

Are Resilient Factors Increasing the Risk for Childhood Psychological Victimization?

Dimitrinka Jordanova-Peshevska^{1*}, Fimka Tozija²

¹Faculty of Political Science and Psychology, University American College, Skopje, Republic of Macedonia; ²Institute of Public Health of Republic of Macedonia, Medical Faculty, Ss Cyril and Methodius University of Skopje, Skopje, Republic of Macedonia

Abstract

Citation: Jordanova-Peshevska D, Tozija F. Are Resilient Factors Increasing the Risk for Childhood Psychological Victimization? Open Access Maced J Med Sci. 2018 Jun 20; 6(6):1168-1173. <https://doi.org/10.3889/oamjms.2018.272>

Keywords: psychological abuse; risk factors; resilience; adolescents

***Correspondence:** Dimitrinka Jordanova-Peshevska. Faculty of Political Science and Psychology, University American College, Skopje, Republic of Macedonia. E-mail: jordanovapesevskad@gmail.com

Received: 17-May-2018; **Revised:** 04-Jun-2018; **Accepted:** 06-Jun-2018; **Online first:** 17-Jun-2018

Copyright: © 2018 Dimitrinka Jordanova-Peshevska, Fimka Tozija. This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC 4.0)

Funding: This research did not receive any financial support

Competing Interests: The authors have declared that no competing interests exist

BACKGROUND: Understanding the resilient factors and why some children do well despite early adverse experiences is crucial, because it can inform more effective policies and programs that help more children reach their full potential.

AIM: The main objective of the study is to describe the associations between psychological abuse in childhood and resilient risk factors on individual, relational, contextual level among adolescents in the country and see the probability of resiliency to predict psychological victimisation.

MATERIAL AND METHOD: Cross-sectional study on two-stage quota sample of 622 university students was applied in the study, including adolescents at first and second year at the main public Ss Cyril and Methodius University of Skopje, from the 12 faculties in the country. *Adverse Childhood Experiences Study International Questionnaires* was used for collecting information on psychological abuse, while the individual, relational and contextual resilient factors were measured using the *Child and Youth Resilience Measure - Youth version*. The study was conducted from March to September 2017. Statistical significance was set up at $P < 0.05$.

RESULTS: The results from the study have shown statistically significant negative correlation between exposure to psychological abuse in childhood and individual ($rpb = -0.159$), relational ($rpb = -0.263$), contextual factors ($rpb = -0.147$), and resilience in total ($rpb = -0.232$). The regressive model presents that 5.2% of the variance of the variable experienced psychological abuse is explained with resilience ($F(1, 527) = 28.909$; $P < 0.001$), showing that resilience is negatively significant predictor for being psychologically abused in childhood ($\beta = -0.228$; $t = -5.377$; $P < 0.001$). The regressive model explains the individual contribution of the predictor variables for the psychological abuse, presenting that only caregiver resiliency is a significant predictor for psychological abuse ($\beta = -0.282$; $t = -4.986$; $P < 0.001$).

CONCLUSION: Supporting children through prevention means foster competence and prevent problems. Preventive programmes represent developing protective factors in childhood, increasing competence and skills for the growth of resilience and decreasing the likelihood of developing psychopathology in adolescence and adulthood. It is of common interest of society for implementation of evidence-based interventions with fostering settings and in the long run enabling positive childhood basis for future generations.

Introduction

Epidemiological evidence links adverse experiences of abuse and neglect in childhood with resilience. Understanding the resilient factors [1] [2] [3] and why some children do well despite adverse early experiences is crucial, because it can inform more effective policies and programs that help more children reach their full potential.

The most influential study of Garmezy, 1970

conducted on children living with a schizophrenic parent, established a foundation for the study of resilience [4]. For the first time, he introduced the term "protective factors" that help individuals to overcome the negative effect of adverse experiences, resulting in positive development [2]. According to the findings of his research, although children living with a schizophrenic parent increases the risk of developing illnesses, an incredible 90% of children in this study do not develop the disease [4]. Researchers began to present findings that speak of positive results that can be achieved despite the negative life events and

experiences of children to plan interventions to promote mental health among children at risk. Evidence-based interventions were evaluated that promote mental health among children at risk. Also, the resilience may be different in different life phases [5] [6]. Resource studies focused on factors or features that help individuals successfully cope with the negative experiences [5]. As research in the field of resilience has progressed, it has become increasingly evident that in addition to research aimed at understanding the characteristics of resilience, attention should also be focused on the study of interventions and prevention programs [7] [8].

