SYSTEMATIC REVIEW

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# Risk Factors Affecting the Psychological Resilience of Adolescents in Institutional Care: A Systematic Review

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## ABSTRACT

**Background:** Psychological resilience is defined as the resilience capacity and the power to recover in the face of stressful life events. Adolescents in institutional care have different individual, familial, and environmental risk factors that negatively affect their psychological resilience. This study aimed to comparatively examine studies that detect the risk factors affecting the resilience of adolescents living in institutional care and make recommendations regarding initiatives or specific outcomes related to this.

**Methods:** This study systematically reviewed national and international literature databases such as PubMed, Web of Science, Science Direct, Medline, CINAHL, EBSCO host, Psychinfo, Cochrane Library, Turkish Ulakbim, Turkish Medical Directory, and Turkish Psychiatry Directory up to December 2021. Fourteen studies were included in this study.

**Results:** Many significant risk factors, such as adolescents' interpersonal relationships, self-confidence, self-esteem, self-efficacy levels, problem-solving skills, empathy skills, as well as parental abandonment, domestic violence, socioeconomic poverty, a history of abuse, peer rejection, lack of social support resources, and low academic performance, have been identified and discussed at individual, familial, and environmental levels.

**Conclusion:** Adolescents in institutional care were more vulnerable and had more mental and behavioral problems than their peers. This systematic review found no studies evaluating preventive programs, interventions, or interventions designed to reduce the frequency and prevalence of future adverse events for children growing up in institutional care settings. Recommends the comprehensive inclusion and evaluation of preventive programs, practices, and assessments aimed at reducing the frequency and prevalence of risk factors affecting resilience.

## ARTICLE HISTORY

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## INTRODUCTION

Adolescents need suitable familial and environmental settings to develop physically, mentally, socially, emotionally, and morally. In cases where adolescents do not have a family, the family is unable to provide adequate care, or where they have to live in an unsuitable environment due to poverty, migration, war, or other issues, the state or voluntary organizations may take them under temporary or permanent protection to protect them from negative situations, social and psychological dangers, negligence, and abuse.[1,2] It is estimated that 2.7 million children under the age of 18 (120 per 100000) live in institutional care worldwide.[3] However, this number represents only 3% of the at-risk group. The official data is not fully reliable because of the low and inadequate quality of the data obtained from many countries, incomplete and late reporting, and the informality of some institutions. Adolescents in institutional care may experience problems due to the inadequate physical conditions of the facility, a lack of personnel, and overcrowding.[4,5]

In addition to problems such as insecurity, hopelessness about the future, and the social issues associated with living in an institution, which may be due to breakdowns in family relations and frequent transfers from one institution to another, the psychological resilience of adolescents is also negatively affected by feelings of rejection in their past lives.[6]

Psychological resilience is the ability of a person to successfully overcome and adapt to adverse conditions despite very difficult conditions.[7] In the development of resilience, it is important to define the risks to which an individual has been exposed and the negative effects of these.

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The risk factors that affect psychological resilience should be determined to reduce or eliminate the risks that prevent adolescents in institutional care from maintaining healthy physical and mental development and being able to integrate with the society in which they live.[8]

The level of psychological resilience is important in adolescents' perception of their self-sufficiency. Adolescents with high levels of psychological resilience adapt more quickly to adverse living conditions, have more self-confidence, and are better able to determine their future and solve their problems more effectively.[9,10] However, in studies on institutional care, it has been determined that the conditions experienced in many institutions are not suitable for the development of psychological resilience.

This systematic review aimed to reveal current approaches to the resilience of adolescents by examining studies that detect the risk factors affecting the resilience of adolescents living in institutional care, attempt to solve them and make recommendations regarding outcomes.

For this purpose, answers were sought to the following questions:

1. What are the risk factors (individual, familial, and environmental) that affect psychological resilience?
2. What are the possible solutions to the risk factors affecting psychological resilience?

## MATERIAL AND METHODS

This research is a systematic review that examines the studies that identify the risk factors affecting the resilience of adolescents living in institutional care, tries to solve them, and makes suggestions regarding the results. The research was conducted as a systematic review of the studies on the subject, compilation, and interpretation of the data obtained.

In this systematic review, the Centre for Reviews and Dissemination (CRD) 2009 guide was examined, and the summary of the data is based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Statement Protocols (PRISMA-P) guideline.[11,12] In addition, a PRISMA flow diagram was created.

The study protocol has been registered in the International Prospective Register of Systematic Reviews (PROSPERO) database (CRD42021290596).

### MAIN POINTS

- The psychological resilience of adolescents in institutional care was negatively affected by individual risks (low communication skills, low self-esteem, low self-efficacy, etc.), familial risks (having a dysfunctional family, being a girl, being neglected and abused by family members, etc.), environmental risks (insufficient social support, lack of visitors to the institution), and their interactions with each other.
- Adolescents with inadequate psychological resilience in institutional care experience self-harm, aggression, anger control problems, academic success problems, etc. in both internal and external relationships.
- Psychological resilience models/guidelines should be developed and used to increase the awareness of institutional staff on behavioral and emotional problems that negatively affect the psychological resilience of adolescents and to improve their competencies through continuous training, in addition to risk prevention, mitigation, and psychological resilience development initiatives.

