

ORIGINAL ARTICLE

Resilience and Its Contributing Factors in Adolescents in Long-Term Residential Care Facilities Affiliated to Tehran Welfare Organization

Manijeh Nourian¹, PhD; Farahnaz Mohammadi Shahboulaghi², PhD; Kian Nourozi Tabrizi², PhD; Maryam Rassouli³, PhD; Akbar Biglarrrian⁴, PhD

¹Department of Nursing, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran;

²Social Determinants of Health Research Center, Department of Nursing, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran;

³Department of Pediatric Nursing, School of Nursing and Midwifery, Shahid Beheshti University of Medical Sciences, Tehran, Iran;

⁴Department of Biostatistics, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran

Corresponding author:

Farahnaz Mohammadi Shahboulaghi, PhD; Social Determinants of Health Research Center, Department of Nursing, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran

Tel: +98 21 88202520; **Fax:** 22180036 21 98+ ; **Email:** f.mohammadi@uswr.ac.ir, mohammadifarahnaz@gmail.com

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ABSTRACT

Background: Resilience is a quality that affects an individual's ability to cope with tension. The present study was conducted to determine resilience and its contributing factors in high-risk adolescents living in residential care facilities affiliated to Tehran Welfare Organization in order to help develop effective preventive measures for them.

Methods: The present descriptive study was conducted on 223 adolescents living in 15 different governmental residential care centers in 2014. Participants were selected through convenience sampling. The data required were collected via the Wagnild and Young Resilience Scale with content validity (S-CVI=0.92) and a reliability of $\alpha=0.77$ and $r=0.83$ ($P<0.001$). The data obtained were analyzed in SPSS-20 using descriptive and inferential statistics including Chi-square test, independent *t*-test and ANOVA.

Results: The adolescents' mean score of resilience was 84.41 ± 11.01 . The level of resilience was moderate in 46.2% of the participants and was significantly higher in the female than in the male adolescents ($P=0.006$); moreover, the score obtained was lower in primary school children as compared to middle school and high school students ($P<0.001$).

Conclusion: Directors of care facilities and residential care personnel should adopt preventive resilience-based strategies in order to optimize resilience among adolescents, particularly the male. It is important to provide a basis to prevent adolescents' academic failure and place a stronger value on education than the past.

KEYWORDS: Resilience; Adolescents; Residential care facilities

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INTRODUCTION

Adolescence is perceived as a critical stage in human life;¹ however, the unique environment of residential care facilities inherently contains additional stressors for the adolescent.² Living in residential care thus exposes adolescents to health-threatening environmental, physical and mental tensions.³ This vulnerable group of the population has been found to be at an increased risk for poor developmental outcomes as well as a variety of emotional, social, behavioral, educational and psychological problems.^{4,5} When all efforts to return them to their own family or to substitute families fail, the children are sent to residential care centers⁵ for reasons such as the parents' death or divorce, the absence of one or both parents (without supervision) and the parents' drug addiction, affliction with incurable physical or mental diseases and imprisonment (poor supervision). In Iran, governmental residential care centers are single-gendered and are run by psychotherapists.

Living in residential care centers increases the likelihood of performing risky behaviors and causing social damage in adolescents and thus threatens the community's health as these adolescents leave the centers and enter the bigger community. The high costs of caring for children and the increasing prevalence of out-of-home care around the world have led to researchers' greater focus on the consequences of living in care centers.⁶ Previous studies have demonstrated the negative consequences of the chronic tensions associated with out-of-home care on different aspects of health in adolescents.⁷ Resilience is an acquired quality that significantly affects health. Examining resilience within the context of health is particularly important, as it is a protective factor that is negatively associated with high-risk behaviors.⁸ The different definitions provided for resilience prove the fact that it is associated with an individual's ability to cope with challenges and difficulties in life. Resilience also depends on the cultural context of the community.⁹ The dimensions and contributing factors

of resilience vary in different populations, because what constitutes a risk factor in one setting may be considered a contributing factor in another, and also because the contributing factors of resilience differ with the type and intensity of the tensions experienced and the damage caused.¹⁰ For example, some studies examined the impact of age at the time of entering out-of-home care^{11,12} and showed that being older at the time of entering care is associated with greater emotional resilience while being younger is linked with greater symptoms of post-traumatic stress disorder due to younger children's underdeveloped coping mechanisms. Another study rejected this finding.¹³ Evidence suggests that communication with family members is one of the main factors contributing to resilience;¹⁴ however, Collins et al. (2008) showed that communication between the biological family and the child in care may even be harmful.¹⁵

The study of resilience in the Iranian population is important because most research in this area has been carried out in English-speaking countries or in Europe. The present study was thus conducted to evaluate resilience and its contributing factors in adolescents in long-term residential care facilities affiliated to Tehran Welfare Organization and to aid the relevant authorities in improving the care provided to this group of children through performing resilience-based interventions and to encourage further research on the subject as well.

