

THE INVESTIGATION OF CAUSAL MODEL OF EDUCATIONAL AND EMOTIONAL RESILIENCE: TEACHER AS SOCIAL CONTEXT, COGNITIVE EMOTION REGULATION AND COPING STRATEGIES

Zahra Hashemi^{1*} and Bahram Jowkar²

¹ Asst. Prof. Dr., University of Alzahra, Iran, zhashemi.serkan@gmail.com

²Assoc. Prof. Dr., University of Shiraz, Iran

*Corresponding author

Abstract

Resilience is defined as the ability for successful adaptation despite challenging or threatening circumstances. The conceptualization of resilience as a general or multidimensional construct and recognizing the inhibitors and facilitators of it are the main issues in the resilience literature. Therefore, the present study examined an explanatory causal model of educational and emotional resilience in a socio-cognitive framework and taking poverty as adversity, teacher-student interaction climate as the structural protective factor and coping strategies and cognitive emotion regulation strategies as the processing protective factors. Participants were 841 girls (466) and boys (375), higher education students selected from the low socio-economic status Shiraz high schools. Participants completed the Teacher As social Context Questionnaire of Belmont & et.al, The cognitive Emotion Regulation Questionnaire of Garnefski and Kraaji, The Children's Coping Strategies Checklist of Sandler & et.al, Educational Resilience of Martin, Children Depression inventory of Cox and Beck, and Psychological Well-Being of Kelley & Peterson. The path diagram of hypothetical model tested by Sequential simultaneous regression analyses, according to recommended steps of Baron and Kenny. Results showed that involvement, structure, and autonomy support were directly predictors of educational resilience, while involvement is a stronger predictor. Also structure (as a stronger predictor) and involvement were directly predictors of emotional resilience. Results of multiple regression showed that the active coping strategies (positively), and the negative cognitive emotion regulation (negatively), and the support seeking (positively) acted as partial mediator between teacher-student interaction climate and educational resilience respectively. The Findings also revealed mediation role of the negative cognitive emotion regulation (negatively), the active coping strategies (positively), the avoidance strategies (negatively), and the positive cognitive emotion regulation (positively), and distracting strategies (positively) respectively between teacher-student interaction climate and the emotional resilience.

Keywords: teacher-student interaction climate, coping strategies, cognitive emotion regulation, educational resilience, and emotional resilience.

1. INTRODUCTION

1.1. Conceptualization and definition of Resilience

Resilience is the ability to thrive, mature, and increase competence in the face of adverse circumstances or obstacles. These circumstances may be severe and infrequent or chronic and consistent. In order to thrive, mature, and increase competence, a person must draw on all of their resources; biological, psychological, and environmental (Gordon, 2001). Resilience has been defined as a dynamic process involving an interaction between both risk and protective processes, internal and external to the individual, that act to modify the effects of an adverse life event (Rutter, 1985, 1999). Rutter defines resilience "as a positive pole of ubiquitous phenomenon of individual differences in people's response to stress and adversity, as well as hope and optimism in the face of severe risk or adversity." (1990, p.181). In a general sense, resilience has been defined as the process of, capacity for, or outcome of successful adaptation despite challenging or threatening circumstances (Howard & Johnson, 2000). It is important to pay attention that resilience construct does not imply a personality trait or an attribute of the individual as ego-resiliency (Luthar, Cicchetti, & Becker, 2000, Rutter,1999). Rather, it represents a dynamic developmental process referring to

the maintenance of positive adjustment under threatening life circumstances (Luthar, et.al., 2000; Masten, 1994).

1.2. Basic Approaches in Resilience Research

The conceptualization of resilience as a general or multidimensional construct and recognizing the inhibitors and facilitators of it, are the main issues in the resilience literature. The review on resilience literature reveal two major approach research strategies in resilience research: the variable based approach and the person based approach. Variable based approach involves multivariate statistics to examine the statistical associations through measures of risk, good adaptation, and individual, familial or environmental protective factors (Masten & Reed, 2002). Person based approach, on the other hand, involves the discrimination and comparison of two groups (resilient and vulnerable) who demonstrate adaptive and maladaptive outcomes within the same high-risk circumstances (Masten & Reed, 2002).