### Literature Search Strategy

The articles included in the study were reached by searching Turkish databases such as Ulakbim, the Turkish Medical Directory, the Turkish Psychiatry Directory, and English databases such as PubMed, the Web of Science, ScienceDirect, Medline, CINAHL, EBSCOhost, PsychInfo, and the Cochrane Library from November 1, 2021, including all years between 2011 and 2021.

The Medical Subjects Headingswere used for the correct English keywords, and the Türkiye Science Terms were used to create the Turkish equivalent of English keywords in the scanning process. In this regard, the research was conducted using the keywords '"adolescence" OR "adolescent" AND "resilience" OR "psychological resilience" AND "institutional care" OR "child protective services" OR "child welfare agencies" AND "risk" OR "risk factors".

**Inclusion Criteria:** This review concerned the psychological resilience of adolescents aged 10-19 living in institutional care. The inclusion criteria were as follows:

a. Studies published in Turkish and English between 2011 2021 and whose full text was available;
b. Quantitative studies (randomized controlled, quasi-experimental, prospective cohort, retrospective cohort, observational studies, descriptive study, cross-sectional studies) and qualitative studies;
c. Studies to identify individual, familial, and environmental risk factors that affect resilience and to prevent these risk factors or to increase resilience.

**Exclusion Criteria:** The exclusion criteria were as follows:

a. Studies that did not meet the article quality evaluation criteria;
b. Studies not written in Turkish or English;
c. Systematic reviews, meta-synthesis/meta-analysis studies, reviews, case reports, theses, papers published in the Book of Congress, and studies whose full text could not be accessed.
d. not between the ages of 10-19
e. not living in institutional care

## Study Selection

A literature search was conducted in the identified databases using predetermined search patterns, resulting in 1324 studies. Through the EndNote X9 program, 49 studies were eliminated due to duplication. After the elimination of duplications, a total of 1244 studies were eliminated in the title and abstract evaluation made by the researcher. The full texts of the remaining studies (n = 31) were then independently analyzed by 2 researchers for suitability and quality. Out of the total number of studies, 12 were excluded for not meeting the inclusion criteria, and 5 were excluded due to the inaccessibility of the full text. After the eliminations, a total of 14 studies were included in the systematic review. The steps for evaluating the articles included in the study are shown in the PRISMA Flow Diagram (Figure 1).

## Evaluation of the Quality of Evidence

The 12-question (minimum = 0; maximum = 12 questions) form developed by Polit and Beck (2009) was used to evaluate the methodological quality of the articles.[13] The form was evaluated as follows: 0-6 points = "weak," 7-8 points = "medium," and 9-12 points = "strong." The researchers evaluated the articles independently of each other, and those with a mean score of 7 and above were included in the further evaluation (n = 14). The Cohen's