MATERIALS AND METHODS

The present descriptive study was conducted on adolescents in the 13-18 age group living in 15 different governmental residential care centers (called 'pseudo-family centers') affiliated to Tehran Welfare Organization. After requesting permission from Tehran Welfare Organization for the participation of male and female adolescents living in 15 different governmental residential care centers in different areas of Tehran province, the researcher visited the centers and selected

samples through convenience sampling. All the adolescents who had lived in residential care centers for a minimum of three years, and who were literate and spoke Persian entered the study. The adolescents who had a history of developmental, psychiatric and seizure disorders or physical-motor disabilities based on the centers' health records and those who were unwilling to continue participation in the study or who were diagnosed with chronic or acute diseases during the course of the study or were transferred to other centers or to substitute families were excluded from the study.

Of the total number of 337 adolescents aged 13-18 years living in the 15 governmental residential care centers sampled (two centers located in Shemiranat county, four in the municipality of Tehran, one in Varamin, one in Pakdasht, one in Shahriar, one in Malard, two in Robot Karim and three in Shahre Rey), 229 were eligible to participate in the study. All the eligible candidates filled out the Persian version of the Wagnild and Young Resilience Scale. With the exclusion of the four adolescents who returned their questionnaires incomplete and two more who had to exit the study for hospitalization or being transferred to a substitute family, 223 adolescents were left to survey. From the 105 adolescents who did not meet the study inclusion criteria, 56% did not even consent to participating, 31.2% had a history of disease or were still ill and 12.8 % had lived in residential care facilities for less than three years. At the time the study was being conducted, no adolescents aged 13-18 lived in residential care in the Tehran counties of Pishva, Qods and Firoozkooh.

The research project was approved by the ethics committee of the University of Social Welfare and Rehabilitation Sciences and the Department of Education and Research of Tehran Welfare Organization under the approval code uswr.rec.1393.211.

After arranging with the technical director of each center and the psychologist or social worker in charge, the researcher introduced herself to the eligible adolescents and asked them to sign an informed written consent

form that discussed the study objectives and ensured participants of the right to withdraw from the study, the confidentiality of their data and the anonymous publication of the study results. The researcher instructed the adolescents on how to complete the scale and then supervised the entire process. The researcher collected participants' demographic information, including their age, gender, duration of time spent in care, age at the time of entering care, educational stage, having visitors (at least once a week), parents' visiting (at least once a week) and the reason for entering institutional care. Sampling lasted from June to late October 2014, and of the total number of 337 adolescents living in the 15 centers examined, 223 eligible candidates were selected to participate in the study.

To determine participants' level of resilience, the standardized Persian version of the Wagnild and Young Resilience Scale was used. Designed in 1993 by Wagnild and Young, this scale measures the level of resilience from early adolescence to adulthood.¹⁶ The scale was translated into Persian and psychometrically assessed by Nourian et al. (2015) and has 23 items scored based on a 5-point Likert scale with responses ranging from strongly agree (given a score of 5) to strongly disagree (given a score of 1) and is designed within five subscales:¹⁷ "Perseverance", "meaningfulness", "self-reliance" and "existential aloneness (self-acceptance or coming home to yourself)" all with 5 items and "equanimity" with 3 items. To measure the adolescents' level of resilience, the total score obtained for all the items was calculated. The scores obtained for the items in each subscale were also calculated separately. As per the original scale's classification system, participants' resilience was classified as very low with a score of 69 and below, as low with 70-83, as moderate with 84-99 and as high with 100-115.¹⁷ The validity of the Persian version of the scale was assessed based on the opinions of 11 experts in psychology, psychiatry, nursing and social welfare and its Cronbach alpha

value was calculated as $\alpha=0.77$. The internal consistency of the five separate subscales ranged from 0.53 to 0.72 while two had $\alpha<0.70$. The Pearson's correlation coefficient test-retest reliability of the Persian version of the resilience scale was 0.83 ($P<0.001$) after two weeks.¹⁷ Chi-square test, independent *t*-test and ANOVA were also used in SPSS-20 to determine the relationship between the demographic variables and resilience in participants at a significance level of 0.05 and with a confidence interval of 0.95.