1.3. Multidimensional construct of resilience

In recent years, researchers have been increasingly using specialized constructs of resilience (Luthar, & et.al. 2000) such as "educational resilience" (Wang, Haertel & Walberg, 1994) or "academic resilience" (Alva, 1991). In this line, Educational resilience is defined as the "highlighted likelihood of success in school and in other life accomplishments, despite environmental adversities, brought about by early traits, conditions, and experiences" (Wang, & et.al. 1994, p. 46) and emotional resilience is defined as "the ability of non- affected by, the recovery of, or acquire or develop further capabilities and experiences of difficult life conditions." (Carbonell, Reinherz, and Giaconia, 1998).

1.4. Protective factors

The term protective factor generally refers to the circumstances that mediate or moderate the effects of adversity and enhance good adaptation, adjustment, or competence (Masten, 1994). According to Greene & Conrad (1999, p.34; as cited in Gizir. 2004), protective factors may buffer, interrupt, or even prevent risk. Garmezy (1985) has expressed protective factors in three levels: Individual- Level Factors, Family- Level Factors, and Community Social- Level Factors. Past and contemporary studies of resilience in adolescence highlight a number of personal (biological and psychological) factors associated with resilience (Werner and Smith, 1982; Garmezy, 1985; Luthar, 1991).

Intervention approached from the level of the social environment presents another important issue to promote resilience in young people. In the literature two such environments are identified: the school environment and broader social environment. Adolescents (especially in the developed world) spend up to a third of their waking hours in school (Rutter et al., 1979; In Olsson & et al. 2003). This makes school an important setting or system to promote resilience in young people, not just at the level of individual resource development, or providing an environment in which to practice these skills, but in terms of a safe environment that can actively buffer against adversity (Glover, Burns, Butler, & Patton, 1998; Patton et al., 2000; In Olsson & et al. 2003). In this respect, motivation theorists have provided a different list. But one of the important are presented the self-determination theory of Deci and Ryan (2000). In fact, the theory of psychological needs of Deci and Ryan (2000), are the most important motivational theories that are involved in coping behaviors in front of adversity. The psychological needs include the need for competence, need to autonomy, and the need to relatedness. The need for competence refers that people need to engage in effective and efficient social and physical environments and experience the feeling of skills and competencies. The autonomy refers to the need for people to be seen as an agent in the selection of its activities and objectives (Charles, 1968; In Deci and Ryan, 2000). Require students to relatedness and dependence suggests an inherent tendency for connection with others. In this connection, or who need to mention that person as a member of a group or community, to love and been loved (Einsworth 1979, 1989; In Skinner, 1999). Briefly, this theory suggests that motivational and social environments such as home or school to such needs by creating areas of involvement and warm, and the rule of law and predictable structure, and creating an climate of support for the independence, offers opportunities to satisfy their decisions, are as a protective factors.

For such environments, self-assessment and self -organized structures and their relation with the social environment affect the directly vulnerability of the system the "self ". This, in turn, affects coping patterns in the form of involvement and efforts to deal with stressful situations (active strategies) or with distracting and avoidance strategies (Skinner and Wellborn, 1994; Brooks, 2006; Washington, 2010; William & Bryan, 2013).

So it seems that the use of coping strategies and the regulation of emotions in stressful situations can be appropriate and considered as effective processes of resilience functions. In fact, many functions of mental, cognitive, physiological, and behavioral success depend on emotion regulation (Gross & Thompson, 2007). Coping is conscious and voluntary efforts to deal emotion regulation, cognition, behavior, and physiology under conditions of stress (Lazarus, 1991; Compas, Coonner –Smith, Saltzman, Thomson & Wadsworth, 2001). Therefore, the failure to establish and develop appropriate emotion regulation * associated with behavioral problems, emotional, cognitive and psychological, such as anxiety, Symptoms of mental disorders, depression, aggression, learning disorders, low academic achievement, and the inability to pursue educational goals , and reduces the ability of problem solving and creativity (for example: Clemente,1999; Landi, 2002; In Piers, 2004; Gizir, 2004; Gross, 2007; Washington, 2010; William & Bryan, 2013). So it seems that the cognitive emotion regulation and coping strategies act as the mediator processing in emotional and academic resilience. Therefore, the present study examined an explanatory causal model of educational and emotional resilience in a socio-cognitive framework and taking poverty as adversity, teacher-student interaction climate as the structural protective factor and coping strategies and cognitive emotion regulation strategies as the processing protective factors. The major questions of this research are: 1) Do coping strategies and cognitive emotion regulation mediate the teacher - student interaction climate of school with emotional and educational resilience? 2) Are the prediction equations profile of academic resilience and emotional resilience different?