Early efforts were primarily focused on personal qualities of “resilient children,” such as autonomy or high self-esteem [9]. How work in the area evolved, however, researchers increasingly acknowledged that resilience might often derive from factors external to the child. Subsequent research led to the delineation of three sets of factors implicated in the development of resilience: (1) attributes of the children themselves, (2) aspects of their families, and (3) characteristics of their wider social environments [9] [10] [11].

The development of children around the world is threatened by disasters, violence, pandemics, and other adversities that can have life-altering consequences for individuals, families, and the future of all societies [12]. These adversities have raised global concerns about dangers posed to children as well as the future of societies and renewed attention to resilience across many fields of research.

During the last few decades, there has been a growing interest in the concept of resilience [13]. The starting point in understanding the term resilience refers to the phenomenon of responding to stress or adversity. The concept of resilience has been defined in many various ways depending on from the components of the construct of resiliency, its dimensions, underlying processes, conceptual models, identifying factors contributing to resiliency, and empirical findings. Resiliency, or resilience, is commonly explained and studied in the context of a two-dimensional construct concerning 1) the exposure of adversity and 2) the positive adjustment outcomes of that adversity [14]. Rutter has defined resilience including... “protective factors which modify, ameliorate or alter a person's response to some environmental hazard that predisposes to a maladaptive outcome” [13]. Masten [12] has broadly defined resilience ...as the capacity of a dynamic system to adapt successfully to disturbances that threaten system function, viability, or development. Luthar and colleagues consider resilience as ... “a dynamic process encompassing positive adaptation within the context of significant adversity” [14].

Lee and Cranford defined resilience...“as the capacity of individuals to cope successfully with significant change, adversity or risk” [15], and also

Leipold & Greve sees resilience as capacity to resist and recover despite adversity ...“as an individual's stability or quick recovery (or even growth) under significant adverse conditions” [16].

Subsequently, ecological systems theory, articulated by Bronfenbrenner [17], and Garmezy (5), functioned as a way to examine the interplay between individuals and their environments and the resulting impact upon the individual's development.

Regarding the term adversity, Luthar et al., (2000) stated that adversity “typically encompasses negative life circumstances that are known to be statistically associated with adjustment difficulties” [14].

Analyzing resilience begins with an assessment of exposure to adversity and the impact risk factors have on children's experience of wellbeing. Large cohort studies have shown that adverse childhood events such as neglect and exposure to family violence exert long-term deleterious effects on mental and physical health [18]. These processes of successful adaptation in situations where there is abnormally high environmental load (the quality and quantity of the adversity that is experienced) have been attributed to a range of biological, psychological, relational, and sociocultural factors, some more likely to respond to clinical interventions than others [19]. Given the multidimensionality of the processes associated with resilience, the likelihood of individual children withstanding the impact of cumulative stressors is not a measure of their invulnerability [20]. Instead, resilience is predicted by both the capacity of individuals, and the capacity of their social and physical ecologies to facilitate their coping in culturally meaningful ways [21].

Based on the work of the Resilience Research Centre, Michael Ungar (2005) makes comprehensive explorations of resilience based on mixed methods (quantitative and qualitative) study including over 1500 youth across various cultures [21] [22]. They explained that resilience is “a multidimensional construct, the definition of which is negotiated between individuals and their communities, with tendencies to display both homogeneity and heterogeneity across culturally diverse research settings” [21]. In the later work he [23] [24]. Understand resilience as a social-ecological construct. According to him [24] ...“resilience is defined as: 1) the capacity of individuals to navigate their ways to resources that sustain well-being; 2) the capacity of individuals' physical and social ecologies to provide those resources; and 3) the capacity of individuals and their families and communities to negotiate culturally meaningful ways to share resources.”

The paper intends to explore the relationship between the experience of psychological abuse in childhood and resilience risk factors on individual, relational, contextual level in adolescents.

Additionally, we want to explore the likelihood of psychological victimisation related to the resilience.