RESULTS

The present study analyzed the data obtained from 223 adolescents. The results obtained showed that the majority of participants (68.2%) were male and many (29.4%) had spent years in care facilities. Participants ranged from 13 to 19 in age and had a mean age of 15.22 ± 1.73 . The mean age of participants at the time of entering residential care was 7.06 ± 4.01 and their mean duration of the time spent in care was

8.026 ± 4.04 years, ranging from 3 to 19 years. Table 1 presents the rest of the demographic characteristics of participants. The adolescents' mean total resilience was 84.41 ± 11.01 and all the participants (100%) were revealed to be resilient, although their level of resilience varied from very low to high. More specifically, only 14 adolescents (6.3%) showed a high level of resilience, while 103 (46.2%) showed a moderate level, 87 (39%) a low level and 19 (8.5%) a very low level. As can be seen in Table 2, the highest score of resilience obtained by the participants pertained to the subscale of "equanimity" ($M=12.92$ and $SE=3.11$).

A significant relationship was observed between resilience and gender. The total score of resilience ($P=0.006$) and the three dimensions of "perseverance" ($P=0.044$ and $t=2.032$), "self-reliance" ($P<0.001$ and $t=3.899$) and "equanimity" ($P=0.009$ and $t=2.630$) were also found to be significantly higher among the female adolescents. The results showed a statistically significant difference between educational stage and

Table 1: Comparison of the score of resilience in adolescents living in residential care centers of Tehran province by demographic variables

Variable	Category	N (%)	Mean \pm SD	Statistics	P
Gender	Female	71 (31.8)	87.03 \pm 9.71	T=2.76	0.006
	Male	152 (68.2)	83.04 \pm 11.34	Df=221	
Reason for entering care	Without Supervision	76 (34.1)	82.72 \pm 11.28	T=-1.65	0.099
	Poor Supervision	147 (65.9)	85.29 \pm 10.80	Df=221	
Educational stage	Primary School	48 (21.5)	77.98 \pm 13.49	F=11.43	<0.001
	Middle School	62 (27.8)	86.31 \pm 9.42	Df1=2	
	High School	113 (50.7)	86.12 \pm 9.65	Df2=220	
Having visitors (at least once a week)	Yes	163 (73.1)	85.02 \pm 11.41	T=1.36	0.175
	No	60 (26.9)	82.07 \pm 9.75	Df=221	
Parents' visiting (at least once a week)	Yes	111 (49.8)	85.31 \pm 11.49	T=1.98	0.226
	No	112 (50.2)	83.52 \pm 10.49	Df=221	
Age (in years)	12-15	108 (48.4)	84.01 \pm 11.32	T=-0.560	0.576
	15-19	115 (51.6)	84.84 \pm 10.72	Df=221	
Age at the time of entering care (in years)	<1	16 (7.2)	84.06 \pm 11.71	F=1.194	0.310
	1-3	21 (9.4)	80.33 \pm 11.21	Df1=4	
	3-7	53 (23.8)	83.36 \pm 9.30	Df2=218	
	7-12	98 (43.)	85.60 \pm 12.06		
	12-19	35 (15.7)	85.31 \pm 9.66		
Duration of time spent in care (in years)	3-7	116 (52.0)	84.46 \pm 11.70	F=0.037	0.964
	7-12	75 (33.6)	84.56 \pm 9.94	Df1=2	
	12-19	32 (14.3)	83.94 \pm 11.18	Df2=220	

Table 2: The total and subscale scores of resilience in adolescents living in residential care centers of Tehran province