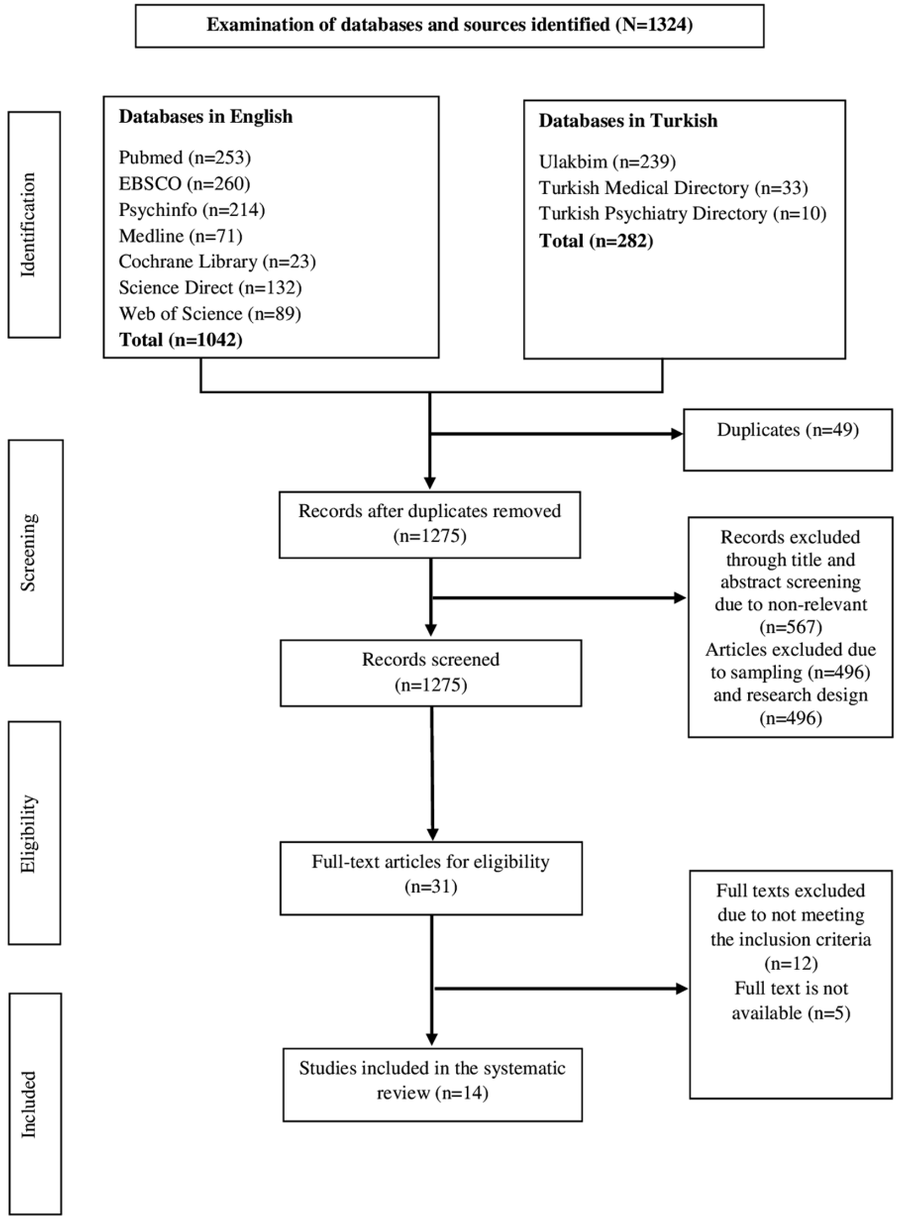


Figure 1. Study selection and inclusion flow diagram based on Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines.

kappa agreement score between researchers was found to be 0.81 (CI: 95%) (Figure 1).

## RESULTS

The main characteristics of all the studies included are summarized in Table 1.

### Characteristics of Studies

As shown in Table 1, the studies included in the systematic review (n=14) were published between 2011 and 2021. Most of the studies had a cross-sectional (n=12) design and used quantitative methods.[14-25]

Other studies, though, used mixed methods (n=1),[26] and qualitative methods (n=1)[27] combining qualitative and quantitative methodologies. Different methodologies such as focus groups, face-to-face interviews, and self-report measures were used to collect data (Table 1). When the data collection tools used in the studies were examined, face-to-face interviews and focus-group interviews (n=1);[27] and self-report measures (n=13),[14-25] were used (Table 1). Some studies used only adolescents as data sources (n=12).[14,16,19,23,25]

In addition to the article focusing on adolescents and institutional staff (n=1),[27] there was 1 study in which the institutional and school personnel (n=1),[25] were discussed together.

The studies were conducted in 3 different continents and eleven countries, namely, Canada (n=1), the Czech Republic (n=1), Croatia (n=1), India (n=1), Iran (n=1), Israel (n=2), Spain (n=1), Poland (n=1), Portugal (n=3), Singapore (n=1), and Thailand (n=1) featured in the studies.

### Sample Population

The 14 studies reviewed included data on a total of 2651 adolescents. The lowest sample size among the studies was 20,[27] while the highest was 467.[22] Adolescents included in the systematic review were between the ages of 10-19, with a mean age of 12.92 years. Examining the studies by gender, 1193 participants were female (45%) and 1119 were male (55%). Only 1 study did not include data on the gender of the participants.[16] A large majority of the participants consisted of adolescents living in full-time institutional care (n=1980, 80.39%). Other participants included adolescents living with their families but in contact with the institution (n=483, 19.61%). The length of stay of the adolescents living in the institutions varied between 24 months (minimum) and 16 years (maximum), and some adolescents had remained in institutional care for more than 10 years (n=98, 4.95%).

### Measurements of Resilience

Twelve of the studies included used accurate, valid, and reliable measures aimed at finding a specific definition of resilience. The most commonly used scale was the Resilience Scale (n=3). This scale evaluates equality, perseverance, self-confidence, meaningfulness, and existential loneliness with the concept of resilience. Another frequently used scale was the Child and Youth Resilience Measure (n=2). This scale measures personal and social skills, caregiver relationships, sense of belonging, peer support, physical and psychological care, and educational, religious, and spiritual beliefs.

Half of the scales used in the studies was intended to measure internal resources relating to resilience (self-efficacy, self-esteem, self-awareness, sense of humor, empathy, problem-solving skills, ability to express and manage emotions, optimism, cooperation, and communication) (n=7), while 5 of them were intended to measure external resources relating to resilience (parent/caregiver relationship, peer support, school and teacher relationship, and support) (n=5). Although more than 1 measurement tool was used, all the scales aimed to determine the current resilience level of the adolescent from different perspectives. The scores obtained from the scales were at a medium level and greater.[14,15,21,23]

### Outcomes of This Systematic Review

Examining the outcomes of this systematic review, risk factors may include individual characteristics, familial and environmental factors, or situations arising from the interaction of these dimensions. What matters is to determine how the existing risk can be reduced, stopped, or even prevented, regardless of which of these dimensions is present.