Material and Methods

Study design and sample

The cross-sectional study on two-stage quota sample comprised of 622 first and second-year university students aged 17-19 years, 417 (67%) of whom were male and 215 (33%) female. According to the ethnicity, 80% of students are Macedonians, 10.1% Albanians, 1.2 Serbians, 0.3% are Roma and under others are 8,2% students. Predominantly 83% of students are from urban areas, while only 17% are coming from the rural environment. Predominantly (83%) of study participants were from urban areas as presented in Table 1.

Table 1: Descriptive statistics: gender, ethnicity, urban/rural

Variables	n (%)
Gender	
Male	206 (33.12)
Female	416 (66.88)
Ethnicity	
Macedonian	498 (80.06)
Albanian	63 (10.13)
Roma	2 (0.32)
Other	56 (9)
Refuse to answer	3 (0.48)
Place of living	
Urban	516 (82.96)
Rural	106 (17.04)

The sampling procedure applied two stages. At the first stage of sampling procedure, selection has been made randomly by electing every second faculty from the website list of the 23 faculties from the biggest public university "Ss Cyril and Methodius University of Skopje" [25]. The following faculties have been included in the sample: Faculty of Architecture, Faculty of Economics, Faculty of Medicine, Faculty of Law; Faculty of Dentistry; Faculty of Veterinary Medicine, Faculty of Drama Arts, Faculty of Agricultural Sciences and Food, Faculty of Fine Arts; Faculty of Physical Education, Sport and Health; Faculty of Philosophy; and Faculty of Forestry.

In the second stage of sampling procedure, participants were selected so that the same percentage was included in the sample as per the percentage of the students enrolled in the first year in the academic 2015/2016 according to the State Statistical Office data [26].

Procedure

The participants were recruited from the largest public university in Republic of Macedonia "Ss Cyril and Methodius University of Skopje". At the beginning of the study, the selected 12th Faculties

have been contacted, and accordingly, an agreement has been done for conducting the study for the first-year university students. At the beginning of the study, the researcher explained issues of confidentiality, informed consent and the right to withdraw at any time or not answer certain questions. Participants were informed in written form of the general aims of the study and were asked to read and sign the consent form before participating.

After reading the information sheet and signing the consent form, participants completed questionnaire to assess abuse and resilience, including demographic characteristics. The questionnaire was administrated in the same order for all participants. Completion time required for the questionnaire was approximately 45 minutes. The researcher indicated that participation in the study was voluntary and that participants had the right to withdraw from the study at any time. The study was conducted from February to September 2017.

Measurement

Adverse Childhood Experiences Study International Questionnaires [27] was used for collecting information on psychological abuse in childhood. The questions on psychological victimisation in childhood were with multiple choice (many times-code 5; a few times-code 4; sometimes-code 3; rare-code 2; and never code 1. The questions begin with the phrase: When you were growing up, during the first 18 years of your life . . . Did a parent, guardian or other household member yell, scream or swear at you, insult or humiliate you? ..or ...Did a parent, guardian or other household member threaten to, or actually, abandon you or throw you out of the house?

Resilience (individual, relational and contextual resilient factors) was measured by using the *Child and Youth Resilience Measure 28 - Youth version* (CYRM-28), [24]. CYRM-28 has three subscales: individual capacities/resources, relationships with primary caregivers and contextual factors that facilitate a sense of belonging. Study participants were asked to state to what extent the sentences describe them asking to circle one answer for each statement on a five-point response scale (Not at All, A Little, Somewhat, Quite a Bit, A Lot) for some of the following statements: I have people I look up to; I know how to behave in different social situations; My parent(s)/caregiver(s) know a lot about me; am treated fairly in my community ...and other similar questions [24].

Permission for usage of the instruments has been obtained by the authors/institutions prior to the study. The study has been approved by the Scientific Advisory Board of the Medical Faculty at the "University St Cyril and Methodius, Skopje" in February 2017.

Statistical analysis

The Statistical Package for Social Sciences (SPSS v17) was employed, and a significance level of 0.5 was adopted. Before commencing statistical tests, data were screened for the accuracy of entered responses, missing data, and violations and assumptions. Statistical analysis included descriptive statistics (Mean and Standard Deviation), correlations and linear logistic regression.