Subscale	Minimum	Maximum	Mean±SD
Perseverance (5 items)	5.00	25.00	15.28±3.12
Meaningfulness (5 items)	6.00	25.00	19.36±3.73
Self-reliance (5 items)	6.00	25.00	17.78±3.68
Existential Aloneness (5 items)	7.00	25.00	19.04±3.46
Equanimity (3 items)	3.00	15.00	12.92±3.11
Total Score	23	113.00	84.41±11.01

the score of resilience. Tukey's multiple comparison test showed that the mean total score of resilience ($P<0.001$) and the three dimensions of "perseverance" ($P<0.001$ and $F=11.274$), "meaningfulness" ($P<0.001$ and $F=12.917$) and "existential aloneness" ($P<0.001$ and $F=8.846$) were significantly lower in the primary school children than in the middle school and high school students. The adolescents who had frequent visitors and whose parents visited often had a greater level of resilience, but the differences were not statistically significant. There were no significant relationships between the total score of resilience and its dimensions by the variables of age, age at the time of entering care, the duration of time spent in care and the reason for entering care (Table 3).

The results indicated no significant relationship between gender and the level of resilience ($P=0.008$); however, the level of resilience was found to be significantly higher among the female adolescents. A significant relationship was also observed between educational stage and the level of resilience ($P<0.001$; Table 3).

DISCUSSION

The results showed that all the adolescents were resilient; however, its levels varied from very low to high. In approximately half of the participants, the level of resilience was moderate; as consistent with the findings of previous studies, very few adolescents had a high level of resilience.^{18,19} Studies have reported varying mean scores of resilience for different populations; however, this finding is inconsistent

with the results of some studies,^{20,21} perhaps due to the cultural and social differences in place and the different characteristics of different residential care centers and more specifically due to the different tools and methods used for determining the level of resilience.

In the present study, the highest mean score of resilience pertained to the subscale of "equanimity". This aspect of resilience includes the ability to consider one's own and others' experiences and to use it for remaining collected when dealing with tension and for avoiding severe reactions to tension.²² The results showed that resilience was significantly higher in female than in male adolescents. Zolkoski et al. reported that in adolescents, resilience may vary by gender.²³ Previous studies have shown contradictory results regarding the impact of gender on resilience. Some studies found gender to have no significant effect on resilience.²⁴ The present study, however, identified significant differences in the score of resilience by gender, which is consistent with the results of some other studies.²⁵ In a study examining the total score of resilience in six areas (as outcomes), girls were found to have higher resilience than boys at the time of discharge from out-of-home care.^{21,23} Although many studies have emphasized the relationship between gender and resilience, this finding was found to be inconsistent with the results of some studies that revealed no significant relationship between gender and resilience.²⁶ Mahmoodi et al. conducted a study on adolescents who had experienced mental traumas but who lived with their family and were different in age from the subjects of the present study, which

Table 3: Comparison of the level of resilience in adolescents living in residential care centers of Tehran province by demographic variables

Variable	R. Level	Very Low N (%)	Low N (%)	Moderate N (%)	High N (%)	Chi-Square Test
Gender	Female	4 (5.6)	18(25.4)	42(59.2)	7(9.9)	P= 0.008 X ² =11.921
	Male	15 (9.9)	69(45.4)	61(40.1)	7(4.6)	
	Total	19 (8.5)	87(39)	103(46.2)	14(6.3)	
Educational stage	Primary School	12 (25)	22(45.8)	11(22.9)	3(6.2)	P< 0.001 X ² =26.74
	Middle School	1 (1.6)	24(38.7)	31(50.0)	6(9.7)	
	High School	6 (5.3)	41(63.3)	61(54)	5(4.4)	
	Total	19 (8.5)	87(39.0)	103(46.2)	14(6.3)	
Reason for entering care	Without Supervision	8 (10.5)	31(40.8)	36(47.4)	1(1.3)	P=0.158 X ² =5.195
	Poor Supervision	11 (7.5)	56(38.1)	67(54.6)	13(8.8)	
	Total	19 (8.5)	87(39.0)	103(46.2)	14(6.3)	
Having visitors (at least once a week)	yes	14 (8.6)	56(34.4)	80(49.1)	13(8.0)	P=0.064 X ² =7.249
	no	5(8.3)	31(51.7)	23(38.3)	1(1.7)	
	Total	19 (8.5)	87(39.0)	103(46.2)	14(6.3)	
Parents' visiting (at least once a week)	yes	10(9.0)	37(33.3)	55(49.5)	9(8.1)	P=0.307 X ² =3.609
	no	9(8.0)	50(44.6)	48(42.9)	5(4.5)	
	Total	19(8.5)	87(39.0)	103(46.2)	14(6.3)	
Age (in years)	12-15	11(9.7)	45(39.8)	48(42.5)	9(8.0)	P=0.536 X ² =2.156 DF=3
	15-19	8(7.3)	42(38.2)	55(50)	5(4.5)	
	Total	19(39.0)	87(39.0)	103(46.2)	14(6.3)	
Age at the time of entering care (in years)	<1	2(12.5)	7(43.8)	6(37.5)	1(6.2)	P=0.910 Fisher's Exact Test =6.236
	1-3	2(9.5)	11(52.4)	8(38.1)	0(0.0)	
	3-7	3(5.7)	21(39.6)	27(50.9)	2(3.8)	
	7-12	9(9.2)	34(34.7)	46(46.9)	9(9.2)	
	12-19	3(8.6)	14(40.0)	16(45.7)	2(5.7)	
	Total	19(8.5)	87(39.0)	103(46.2)	14(6.3)	
Duration of the time spent in care (in years)	1-7	12(10.3)	44(37.9)	50(43.1)	10(8.6)	P=0.782 Fisher's Exact Test =3.280
	7-12	5(6.7)	29(38.7)	38(50.7)	3(4.0)	
	12-19	6(6.2)	14(33.8)	15(46.9)	1(3.1)	
	Total	19(8.5)	87(39.0)	103(46.2)	14(6.3)	