### Individual Risk Factors for the Development of Resilience

**Communication Skills:** Adolescents who live in institutional care and cannot communicate effectively with important figures other than their families (institutional and/or school staff, mentors) have been found to manifest behaviors including self-harming, aggression, anger, and anger management issues. In addition, these adolescents have lower levels of psychological resilience than other adolescents in the institution. It has been determined that the psychological well-being and sense of hope increase in adolescents who are able to establish bonds with important figures, identify with them, and can engage in high-quality communication.[19,20,25]

**Self-Esteem:** The level of psychological resilience of adolescents living in institutional care with low self-esteem was found to be lower than that of other adolescents in the institution. Adolescents with lower self-esteem and resilience levels were less able to identify with the aims and values of the schools they attended and had a lesser sense of "belonging" to the school.[14]

**Table 1.** Characteristics and Results of Examined Studies

| First Author (Year), Location | Study Design | Sample Characteristics: Number (n), Age (years), Gender | Aim | Resilience Measure | Relevant Findings |
|---|---|---|---|---|---|
| Chulakarn and Chaimongkol (2021), Thailand | Descriptive model-testing, cross-sectional | n=240, 10-14 years (mean=12, SD=1.31), n=122 (50.9%) of the adolescents were male and n=118 (49.1%) were female. All of them had resided in the homes for children for more than 6 months | To determine the factors affecting the resilience of adolescents living in institutional care | 25-item Resilience Factors Scale, the Self-Concept Scale the Classroom Engagement Inventory. | It was determined that problem-focused coping, self-concept, and school engagement had direct positive effects on resilience ($\beta$=+0.49, $\beta$=+0.32, $\beta$=+0.18, $P < .001$, respectively) |
| Collin Vezina et al (2011), Canada | Cross-sectional | n=53, 14-17 years (mean=15.5 SD=1.1), n=24 (45%) of the adolescents were male and n=29 (55%) were female. All were living in institutional care | To describe the trauma experiences, trauma-related sequelae, and resilience characteristics of adolescents in institutional care | The Child and Youth Resilience Measure (CYRM), the Trauma Symptom Checklist for Children. | Multiple abusive or neglectful experiences were found to significantly impact 3 subcategories of resilience: individual ($P < .01$); relational $P < .001$) and community ($P < .01$) |
| Davidson-Arad and Navaro-Bitton (2015), Israel | Cross-sectional | n=286, 13-17 years (mean=15, SD=2.82), n=71 (24.8%) in institutional care, 63 (22%) lived in foster families, and 152 (53.2%) at home | To compare the resilience levels and predictors of resilience of maltreated adolescents in foster care with those of maltreated adolescents in institutional and community care | Resilience and Youth Development Module, the Children's Report of Parent Behavior Inventory | It was determined that girls were more resilience: general resilience $P < .05$); internal resilience ($P < .05$); external resilience ($P < .01$) |
| Go et al (2017), Singapore | Cross-sectional | n=130, 13-19 years (mean=15.1, SD=1.58). n=61 (46.8%) of the adolescents were male and n=69 (53.2%) were female. All were living in institutional care | To evaluation of the effect of multiple maltreatment on anger control and behavior problems | Child and Adolescent Needs and Strengths and Multi-type Maltreatment Scale | In this study, it was found that n=52 (40%) of the sample had anger control problems and n=32 (25%) had behavior problems. Additionally, when the participants with conduct problem compared with the participants with no conduct problem; talents/interest, educational support, and applied strengths predictors were found to be significantly different ($P < .05$). On the other hand, maltreatment composite and family relationships predictors did not show significant difference ($P > .05$) |
| Lemos, Brás, Lemos and Nunes (2021), Portugal | Quantitative, comparative study, with a cross-sectional and descriptive correlational analysis | n=266. 12-19 years (mean=14.98, SD=1.92), n=105 (39.5%) of the adolescents were male and n=161 (60.5%) were female. Of the sample, n=125 (47%) adolescents lived in institutional care, and n=141 (53%) lived with their families | To determine the differences in psychological distress symptoms and in resilience assets in institutionalized and non-institutionalized adolescents | Healthy Kids Resilience Assessment Module, Brief Symptom Inventory. | Results show a significant and inverse relationship between psychopathology and the perception of individual resilience assets, specifically with self-efficacy and self-awareness in the community sample ($r$=-0,24 and $r$=−0,26; $P < .05$, respectively). For the institutionalized sample, only empathy had a significant correlation with psychopathology ($r$=+0,32, $P < .05$) |

(*Continued*)