Results

Descriptive statistics

The data regarding the descriptive statistics such as median (M), standard deviation (SD) and obtained a range of the scores for the variables: psychological abuse, individual, caregiver and contextual resilience, and resilience total in adolescents are presented in Table 2. The mean for psychological abuse is 3.68, and standard deviation of 2.01, scores ranging from 2-10. The mean for resilience is 114.4, while the standard deviation is 15.7, with scores ranging from 29-140. The descriptive statistics for the other types of resilience are presented in Table.

Table 2: Descriptive statistics for variables: psychological abuse, resiliency total, individual, caregiver and contextual resilience

	M	SD	Obtained range of scores
Psychological abuse	3.68	2.01	2-10
Resilience total	114.4	15.7	29-140
Individual resilience	46.6	6.5	11-55
Relationship with Primary Caregiver	29.5	5.0	6-45
Contextual resilience	38.3	6.6	11-50

N = 622

Correlation and linear regression analysis

The findings showed statistically significant negative correlation between the individual resilient factors ($r = -0.159$), relational ($r = -0.263$), and contextual resilient factors ($r = -0.147$) as well as resilience in total ($r = -0.232$) with exposure to psychological abuse in childhood as presented in Table 3.

Table 3: Correlation coefficients (r) between psychological abuse and individual, caregiver, contextual resilience and resilience in total

	Individual resilience (r)	Relationship with Primary Caregiver (r)	Contextual resilience (r)	Resilience total (r)
Psychological abuse	-0.159**	-0.263**	-0.147**	-0.232**

N = 622; *P < 0.05; **P < 0.01.

The results have shown that adolescents with higher level experiences of psychological abuse have

lower levels of individual, relational, contextual and resiliency in total as presented in Table 3. The findings showed a statistically significant negative correlation between the resilient (individual,) factors and exposure to psychological abuse in childhood that is in line with the actual literature evidence. The higher level experiences of adverse experience such as psychological abuse were associated with lower levels in resilient (individual, relational, contextual) factors.

In Table 4, the data were presented from the linear regressive analysis predicting psychological abuse by resilience, were total score of resilience has been calculated.

Table 4: Simple linear regression analysis results: predicting psychological abuse by the resiliency

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
	B	Std. Error				Lower Bound	Upper Bound
1	(Constant)	3.644	0.333	10.934	0.000	2.989	4.298
	Resilience	-0.429	0.080	-5.377	0.000	-0.585	-0.272

r = 0.228; R² = 0.052.

The regressive model revealed that 5.2% of the variance of the criteria variable psychological abuse is explained by resilience ($F(1.527) = 28.909$; $P < 0.001$). The findings show that resilience is an important predictor for experiencing psychological victimization in childhood ($\beta = -0.228$; $t = -5.377$; $P < 0.001$). Lower resiliency in adolescents increase the odds for the experience of psychological abuse. The linear regression analysis also confirmed that lower resilience factor is a statistically significant predictor for experiencing psychological victimisation.

Table 5: a Hierarchical linear regression analysis: predicting psychological violence by individual, caregiver and contextual resiliency

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95% CI for B	
	B	Std. Error				Lower Bound	Upper Bound
1	(Constant)	3.050	0.314	9.711	0.000	2.433	3.667
	Individual resiliency	-0.275	0.072	-3.804	0.000	-0.417	-0.133
2	(Constant)	3.661	0.326	11.219	0.000	3.020	4.302
	Individual resiliency	-0.003	0.087	-0.002	0.970	-0.173	0.167
	Caregiver resiliency	-0.418	0.077	-5.395	0.000	-0.570	-0.266
3	(Constant)	3.648	0.333	10.938	0.000	2.992	4.303
	Individual resiliency	-0.008	0.090	-0.091	0.928	-0.186	0.169
	Caregiver resiliency	-0.425	0.085	-4.986	0.000	-0.592	-0.257
	Contextual resiliency	0.016	0.084	0.194	0.846	-0.149	0.182

r = 0.279; R² = 0.078.

The hierarchical linear regression analysis suggests that three types of individual, caregiver and contextual resiliency explain 7.8 of the variance for the psychological abuse. Significant 2.7% is explained by individual resiliency ($F(1.527) = 14.471$; $P < 0.001$). Major significant part of 5.1% is explained by caregiver resiliency ($F(1.526) = 29.101$; $P < 0.01$), while contextual resiliency does not have significant contribution.