may have caused the inconsistency of the results obtained.²⁶ Moreover, in Mahmoodi's study, the adolescents examined were students living on campus, which somehow explains the lack of differences between the genders. Contrary to the findings of the present study, the results of the quantitative stage of a mixed-methods study that evaluated resilience with similar tools showed that resilience is higher among boys compared to girls.²⁷ This mixed-methods study examined high-risk adolescents; however, their age, living environment and more importantly, different personal and social characteristics may have caused the inconsistency of results. The gender

differences observed can be explained by the biological and cultural differences existing between the children, especially in terms of the differences in the education systems in place in different communities, as well as the higher capacity of girls to benefit from the services provided at supportive care centers.²⁸ Although resilience was found to be higher among the adolescents whose parents visited often and who had other visitors at least once a week, the difference was not statistically significant. Studies have reported disparate findings on the effect of visits from and contact with the biological parents during separation from the family and while living in supportive

centers. In fact, multiple complex problems related to family members, especially parents, may have adverse effects on the adolescents;²⁹ however, communication with the parents, especially during the period of transition to the community, can be highly beneficial too.³⁰

Metzger showed that the increase of the number of parents' visits is positively correlated with the adolescents' self-concept and their degree of coping and resilience.³¹ The review of literature showed that, in and by itself, the number of parents' visits may not promote children's development in supportive centers; however, parental support of the adolescents and communication with them can help better prepare for dealing with tensions and promote their development and resilience through creating a sense of self-worth.³² A quality communication between adolescents and their biological parents, step-parents and peers in supportive centers is believed to help protect them against behavioral disorders.³² It appears that although adolescents examined in the present study had frequent visits from their parents, the relationship between them may have lacked in quality, supportiveness and receptivity, perhaps caused by a bad parenting style and its impact on the parent-adolescent relationship, or by the type of the supportive center to which they had been admitted—that is, whether or not it allowed the parents to be present in their children's lives and contribute to their care and development.

Communicating with the people around and building a communication network can help reduce tension and enhance resilience in adolescents, thereby creating a sense of stability and continuity in life,³³ as the support they receive this way encourages self-efficacy and independent behaviors.³⁴ Previous studies^{35,36} have shown that stable communication with peers, teachers, friends and relatives is crucial to a resilient adaptation to supportive centers among high-risk adolescents; however, the quality of this communication is even more important, as it is associated with receiving sympathy and support and having better opportunities for

contribution and cooperation. This can also foster intimacy and care and can therefore be associated with resilience and help promote it. These factors are but some of the features of good communication and may constitute one of the reasons for the inconsistency of results in different studies.