**Table 1.** Characteristics and Results of Examined Studies (Continued)

| First Author (Year), Location | Study Design | Sample Characteristics: Number (n), Age (years), Gender | Aim | Resilience Measure | Relevant Findings |
|---|---|---|---|---|---|
| • Mota and Matos (2015), Portugal | Cross-sectional | n = 246, 12-18 years (mean = 14.87, SD = 1.79). n = 114 (46.3%) of the adolescents were male and n = 132 (53.7%) were female. Fourteen adolescents had lived for more than 10 years in the institution. | To determine the effect of adolescents' relationships with important people in institutional care on resilience and well-being | Relationship to Significant Figures Questionnaire, Resilience Scale, Psychological Well-Being Manifestation Measure Scale | The quality of the relationship with significant figures (teachers, school, and institution staff) showed significant positive correlations with resilience ($r$ between +0.21 to +0.46, $P < .05$). |
| • Mota and Matos (2016), Portugal | Cross-sectional | n = 202, 12-18 years (mean = 14.96, SD = 1.80), n = 92 (45.5%) of the adolescents were male and n = 110 (54.5%) were female. Nine adolescents had lived for more than 10 years in the institution. | To identify the role of teachers and institution staff in increasing the resilience of adolescents in institutional care | Relationship to Significant Figures Questionnaire, Deviant Behaviors Scale, Resilience Scale | The quality of the relationship (teachers and institution staff presented) with significant figures was positively related to resilience ($\beta = +0.43$, $P < .05$), and negatively related to deviant behavior ($\beta = -0.18$, $P < .05$). A significant association was found between the length of stay in the institution and deviant behaviors ($P < .05$). It was determined that 15-18-year olds showed higher levels of deviant/self-harming behavior (mean = 2.11, SD = 1.03) |
| Nourian et al (2016), Iran | Cross-sectional | n = 223, 13-19 years (mean = 15.22, SD = 1.73), n = 71 (32%) of the adolescents were male and n = 152 (68%) were female. Their mean duration of the time spent in care was 8 years | To determine the factors affecting resilience in adolescents in institutional care | Wagnild and Young Resilience Scale | There was no significant relationship between gender and resilience level ($P = .008$), however, the level of resilience was found to be significantly higher in female adolescents. A significant correlation was observed between education level and resilience level ($P < .001$) |
| Novotny and Kremenkova (2016), Czech Republic | Comparative, relationship seeker | n = 467, 13-19 years (mean = 16.44, SD = 1.40), n = 222 (47.5%) of the adolescents were male and n = 245 (52.5%) were female. n = 95 (20.3%) of the Roma adolescents and n = 182 (39%) of the Caucasian adolescents lived in institutional care, and n = 190 (40.7%) adolescents lived at home | To assess the relationship between resilience and academic performance in youth living in institutional care | The Child and Youth Resilience Measure, the Resiliency Scales for Children & Adolescents. Academic performance was assessed using the Youth Self-Report Questionnaire | Resilience accounted for 24% of the variance in academic performance ($R^2 = 0.23$, $P = .001$), considering the following predictors: relations with caregivers, physical care, psychological care, emotional reactivity, length of stay in residential care were significantly associated with academic performance scores |
| Oginska-Bulik and Kobylarczyk (2015), Poland | Cross-sectional | n = 60, 11-17 years (mean = 14.80, SD = 2.00), n = 29 (48.3%) of the adolescents were male and n = 31 (51.7%) were female. All were living in institutional care | To assess the relationship between resilience and social support in youth living in institutional care | Resilience Measurement Scale, Subjective Quality of Life Questionnaire for Children and Adolescents, and Scale of Social Support | Resilience and social support were found to be significant predictors of quality of life as a result of the regression analysis ($\beta = +0.34$ and $\beta = +0.32$; $P < .05$, respectively) ($R^2 = 0.28$) |

(*Continued*)

**Table 1.** Characteristics and Results of Examined Studies (Continued)

| First Author (Year), Location | Study Design | Sample Characteristics: Number (n), Age (years), Gender | Aim | Resilience Measure | Relevant Findings |
|---|---|---|---|---|---|
| Segura, Pereda, Guilera and Hamby (2017), Spain | Cross-sectional, quantitative | n=127, 12-17 years (mean=14.60, SD=1.61), n=62 (48.8%) of the adolescents were male and n=12 (51.2%) were female. All were living in institutional care | To determine the role of resilience in lifetime victimization among adolescents in institutional care | Adolescent resilience Questionnaire, the Juvenile Victimization Questionnaire(JVQ). Psychopathology was measured through through Youth Self-report/11-18 | In 2 different multivariate models where self and community support were separately tested as mediators to understand the effect of victimization on internalizing symptoms. The indirect effect of victimization through both mediating variables was found to be statistically significant ($P < .001$, $R^2=0.47$) and ($P=.002$, $R^2=0.15$), respectively) |
| Sulimani-Aidan and Tayri-Schwartz (2021), Israel | Cross-sectional | n=213, 16-19 years (mean=17.50; SD=0.88), n=122 (57%) of the adolescents were male and n=91 (43%) were female. Of these, n=83 (39%) were in institutional care facilities, n=60 (28.2%) in group homes; and n=70 (32.8%) lived in youth villages. The average length of stay in adolescent institutional care was 4.5 years | To explore the mechanism by which mentoring relationships and sense of belonging contribute to youths' life skills and hope | Resilience Scale, Mentoring scale, Sense of School Membership Scale | The adolescents who had a more supportive mentoring relationship ($\beta=+0.33$, $P=.001$) were found to feel significantly more belonging where they were placed in care and were ultimately more resilient ($\beta=+0.54$, $P=.001$) |
| Maurovic Krizanic and Klasic (2015), Croatia | Case-series, pilot intervention, mixed method | n=118, 14-18 years (mean=14.60, SD=1.61), n=87 (74%) of the adolescents were male and n=31 (26%) were female. All were living in institutional care | To determining the relationship between happiness and resilience levels of adolescents in institutional care | The List of Major Life Events/ Stressors, the Everyday Stress among Adolescents in Residential Care Scale, the Protective Mechanisms among Adolescents in Residential Care Questionnaire, the Subjective Happiness Scale | Level of happiness was found to be significantly correlated with the number of everyday stressors ($r=-0.30$, $P < .05$) but not significantly correlated with the number of major life events ($r=-0.13$, $P > .05$). The correlations with protective mechanisms were all statistically significant ($r$ between +0.32 to +0.44, $P < .05$) except caring relationships with the family members ($r=+0.18$, $P > .05$). The number of life events and everyday stressors predicted self-reported happiness, accounting for 7.3% of the variance. Once protective factors were included, they explained 22.9% of the happiness levels |
| Mishra and Sondhi (2019), India | Qualitative, exploratory focus groups | n=20, 12-19 years (mean=15.6, SD=1.84), n=8 (40%) of the adolescents were male and n=12 (60%) were female. All of them had resided in the homes for children for more than 2 years | To identify the role of institutional care in increasing resilience | Transcribed focus-group interview | It has been determined that institutional care increases adolescents' sense of self, gives hope for a better life, and strengthens their resilience by contributing to their development of positive behavioral changes |

The main characteristics of all the studies included are summarized.
$\beta$, standardized coefficients beta. $r$, Pearson correlation coefficient; $R^2$, the coefficient of determination.