The third regressive model explains the individual contribution of the predictor variables for the psychological abuse, presenting that only caregiver resiliency is a significant predictor for psychological abuse ($\beta = -0.282$; $t = -4.986$; $P < 0.001$). The caregiver resiliency significantly contributes as a predictor for decreasing the risk for psychological victimisation.

Discussion

At the beginning of the investigation of the construct of resilience in the 1970s, researchers investigating children at risk for psychopathology noted that some children had good outcomes despite being exposed to risk [3] [28]. This discovery stimulated a search for specific differences in children who thrive in the face of adversity and generated a field of research on resilience [29]. The concept of resilience was significant as it signified a change in focus from mental illness to mental health [30]. This changing focus created an increase of research on protective factors that promote mental health and positive development in the face of risk and adversity [28].

The results of the current research showed that higher levels of psychological abuse experiences in childhood are associated with lower levels of resilient (individual, relational and contextual) factors, which is in line with other studies [13] [30]. As other study suggested, not all maltreated children develop maladaptively. Many abused and neglected children show positive, resilient functioning despite the pernicious experiences they have encountered and the ignominious treatment they have received [28] [31]. Adolescents who have higher levels of experience of psychological abuse in childhood, a lower level of resistance appears, not only for the overall resilience but also for individual, relational and contextual factors of resilience in the current study. Similar data were also obtained when studying the resilience in psychosocial studies, in which it was noted that children could adapt and deal despite the negative experiences that they had [5] [32].

The findings show that resilience is an important predictor of the being psychologically victimised among adolescents involved in the study. Adolescents with higher resilience are less likely to experience psychological abuse than those with lower levels of resilience. Longitudinal studies have produced similar empirical evidence of understanding of resilience [11] [33]. An influential study conducted by Hawaii-born children provided key information that resilience is a result of the impact of multiple risks [11] [33], giving prospective ecological studying the factors as suggested by Ungar [24]. According to this study, about one-third of children were resilient despite the

risks they experienced. These children continued to be resilient as adults [11]. The growth and development of children in environments dominated by protective factors are of paramount importance in reducing the likelihoods of experiencing psychological victimisation [22] [35].

There are available interventions based on evidence of reducing child abuse and neglect with an emphasis on protective factors that encourage the growth and development of children [27]. These protective factors can have a positive long-term impact on the development of the overall potential of future generations [36] [37]. Research demonstrates that resilient are important factors that can either increase or reduce the risk of victimisation, although the conclusions were drawn from relatively privileged population group of adolescents enrolled at the university.

The study findings highlight the need for investing in protective (individual, relational, contextual) factors in childhood as critical features in the development of resilience in young adolescents [36] [37] as well as increasing the self-esteem, competence and decreasing the likelihood of developing psychopathology. More evidence is needed analysing influence on various factors of adversity such as physical, sexual abuse, community violence, and family dysfunction to come up with more general conclusions and recommendations. To advance the understanding of resilience, it is essential that more longitudinal research is conducted that investigates the pathways to the resilient functioning and that simultaneously examines biological and psychological systems. Still, evidence-based interventions to reduce adverse childhood experiences are available with design and implementation of resilience-promoting interventions and in the long run setting up positive childhood surroundings for future generations.

Acknowledgement

I would like to express my deepest gratitude to Professor Michael Ungar, PhD, School of Social Work, Dalhousie University, Halifax, Nova Scotia, Canada, from the Resilience Research Centre to granting me with permission to reproduce and use the Child and Youth Resilience Measure and CYRM manual for this study.

I would also like to use to opportunity to express my sincere appreciation to Alexander Butchart, MA, PhD Coordinator, Violence Prevention, World Health Organization, Geneva, for providing me with permission for to reproduce and use the Adverse Childhood Experiences Study International Questionnaires.

