behind children among clinicians, teachers, counselors, and other individuals who work with left-behind children. Moreover, the present study also sheds light on the possible interventions to be adopted by counselors in their counseling practices, especially when they are dealing with left-behind children.

Limitations

The main constraint was the limited applicability of the findings. The data were gathered exclusively from a specific sample of middle school students in the city of Zigong, China, raising concerns about generalizability. Another limitation in the current study was the inability to establish causal relationships among the identified factors. Additionally, the data relied on self-reported measures, introducing a potential source of bias. Lastly, certain variables like the mental health and self-esteem of the study participants might not have been accurately assessed, given the potential influence of external factors such as the psychological effects of COVID-19.

References

Accredited Schools Online. (2021). Promoting Student Mental Health. https://www.accreditedschoolsonline.org/resources/student-mental-health-resources/

Ainsworth, M. D. S. & Bell, S. M. (1970). Attachment, exploration, and separation: Illustrated by the behavior of one-year-olds in a strange situation. Child Development, 41(1), 49–67. https://doi.org/10.2307/1127388

Althubaiti A. (2016). Information bias in health research: definition, pitfalls, and adjustment methods. Journal of Multidisciplinary Healthcare, 9, 211–217. https://doi.org/10.2147/JMDH.S104807

Bartlett, J. E., Kotrlik, J. W. & Higgins, C. C. (2001). Organizational research: determining appropriate sample size in survey research. Information Technology, Learning, and Performance Journal, 19(1), 43-50.

Bhandari, P. (2020, September 4). An introduction to inferential statistics. https://www.scribbr.com/statistics/inferential-statistics/

Bouchrika, I. (2021, May 2). How to write research methodology: Overview, tips, and techniques. https://www.guide2research.com/research/how-to-write-research-methodology

Bronfenbrenner, U. (1986). Ecology of the family as a context for human development: Research perspectives. Developmental Psychology, 22, 723-742. https://doi.org/10.1037/0012-1649.22.6.723

Brutus, S., Aguinis, H., & Wassmer, U. (2013). Self-reported limitations and future directions in scholarly reports: Analysis and recommendations. Journal of Management, 39(1), 48–75. https://doi.org/10.1177/0149206312455245

Bullen, P. B. (2021). *How to choose a sample size (for the statistically challenged).* https://tools4dev.org/resources/how-to-choose-a-sample-size/

Cherry, K. (2019). What is attachment theory? Very Well Minded. https://www.verywellmind.com/what-is-attachment-theory-2795337

Cherry, K. (2020). How social support contributes to psychological health. https://www.verywellmind.com/social-support-for-psychological-health-4119970

Cherry, K. (2021). What is self-esteem? Very Well Minded. https://www.verywellmind.com/what-is-self-esteem-2795868

Cohen, S. (2004). Social relationships and health. The American psychologist, 59(8), 676–684. https://doi.org/10.1037/0003-066X.59.8.676

Cui, S., Cheng, F., Zhang, L., Yuan, Q., Huang, C., Zhang, K. et al. (2021). Self-esteem, social support and coping strategies of left-behind children in rural China, and the intermediary role of subjective support: A cross-sectional survey. BMC Psychiatry, 21, 158. https://doi.org/10.1186/s12888-021-03160-y

Dai, Q., & Chu, R-X. (2016). Anxiety, happiness and self-esteem of western Chinese left-behind children. Child Abuse & Neglect, 1-11. doi:10.1016/j.chiabu.2016.08.002

Delphis. (2019). The Biopsychosocial model of mental health. https://delphis.org.uk/mental-health/the-biopsychosocial-model-of-mental-health/

Engel, G. (1977). The need for a new medical model: A challenge for biomedicine. Science, 196, 4286, 129–136. https://doi.org/10.1126/science.847460

Fan, X. & Lu, M. (2019). Testing the effect of perceived social support on left-behind children's mental well-being in mainland China: the mediation role of resilience. Children and Youth Services Review, 109(2020), 1-7. https://doi.org/10.1016/j.childyouth.2019.104695

Galderisi, S., Heinz, A., Kastrup, M., Beezhold, J., & Sartorius, N. (2015). Toward a new definition of mental health. World Psychiatry, 14(2), 231–233. https://doi.org/10.1002/wps.20231

Ge, Y., Song, L., Clancy, R. F., & Qin, Y. (2019). Studies on left-behind in China: reviewing paradigm shifts. New Directions for Child and Adolescent Development, 163(3), 1-21. https://doi.org/10.1002/cad.20267