### Self-Efficacy

In the studies included in the review, the psychological resilience levels of adolescents with low self-efficacy were also found to be lower than those of other adolescents. In addition, adolescents with low resilience had less peer and school support and experienced more mental problems.[24] According to the findings of Ogińska-Bulik and Kobylarczyk (2015), the self-efficacy levels of adolescents with low self-confidence were lower than those of other adolescents in the institution studied.[23] The perceived quality of life and general psychological resilience level were also low in adolescents with low self-efficacy levels.

### Problem-Focused Coping

According to the research, adolescents living in institutional care with few problem-solving skills had lower levels of resilience and only occasionally used internal resilience resources (self-efficacy, self-awareness, collaboration and communication, empathy, goals and aspirations, problem-solving skills). Problem-solving skills were found to be the strongest predictor of resilience.[14]

### Effects of Familial Risks on Resilience

**Dysfunctional Family:** The relevant studies showed that female adolescents living in institutional care had lower empathy levels than males due to deficiencies in their parent–child relationships, and that female adolescents showed more symptoms of psychological distress. The psychological resilience levels of female adolescents showing symptoms of distress were also lower than those of other adolescents.[18]

### Effect of Environmental Factors on Psychological Resilience

**Maltreatment:** In the studies reviewed, it was observed that the psychological resilience levels of girls who experienced more victimization in institutional care throughout their lives were lower than those of boys. Anger control and behavioral problems were found in adolescents who were exposed to various types of abuse and neglect (physical, emotional, sexual) in their family and social environment.[15,17,24]

**Social Support:** The level of psychological resilience of adolescents with less social support who were living in an institution was lower than that of adolescents who were receiving social support. Adolescents with lower social support showed more externalizing disorder symptoms (uncontrollable emotions, irritability, and aggressive behaviors, difficulty in obeying rules and maintaining personal relationships, etc.).[23,24] It was reported that the psychological resilience levels of adolescents who had no visitors in the institution were lower than adolescents who were frequently visited by their parents or had another visitor at least once a week.[21]

Common limitations in the studies included in the systematic review were the lack of statistically significant relationships in some analyses due to the small sample size of the studies reviewed, the fact that the samples represented only 1 country, and the fact that more than half of the studies used a cross-sectional study design, limiting their generalizability. This situation meant that researchers were limited in their ability to explain the risk factors affecting psychological resilience. In addition, the data were obtained only through the self-report of the adolescents, and the differences arising from the data collection methods can also be considered as common limitations. It was recommended that future research include additional perspectives (institutional staff, teachers, caregivers, etc.) to gain a more holistic understanding of the factors that affect young people's lives.

Limitations in the results about the individual, familial, and environmental risk factors that affect psychological resilience included the fact that there were no findings relating to the lack of gender balance among the adolescents in institutional care, not specifying the reasons for placement in the institution, and the different life difficulties encountered by adolescents in pre-institutional and institutional care. These limitations meant that the extent to which these situations affected adolescents' self-resources (emotional insight, self-efficacy, self-awareness, emotion regulation skills, coping skills, etc.) could not be explained. Individual recommendations to strengthen psychological resilience included developing competencies such as self-efficacy, attachment and self-regulation, implementing peer programs, providing opportunities for social activities, conducting further studies on how to improve the skills of the individual, and applying resource-oriented strategies to help balance the risk factors.

Researchers have suggested that young people be educated in planning and organizing their daily lives, and that the personnel employed in institutions be able to help manage the behavioral and emotional difficulties that adolescents face, help them structure their daily lives, and provide them with guidance and care. It has been suggested that institutional staff have an awareness of the common difficulties and problems experienced by adolescents and how to manage them and be given the opportunity to develop these competences through continuing education.[23,24,26] Researchers have suggested that social support is extremely important for adolescents in institutional care and that psycho-educational programs focusing on communication skills and social support skills program should be planned in order to improve adolescents' social skills and relationships. In addition, it has been suggested that planning extracurricular activities in the institution and/or school and ensuring the participation of adolescents may have a positive effect on academic performance and school attendance.

In general, in order to ensure the generalizability of the findings of the researchers, it has been recommended that the quality of institutional care be improved, that studies be conducted that include different countries and cultures, that longitudinal studies that address individual, familial, and environmental risk factors that affect resilience also be conducted, and that a comprehensive resilience model be created from the results.

## DISCUSSION

The purpose of this systematic review was to use the information found to inform future research and/or practice, with the overarching goal of identifying, combating or removing the individual, familial, and environmental risk factors that affect the resilience of adolescents living in institutional care. The aim is to reveal current approaches to the resilience of adolescents living in institutional care.

Half of the studies included in this review measured the positive personality traits and strengths that aided the adjustments required for resilience, basic protective factors related to being healthy, and the level of resilience.