References

1. Belsky J. Child maltreatment: An ecological integration. *Am Psychol*. 1990; 35:320-335. <https://doi.org/10.1037/0003-066X.35.4.320>
2. Belsky J. Etiology of child maltreatment: A developmental ecological analysis. *Psychol Bull*. 1993; 114: 413-434. <https://doi.org/10.1037/0033-2909.114.3.413> PMID:8272464
3. Belsky J, Jaffee SR. The Multiple Determinants of Parenting. In Cicchetti D, Cohen DJ, editors. *Developmental Psychopathology, Volume 3: Risk, Disorder and Adaptation*. 2nd ed. New Jersey. John Wiley & Sons, Inc., Hoboken, 2006. PMCid:PMC1482335
4. Garmezy N. Process and reactive schizophrenia: Some conceptions and issues. *Schizophr Bull*. 1970; (2):30-74. <https://doi.org/10.1093/schbul/1.2.30>
5. Garmezy N. Resilience in children's adaptation to negative life events and stressed environments. *Pediatr Ann*. 1991; 20(9):459-66. <https://doi.org/10.3928/0090-4481-19910901-05> PMID:1945543
6. Masten AS, Coatsworth JD, Neemann J, Gest SD, Tellegen A, Garmezy N. The structure and coherence of competence from childhood through adolescence. *Child Dev*. 1995; 66:1635-1659. <https://doi.org/10.2307/1131901> PMID:8556890
7. Luthar SS, Zigler E. Vulnerability and Competence: A Review of Research on Resilience in Childhood. *Am J Orthopsychiatry*. 1991; 61(1):6-22. <https://doi.org/10.1037/h0079218>
8. Luthar SS. Annotation: Methodological and conceptual issues in the study of resilience. *J Child Psychol Psychiatry J Child Psychol Psychiatry*. 1993; 34:441-453. <https://doi.org/10.1111/j.1469-7610.1993.tb01030.x> PMID:8509489
9. Masten AS, Garmezy N. Risk, vulnerability, and protective factors in developmental psychopathology. In. Lahey BB, Kazdin AE, editors. *Advances in clinical child psychology*. Vol. 8: New York, NY: Plenum Press, 1985. https://doi.org/10.1007/978-1-4613-9820-2_1
10. Werner EE, Smith RS. *Overcoming the odds: High risk children from birth to adulthood*. Ithaca, NY: Cornell University Press, 1992.
11. Werner EE. Risk, resilience, and recovery: Perspectives from the Kauai Longitudinal Study. *Dev Psychopathol*. 1993; (4):503-515. <https://doi.org/10.1017/S095457940000612X>
12. Masten AS. Global perspectives on resilience in children and youth. *Child Dev*. 2014; 85:6-20. <https://doi.org/10.1111/cdev.12205> PMID:24341286
13. Rutter M. Resilience in the Face of Adversity: Protective Factors and Resistance to Psychiatric Disorder. *Br J Psychiatry*. 1985; 147(6):598-611. <https://doi.org/10.1192/bjp.147.6.598> PMID:3830321
14. Luthar SS, Cicchetti, D, Becker B. The Construct of Resilience: A Critical Evaluation and Guidelines for Future Work. *Child Dev*. 2000; 71(3):543-562. <https://doi.org/10.1111/1467-8624.00164> PMID:10953923 PMCid:PMC1885202
15. Lee HH, Cranford JA. Does resilience moderate the associations between parental problem drinking and adolescents' internalizing and externalizing behaviours? A study of Korean adolescents. *Drug Alcohol Depend*. 2008; 96:213-221. <https://doi.org/10.1016/j.drugalcdep.2008.03.007> PMID:18440164
16. Leipold B, Greve W. Resilience: A conceptual bridge between coping and development. *Eur Psychol*. 2009; 14:40-50. <https://doi.org/10.1027/1016-9040.14.1.40>
17. Bronfenbrenner U. *The ecology of human development*. Cambridge, Massachusetts: Harvard University Press, 1981.
18. Felitti VJ, Anda RF, Nordenberg D, Williamson DF, Spitz AM, Edwards V, Koss MP, Marks JS. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The adverse childhood experiences (ACE) study. *Am J Prev Med*. 1998; 14(4): 245-258. [https://doi.org/10.1016/S0749-3797\(98\)00017-8](https://doi.org/10.1016/S0749-3797(98)00017-8)
19. Cicchetti D. Annual Research Review: Resilient functioning in maltreated children: Past, present, and future perspectives. *J Child Psychol Psychiatry*. 2013; 54(4):402-422. <https://doi.org/10.1111/j.1469-7610.2012.02608.x> PMID:22928717