The level of resilience was higher in the adolescents with poor supervision than in those with no supervision at all; however, the difference was not statistically significant, perhaps owing to the similar risk factors associated with having poor or no supervision. Children are often sent to supportive centers for risk factors such as addiction, mental diseases, delinquency and parents' incurable diseases or death, which are also associated with having poor or no supervision. Despite the limited information available on the experiences of these adolescents before entering care, researchers believe that certain risk factors and hardships experienced before admission to these center contribute to the vulnerability of these adolescents against risk factors later experienced in institutional care, as they disrupt their key developmental process in childhood, entailing emotional regulation, attachment and executive functioning.¹¹ Five main factors that threaten adolescents living in out-of-home care include their individual characteristics, the mental and physical traumas experienced before entering care, the psychosocial experiences lived before entering care, the experiences lived while in care and the experiences lived after leaving care.¹ Evidence suggests that children who have experienced family difficulties and turmoil before entering care are at a greater risk for behavioral and emotional problems compared to children who have been admitted to care centers for economic reasons.¹ According to the centers' caregivers, the children's early history before entering care has a significant relationship with their performance, as children with a history of poor physical behaviors, physical or sexual abuse and parental addiction to alcohol and narcotics showed less resilience.³⁵ In fact, children's

negative experiences before entering care can impair their developmental process and challenge their proper control of emotions, the creation of a sense of independence and, ultimately, their performance.³⁷

The results also showed that the mean score and level of resilience was significantly lower in primary school children than in middle school (which, in Iran, is the equivalent of the first three years of high school in North America) and high school students. This finding is not unexpected, because resilience is described as a developing process.³⁸ An individual's capacity for a positive adaptation to risk changes during the various developmental stages of life as well as the level of education increases, because success in achieving higher education contributes to resilience. In addition to the individual's nature, his character and personality also change over time under the influence of the society, culture and system of education, resulting in a higher level of resilience.³⁹ School programs should also incorporate positive social norms, cultural values and ideologies so as to cultivate prosocial attitudes and an optimistic outlook towards the future in adolescents, which is deemed necessary for cultivating their resilience.⁴⁰

The duration of time spent in care, age at the time of entering care and current age had no significant effects on resilience in the adolescents. Previous studies, however, have yielded different findings on the effect of age at the time of entering care on the outcome of resilience. In some studies, age at the time of entering care was not reported as a significant predictor of behavioral problems and resilience;¹³ in other studies, in contrast, the entry of children into care at a younger age was associated with greater symptoms of post-traumatic stress disorder and lower levels of resilience.^{11,12} It can thus be concluded that age at the time of entering care is not associated with resilience, but facilitates the correlation between resilience and its predictors. As for the duration of time spent in care, previous studies have mostly emphasized the frequency

of changing centers and have found it to be associated with behavioral problems, which themselves trigger the changing of centers.¹¹ The present study examined only the duration of time spent in care and further studies are required to examine these relationships.

Despite finding resilience to be lower among younger adolescents, the present study found no significant differences in the level of resilience between the two age groups examined. Most studies on the correlation between age and resilience have not examined high-risk adolescents.^{38,41} Wagnild and Young correlated resilience with positive outcomes and successful aging;⁴² in the present study, however, participants' accumulation of negative life experiences may have affected the results. The disparate findings on this issue can be explained by methodological differences.

Limitations of the present study include the limited generalizability of the results due to the lack of data on non-governmental residential care centers, the sample being restricted to adolescents living in counties of Tehran province (which may not be representative of the entire population of adolescents in residential care), self-report biases and poorly operationalized variables (for example, having visitors and parents' visiting were represented by a binary variable [Yes/No]). Moreover, the type of data collected was limited to child-level variables; future studies are therefore recommended to investigate other variables such as care center-level and community-level variables. The cross-sectional design of the study was another limitation worth noting. Longitudinal studies are required for examining resilience and its contributing factors over time. It should also be noted that the Wagnild and Young Resilience Scale does incorporate self-reports made by children below age 12; however, the 10-12 age range was outside the scope of the present study.

CONCLUSION

The main finding of the present study is that

approximately half of the adolescents examined had moderate levels of resilience. Resilience-based interventions are therefore required for optimizing resilience in this vulnerable group of adolescents, as higher levels of resilience appear to be more common in female adolescents and in those at higher levels of education. Academic progress plays an evidently significant role in fostering resilience and reducing adversity. The findings of the present study may help inform policy-makers and caregivers about the importance of promoting resilience and well-being among children in residential care centers through offering extra-curricular activities and encouraging academic success, especially among male adolescents and those in need of extra support. Due to the complexity of the subject of resilience and how it depends on the context in which one lives, in-depth interviews with female adolescents living in residential care centers are also vital for better understanding the factors that contribute to resilience.

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