Three studies focused on life skills (as the practical/concrete domain), hope (as the mental/psychological domain), emotional and behavioral needs, characteristics of the adaptations made that demonstrated the psychological resilience of adolescents, and the effects of daily stress factors on psychological resilience.[18,22]

According to more than half of the studies reviewed, low self-confidence,[16,17,23] low self-respect,[17,23,24] low self-efficacy, and poor problem-solving skills[14,17] were individual risk factors that affected resilience.

In the literature, adolescents with low intelligence/cognitive ability, a chronic or mental illness, a disagreeable temperament or shy personality, a sense of hopelessness for the future, and who tended to avoid taking responsibility were found to have low psychological resilience levels.[28,29] Adolescents with high psychological resilience keep their lives under control and see unexpected situations as opportunities for improvement. These adolescents see themselves as worthy of being loved and respected, evaluate themselves in a healthy way, can communicate effectively, and have high self-esteem.[30,31]

In order for the adolescent in institutional care to gain social competence and strengthen their individual resilience, social and emotional skills programs that will support and develop the personalities of adolescents should be included in schools.[22,32,33] These programs will contribute to the development of emotional skills by providing adolescents with social communication and cooperation, enabling them to establish friendships, solve problems in the community, be more sensitive, attentive, and loving, and have respect for their immediate environment.

Six of the studies reviewed in this review included familial risk factors including physical, emotional, psychological neglect and abuse.[15,19,20,24,26,27] In addition, 6 studies identified socioeconomic poverty, parental loss, parental illness or psychopathology, and parental substance/alcohol abuse as risk factors.[14,16,26,27]

In general, familial risk factors in the literature include illness, divorce, single parenthood, poor relationships between parents, child and family violence, neglect, and abuse.[34,35]

In the study of Sağlam (2014), in which he compared the psychological characteristics of young adults who grew up in an orphanage with the psychological characteristics of individuals who grew up with their families, it was found that the average level of psychological resilience of individuals who grew up in a family home was higher than that of those who grew up under institutional care.[36]

In the study examining the relationship between psychological resilience, self-esteem, coping styles, and psychological symptoms of adolescents with divorced parents, it was found that coping with stress and having high self-esteem contributed positively to the psychological resilience of adolescents with divorced parents, and psychological resilience led to a decrease in psychological symptoms.[37]

The family situation and the mental and physical health of the child are all important for the development of his or her personality, and considering that psychological resilience develops in early childhood, the impact of family life is enormous. Considering the trauma of separation at a young age, the failure to maintain family ties, separation from siblings, frequent transfers of accommodation, and the limited attention provided by caregivers, the emotional development of children who have been deprived of a healthy family environment and have grown up in institutional care will be adversely affected, as will their psychological resilience.

The studies included in the review state that there is a need for a sufficient number of institutional personnel who will take an interest in the children and adolescents in their care and be able to intervene immediately in their problems so that they can continue their lives in a safe environment.[19,20,25] Therefore, every residential care setting needs experienced institutional staff who can monitor the physical, mental, and social development of adolescents. In addition, special efforts should be made to maintain the relationships of adolescents with their families and relatives, and to ensure that siblings are placed in the same institution.

According to 6 of the studies, the absence of institutional and/or school personnel or the support of a mentor[14,19,20,23,24,26]; socioeconomic poverty[14,16,26,27]; physical, emotional, and sexual abuse of the child[15,20,24,27]; peer rejection[22,23,26]; poor academic performance[20,23]; and

being stigmatized as an "orphan" [27] were environmental risks that affected psychological resilience.

In the literature, the psychological resilience levels of adolescents exposed to both poverty and other risk factors have been examined; it has been revealed that participation in school activities has a positive effect on psychological resilience scores by promoting self-confidence and providing feelings of success and acceptance by others. In addition, it was found that there was a significant relationship between the social support of adolescents' relatives, teachers, and friends outside the family and psychological resilience.[38 39]

Saral (2013), in a study examining the coping styles of adolescents living in institutional care, determined that the adolescents who lived in the institution with their siblings and received support from at least 1 mentor, had more social support and experienced less loneliness than other adolescents. It has been stated that as the duration of the adolescents' stay in the institution increases, they seek more help in the face of problems and accept more social support.[40]

The positive social relationships established during adolescence have a special importance in the lives of individuals. When adolescents receive emotional and psychological support from these relationships, they develop self-efficacy through their friendships and gain many social and physical skills.[41,42] Adolescents who have strong social ties and whose families provide a suitable, nurturing environment, which meets their needs and allows them to develop interests and social relationships, are expected to be successful in life. However, adolescents in institutional care are an important group within any society. In order for children and adolescents in this group to develop, they need to be provided with an appropriate environment, social support, and sustainable relationships in a structured way.

A situation that requires a child or adolescent to be taken into the care of the state is mostly caused by the environment in which the child lives, not the child themselves. If the adolescent is not safe in their current environment, intervention is required. Psycho-social support should thus not only be given to children in institutional care, but also be provided to families and schools and should focus on the "individual in their environment".