GL Assessment. (2021). General health questionnaire. https://www.gl-assessment.co.uk/assessments/products/general-health-questionnaire/

Glen, S. (2021). Confidence level: what is it? https://www.statisticshowto.com/confidence-level/

Goldberg, D. P. & Hillier, V. F. (1979). A scaled version of the General Health Questionnaire. Psychological Medicine, 9(1), 139–145. https://doi.org/10.1017/s0033291700021644

Gu, X. (2021, April 20). 'Save the children': governing left-behind children through family in China's great migration. Current Sociology, 1-26.

https://doi.org/10.1177/0011392120985874

Guo, J., Ren, X., Wang, X., Qu, Z., Zhou, Q., Ran, C., Wang, X., & Hu, J. (2015). Depression among migrant and left-behind children in china in relation to the quality of parent-child and teacher-child relationships. PloS One, 10(12), e0145606. https://doi.org/10.1371/journal.pone.0145606

Hazan, C., & Shaver, P. R. (1987). Romantic love conceptualized as an attachment process. Journal of Personality and Social Psychology, 52, 511-524.

He, B., Fan, J., Liu, N., Li, H., Wang, Y., Williams, J., & Wong, K. (2012). Depression risk of 'left-behind children' in rural China. Psychiatry research, 200(2-3), 306–312. https://doi.org/10.1016/j.psychres.2012.04.001

He, X., Wang, H., Friesen, D., Shi, Y., Chang, F., & Liu, H. (2020). Cognitive ability and academic performance among left-behind children: Evidence from rural China. Compare: A Journal of Comparative and International Education, 1–17. https://doi.org/10.1080/03057925.2020.1848520

Hong, Y. & Fuller, C. (2019). Alone and "left behind": A case study of "left-behind children" in rural China. Cogent Education, 6(1), 1-16. https://doi.org/10.1080/2331186X.2019.1654236

Iovino, F., & Tsitsianis, N. (2020). The methodology of the research. Changes in European Energy Markets. Emerald Publishing Limited. https://doi.org/10.1108/978-1-83909-107-020201004

Jia, Z., & Tian, W. (2010). Loneliness of left-behind children: A cross-sectional survey in a sample of rural China. Child: care, health and development, 36(6), 812–817. https://doi.org/10.1111/j.1365-2214.2010.01110.x

Ke, X., Liu, C., & Li, N. (2010). Social support and Quality of Life: a cross-sectional study on survivors eight months after the 2008 Wenchuan earthquake. BMC Public Health, 10(1), 1-11. https://doi.org/10.1186/1471-2458-10-573

Kibuacha, F. (2021, April 06). How to determine sample size for a research study. https://www.geopoll.com/blog/sample-size-research/#How_to_Calculate_Sample_Size

Kocalevent, R., Berg, L., Beutel, M. E., Hinz, A., Zenger, M., Harter, M., Nater, U., & Brahler, E. (2018). Social support in the general population: Standardization of the Oslo Social Support Scale (OSSS-3). BMC Psychology, 6(31). https://doi.org/10.1186/s40359-018-0249-9

Li, Y., Liang, F., Xu, Q., Gu, S., Wang, Y., Li, Y., & Zeng, Z. (2021). Social support, attachment closeness, and self-esteem affect depression in international students in China. Frontiers in Psychology, 12, 618105. https://doi.org/10.3389/fpsyg.2021.618105

Li, Y-F., Zhang, J., Li, J., Chen, Y-P., Yang, S-L., Tao, Y-X., … Mao, T. (2020). Influencing factors of aggressive behavior among left-behind junior high school students: structural equation model. Research Square, 1-28. https://doi.org/10.21203/rs.3.rs-25120/v1

Liu, H., Liu, L., & Jin, X. (2020). The impact of parental remote migration and parent-child relation types on the psychological resilience of rural left-behind children in China. International Journal Of Environmental Research and Public Health, 17(15), 5388. https://doi.org/10.3390/ijerph17155388

Lu, Y. (2012). Education of children left behind in rural China. Journal of Marriage and Family, 74(2), 328–341. doi:10.1111/j.1741-3737.2011.00951.x

Luo, J., Peng, X., Zong, R., Yao, K., Hu, R., Du, Q., Fang, J., & Zhu, M. (2008). The status of care and nutrition of 774 left-behind children in rural areas in China. Public Health Reports (Washington, D.C. : 1974), 123(3), 382–389. https://doi.org/10.1177/003335490812300319