20. Ungar M, Ghazinour M, Richter J. Annual research review: What is resilience within the social ecology of human development? *J Child Psychol Psychiatry*. 2013; 54(4):348-366. <https://doi.org/10.1111/jcpp.12025> PMID:23215898
21. Ungar M, Liebenberg L. Assessing Resilience Across Cultures Using Mixed Methods: Construction of the Child and Youth Resilience Measure. *J Mix Methods Res*. 2011; 5(2):126-149. <https://doi.org/10.1177/1558689811400607>
22. Ungar M. The social ecology of resilience: Addressing contextual and cultural ambiguity of a nascent construct. *Am J Orthopsychiatry*. 2011; 81(1):1-17. <https://doi.org/10.1111/j.1939-0025.2010.01067.x> PMID:21219271
23. Ungar M. Practitioner review: Diagnosing childhood resilience - a systemic approach to the diagnosis of adaptation in adverse social and physical ecologies. *J Child Psychol Psychiatry*. 2015; 56(1):4-17. <https://doi.org/10.1111/jcpp.12306> PMID:25130046
24. Ungar M. *The Child and Youth Resilience Measure (CYRM) Youth Version*. User's Manual Research. Halifax: The Resilience Research Centre; 2016.
25. University St Cyril and Methodius-Skopje" [Internet]. 2016 Mar 16 [cited 2016 Mar 16]; Available from: http://www.ukim.edu.mk/mk_struktura.php.
26. State Statistical Office. *Education News*. [Internet]. Available from: http://www.stat.gov.mk/PrikaziSooopstenie_en.aspx?rbtrxt=29 (cited January 2017).
27. Butchart A, Harvey AP, Mian M, Furniss T. *Preventing child maltreatment: a guide to taking action and generating evidence*. Geneva: World Health Organization and International Society for Prevention of Child Abuse and Neglect, 2006. [cited 2017 Nov 15]. Available from: http://apps.who.int/iris/bitstream/handle/10665/43499/9241594365_eng.pdf;jsessionid=A9E7B7D2A37C8FDB1EF4AE7EABBF0960?sequence=1
28. Masten AS, Cicchetti D. Developmental cascades. *Development and Psychopathology*. 2010; 22(3):491-495. <https://doi.org/10.1017/S0954579410000222> PMID:20576173
29. Masten AS, Monn AR. Child and family resilience: A call for integrated science, practice, and professional training. *Fam Relat*. 2015; 64: 5-21. <https://doi.org/10.1111/fare.12103>
30. Masten AS. Developmental psychopathology: Pathways to the future. *Int J Behav Dev*. 2006; 31: 47-54. <https://doi.org/10.1177/0165025406059974>
31. Widom CS, DuMont K, Czaja SJ. Predictors of resilience in abused and neglected children grown-up: the role of individual and neighborhood characteristics. *Child Abuse Negl*. 2007; 31(3):255-74. <https://doi.org/10.1016/j.chiabu.2005.11.015> PMID:17386940
32. Masten AS, Coatsworth JD. The development of competence in favorable and unfavorable environments: Lessons from research on successful children. *Am Psychol*. 1998; 53:205-220. <https://doi.org/10.1037/0003-066X.53.2.205>
33. Luthar SS. *Resilience and vulnerability: Adaptation in the context of childhood adversities*. Cambridge: Cambridge, 2003. <https://doi.org/10.1017/CBO9780511615788>
34. Luthar SS. Resilience in development: A synthesis of research across five decades. In Cicchetti D, Cohen DJ, editors. *Developmental Psychopathology, Volume 3: Risk, Disorder and Adaptation*. 2nd ed. New Jersey. John Wiley & Sons, Inc., Hoboken, 2006.
35. Cicchetti D, Rogosch FA. The role of self-organization in the promotion of resilience in maltreated children. *Dev Psychopathol*. 1997;9(4):797-815. <https://doi.org/10.1017/S0954579497001442> PMID:9449006
36. Krug EG, Mercy JA, Dahlberg LL, Zwi AB. *World report on violence and health*. Geneva: World Health Organization; 2002. [https://doi.org/10.1016/S0140-6736\(02\)11133-0](https://doi.org/10.1016/S0140-6736(02)11133-0)
37. Garbarino J. *Raising Children in a Socially Toxic Environment*. San Francisco: Jossey-Bass Inc., Publishers, 1995. PMCid:PMC157671