Many risk factors in the adolescent's environment, such as poverty, abuse, peer bullying, social violence, and ineffective social support, can create obstacles that prevent adolescents from coping with negative events.[43] Another environmental risk identified was exposure to traumatic events. People can be exposed to traumatic experiences that have many long- and short-term negative consequences, especially in early childhood. The adolescent's perspective about human relationships and life in general can be shaped by traumatic experiences, and the social roles they inhabit can bear the traces of this trauma.[44,45]

Three studies included in the review found that the adolescents had been exposed to physical and emotional neglect and abuse by adults in their immediate environment before they had arrived at the institution.[14,21,22] The psychological resilience level of these adolescents was found to be lower than that of those who were not exposed to such abuse. Similar results are also found in the study of Flores, Cicchetti, and Rogosch (2005). In their study with 113 Latino children, the psychological resilience levels of children who had experienced childhood trauma were lower than those of children who had not.[46]

Studies in the review and related literature have emphasized that it is important to strengthen the self-confidence of adolescents who live in risky environments such as institutional care and who cannot effectively cope with the abuse and trauma they experience.[15,17,24] In order to strengthen self-confidence in adolescents, it has been suggested that emotional regulation strategies be provided through practices such as individual and/or group psychotherapy.[31] To better understand causal effects, it has been recommended that future studies be planned as longitudinal and qualitative studies, rather than studies using self-report measures.[15,17,24] Despite the differences in assessment tools and study samples, all the studies consistently demonstrated the effects of many individual, familial, and environmental factors, including self-esteem, self-efficacy, self-awareness, empathy, collaboration and communication, problem-solving skills, the parent-child relationship, the relationship with the institution and school staff, and peer support on the resilience levels of adolescents. It is believed that adolescents who are not able to understand how these factors connected to resilience relate to themselves, their families, and their social circles will be at risk throughout their lives.

This review is strong in terms of sample diversity because the studies about the phenomenon of resilience and the risks affecting resilience in adolescents in institutional care were mostly conducted in developed countries (Canada, Poland, Spain, etc.) and because adolescents from different cultures and ethnicities were included. However, no study was found in the national literature or in African countries that met the inclusion criteria. In these regions, there are many children and adolescents in alternative care with region-specific risk factors that affect their psychological resilience. Future studies examining these issues may provide different perspectives.

In addition, different periods of adolescence (early, middle, late) were not categorized in the studies included in this review. Not examining the difference between the psychological resilience of adolescents in these 3 different periods can be considered as a limitation. İt is possible that the institutions involved may not have provided researchers with information about the type of maltreatment that

adolescents experienced, and this study may thus be limited in explaining the effects of different types of abuse on resilience. Other limitations are that more than half of the studies in the review were based on quantitative data and adolescent self-report, using quantitative data in only 1 study and a mixed (qualitative and quantitative combined) design in 3 studies. For this reason, it would be useful to use qualitative studies or mixed (qualitative and quantitative) designs in order to see the relationships between variables in more detail in future studies.

## CONCLUSION

This systematic review found no studies on preventive programs, interventions or evaluation of interventions designed to reduce the frequency and prevalence of adverse situations that adolescents growing up at risk may encounter in the future.

The studies discussed focused on identifying risks affecting resilience in adolescents living in institutional care and did not identify a common understanding of care in child protection systems originating from the different sociocultural structures.

The studies cited found that institutionalized adolescents who grow up under risky and difficult living conditions are more vulnerable, experience more emotional and behavioral problems, and have difficulty in reaching optimal health compared to adolescents who are not in care (e.g., adolescents living in foster families or with their families).

In order to strengthen psychological resilience in institutional care, it is necessary to offer an approach that aims to reduce or eliminate the existing risk in the environment where the child and adolescent lives. In this approach, it should be aimed at improving these problems at the first moment by anticipating the conditions that may cause problems without any minor or negative experience in the adolescent's life. In existing risky situations, the existing qualities of the adolescent should be improved in order to reduce the impact of the risk. Effective strategies are needed to facilitate the mobilization of support resources (family, institution, school, community) that will increase the competence of adolescents.

In this sense, it should be ensured that all personnel working in institutions (from security guards to professional staff) are specialized in this field; no compromises should be made on this issue in the recruitment of new personnel, and merit should be taken into consideration. For the qualitative development of the existing staff, standard, adequate, periodic, in-service trainings that feed into each other should be prepared, and the active participation of all staff should be ensured. Teachers and psychological counselors working in schools should prepare various psychological counseling and guidance programs that increase psychological resilience, especially for students at risk, and provide support to these students.

Both the institution and schools should help adolescents gain the ability to adapt and cope in the face of adversity, increase their resilience to traumatic life events, and develop skills to solve interpersonal problems or to provide social support from their environment.

There is a need to establish a common national standard and procedure for determining which services are to be provided by which institutions and organizations, when and under what conditions. In order to determine the responsibilities of persons and institutions responsible for the protection of children and adolescents, there is a need for participation in joint implementation and pilot study meetings and the creation of an environment where experiences can be shared to test the validity and effectiveness of different models. In addition, active participation in all activities and services related to children and adolescents and in all decisions concerning the lives of children and adolescents should be supported to ensure that each individual is perceived as an equal citizen.

Through research on psychological resilience in different risk groups and ages, it may be possible to determine the factors that contribute to increasing the psychological resilience of children and adolescents at risk in different cultures and to identify the various risk factors mentioned earlier. This research can also help in developing preventive programs in line with the results.

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