MacArthur. (2004). Self-Esteem. https://macses.ucsf.edu/research/psychosocial/selfesteem.php

McCombes, S. (2019, May 15). Descriptive Research. https://www.scribbr.com/methodology/descriptive-research/

McLeod, S. (2014). Carl Rogers Theory. SimplePsychology. https://www.simplypsychology.org/carl-rogers.html

McLeod, S. (2017). Attachment theory. Simply Psychology. https://www.simplypsychology.org/attachment.html

Meyer, B., & Pilkonis, P. A. (2001). Attachment style. Psychotherapy: Theory, Research, Practice, Training, 38(4), 466–472. https://doi.org/10.1037/0033-3204.38.4.466

Mind Organization. (2019). Self-esteem. https://www.mind.org.uk/information-support/types-of-mental-health-problems/self-esteem/about-self-esteem/

National Association of Secondary School Principals. (2021). Mental health in middle level and high schools. https://www.nassp.org/mental-health-in-middle-level-and-high-schools/

Pistole, M. C. (1989). Attachment in adult romantic relationships: Style of conflict resolution and relationship satisfaction. Journal of Social and Personal Relationships, 6, 505-510. https://doi.org/10.1177/0265407589064008

Pollfish. (2021). What is the margin of error & how to reduce it in your survey. https://resources.pollfish.com/market-research/what-is-the-margin-of-error-how-to-reduce-in-your-survey/

Rogers, C. R. (1959). A theory of therapy, personality, and interpersonal relationships, as developed in the client-centered framework. McGraw-Hill, 1(3), 184-256.

Rosenberg, M. (1965). Society and the adolescent self-image. Princeton, Princeton University Press.

Sanchez-Lopez, M.D.P. & Dresch, V. (2008). The 12-item general health questionnaire (ghq-12): Reliability, external validity and factor structure in the spanish population. Psicothema, 20(4), 839-843.

Schaffer, H. R. & Emerson P. E. (1964). The development of social attachments in infancy: The development of social attachments in infancy. Monographs of the Society for Research in Child Development, 29(3), 1-71. https://doi.org/10.2307/1165727

Schreck, C. J., Leiber, M. J., Miller, H. V., & Welch, K. (2017). Social support theory. The Encyclopedia of Juvenile Delinquency and Justice. 1-4. https://doi.org/10.1002/9781118524275.ejdj0066

Scott, E. (2020). The different types of social support. https://www.verywellmind.com/types-of- social-support-3144960

Shumaker, S. A., & Brownell, A. (1984). Toward a theory of social support: Closing conceptual gaps. Journal of Social Issues, 40(4), 11–36. https://doi.org/10.1111/j.1540- 4560.1984.tb01105.x

Sperling, M.B., Foelsch, P., & Grace, C. (1996). Measuring adult attachment: aae self-report instruments congruents. Journal of Personality Assessment, 67(1), 37-51. https://doi.org/10.1207/s15327752jpa6701_3

Statisctics Solution. (2021). Rosenberg self-esteem scale (SES). https://www.statisticssolutions.com/free-resources/directory-of-survey-instruments/rosenberg-self-esteem-scale-ses/

Su, S., Li, X., Lin, D., Xu, X., & Zhu, M. (2013). Psychological adjustment among left-behind children in rural China: The role of parental migration and parent–child communication. Child: Care, Health and Development, 39(2), 162-170. https://doi.org/10.1177/0033294119862981

Tan, R. (2020). China's left-behind children. The Borgen Project Organization. https://borgenproject.org/left-behind-children/

Tang, W., Wang, G., Hu, T., Dai, Q., Xu, J., Yang, Y., & Xu, J. (2018). Mental health and psychosocial problems among Chinese left-behind children: A cross-sectional comparative study. Journal of Affective Disorders, 241, 133–141. https://doi.org/10.1016/j.jad.2018.08.017

The Economist. (2021). The plight of China's "left-behind" children. https://www.economist.com/china/2021/04/08/the-plight-of-chinas-left-behind-children

Thomas, L. (2020, September 7). An introduction to cluster sampling. https://www.scribbr.com/methodology/cluster-sampling/

Tong, L., Yan, Q. & Kawachi, I. (2019). The factor associated with being left-behind children in China: multilevel analysis with nationally representative data. PLoS ONE, 14(11). https://doi.org/10.1371/journal.pone.0224205

Trochim, W. M. K. (2021). Descriptive statistics. https://conjointly.com/kb/descriptive-statistics/

Trochim, W. M. K. (2021). Inferential statistics. https://conjointly.com/kb/inferential-statistics/

University of Southern California. (2021). Research guide. USC Libraries. https://libguides.usc.edu/writingguide/researchdesigns

W.W. Norton & Company. (2021). Rosenberg's self-esteem scale questionnaires. https://wwnorton.com/college/psych/psychsci/media/rosenberg.htm

Wang, F., Lin, L., Xu, M., Li, L., Lu, J., & Zhou, X. (2019). Mental health among left-behind children in rural china in relation to parent-child communication. International Journal of Environmental Research and Public Health, 16(10), 1855. https://doi.org/10.3390/ijerph16101855

Wang, X., Ling, L., Su, H., Cheng, J., Jin, L., & Sun, Y.-H. (2014). Self-concept of left-behind children in China: A systematic review of the literature. Child: Care, Health and Development, 41(3), 346–355. https://doi.org/10.1111/cch.12172

Wang, Y.; Zhang, M., & Chen, H. (2019). Self-injury among left-behind adolescents in rural china: The role of parental migration and parent–child attachment. Frontiers in Psychology, 9(2672), 1-8. doi:10.3389/fpsyg.2018.02672

Wei, X., Yu, C., Zhao, C., Wang, Z., Liu, Y., & Wang, J. (2016). The mediating role of sense of school belonging in school atmosphere and academic achievement of left-behind children. Chinese Journal of School Health, 37(7), 1103-1105. https://doi.org/10.16835/j.cnki.1000-9817.2016.07.043

World Health Organization. (2004). Promoting Mental Health: Summary Report. https://www.who.int/mental_health/evidence/en/promoting_mhh.pdf

World Health Organization. (2020). Adolescent mental health. https://www.who.int/news-room/fact-sheets/detail/adolescent-mental-health

Xiao, J., Huang, B., & Gao, Y. (2017). Association between social support and health-related quality of life among Chinese seaferars: A cross-sectional study. PLoS ONE, 12(11). https://doi.org/10.1371/journal.pone.0187275

Yeung, W. J. & Gu, X. (2016). Left behind by parents in China: Internal migration and adolescents' well-being. Marriage & Family Review, 53(1-2), 127-161. https://doi.org/10.1080/01494929.2015.1111284

Yu, B-L., Li, J., Liu, W., Huang, S-H., & Cao, X-J. (2020). The effect of left-behind experience and self-esteem on aggressive behavior in young adults in China. Journal of Interpersonal Violence, 0(0),1-27. doi:10.1177/0886260520922373

Yu, Y., Liu, S., Song, M., Fan, H., & Zhang, L. (2020). Effect of parent-child attachment on college students' social anxiety: A moderated mediation model. Psychological reports, 123(6), 2196–2214. https://doi.org/10.1177/0033294119862981

Yue, A., Bai, Y., Shi, Y, Luo, R., Rozelle, S., Medina, A., & Sylvia, S. (2020). Parental migration and early childhood development in rural China. Demography, 57(1), 403-422. https://doi.org/10.1007/s13524-019-00849-4

Zhang, X., Li, M., Guo, L., & Zhu, Y. (2019, December 23). Mental health and its influencing factors among left-behind children in South China: A cross-sectional study. BMC Public Health, 19, 1725. https://doi.org/10.1186/s12889-019-8066-5

Zhao, C., Wang, F., Zhou, X., Jiang, M., & Hesketh, T. (2018). Impact of parental migration on psychosocial well-being of children left behind: a qualitative study in rural China. International Journal For Equity In Health, 17(1), 80. https://doi.org/10.1186/s12939-018-0795-z

Zhao, M. M., Li, H., Li, J., Li, L. G., Wang, C. L., Stephen, N. & Meng, Q. Y. (2012). Studying on the influence of migrant parents on mental health of their left-behind children in rural China. China Health Management, 1, 60–64. https://doi.org/10.1111/cch.12172

Zhou, M., Sun, X., Huang, L., Zhang, G., Kenny, K., Xue, H., Auden, E., & Rozelle, S. (2018). Parental migration and left-behind children's depressive symptoms: Estimation based on a nationally-representative panel dataset. International Journal of Environmental Research and Public Health, 15(6), 1069. https://doi.org/10.3390/ijerph15061069