2. Methodology, Results, Conclusions

2.1. Methodology

Participants were 841 girls (466) and boys (375), higher education students selected from the low socio-economic status Shiraz high schools. Participants completed the questionnaires. The path diagram of hypothetical model tested by Sequential simultaneous regression analyses, according to recommended steps of Baron and Kenny. The questionnaires were used in this research Included:

2.2. Instruments

2.2.1. Teacher As social Context Questionnaire

Teacher As social Context Questionnaire has designed by Belmont , Skinner, Wellborn, and Connell (1991). Cronbach's alpha reliability coefficients for the subscales of the involvement, structure, and autonomy activities reported in sequential 0.83, 0.87, 0.89. The reliability and validity of this scale by Hashemi and Jowkar (2012) for Iranian population has been approved .

2.2.2. The Children's Coping Strategies Checklist

The Children's Coping Strategies Checklist has designed by Sandler, Ayers, Bernzweig, Wampler, Harrison, & Lustig (1990). This scale has four subscales. The four subscales and strategies are: a) active coping or problem-solving coping, b) Distraction strategies, c) avoidance strategies, and d) Support seeking strategies. To examine reliability of the measures, for Iranian population, Cronbach alpha coefficient was used. The validity of the measures verified by factor analysis method by Hashemi and Jowkar (2012).

2.2.3. The cognitive Emotion Regulation Questionnaire

The cognitive Emotion Regulation Questionnaire has designed by Garnefski and Kraaji (2006). It consist of 9 cognitive strategies to regulate emotions, which is set in the two broader cognitive subscale were classified as positive and negative cognitive emotion regulation. The reliability and validity of this scale in the domestic and foreign research (Persian and Latin sources) is approved (Hashemi and Jowkar, 2012).

2.2.4. Educational Resilience

Educational Resilience of Martin (2006) is a one-dimensional scale, which is composed of 6 items. External validity and construct validity of the scale by Martin (2003) has been approved . The reliability and validity of this scale by Hashemi and Jowkar (2012) for Iranian population has been approved.

2.2.5. Emotional resilience

The overall index score of emotional resilience is the score of factor analysis of the questionnaire of Children Depression inventory of Cox and Beck (1977), and Psychological Well-Being of Kelley & Peterson (1997, as cited in Vincent, 2007). KMO coefficient of factor analysis was 0.75 and Bartlett's sphericity coefficient equal to 324.67 ($p < 0.001$), and total variance was 56.53. The coefficient of the factorial load were 0.88 for Well-

Being and -0.88 for Depression inventory. To examine reliability of the measures Cronbach alpha coefficient was used. The validity of the measures verified by factor analysis method.

2.3. Results

The results of descriptive statistics are reported in the table 1. And zero-order correlation matrix of variables in table 2 are shown.

Table 1. Descriptive Statistics

Variables	N	Minimum	Maximum	Mean	Std. Deviation	Variance
involvement	841	10.00	40.00	26.0635	5.97310	35.678
structure	841	13.00	46.00	29.9492	5.52970	30.578
autonomy	841	8.00	32.00	21.7234	5.40682	29.234
Active coping	841	22.00	64.00	48.2284	7.80674	60.945
distracting	841	8.00	27.00	16.8579	4.66541	21.766
Support seeking	841	7.00	32.00	18.1574	4.64469	21.573
avoidance	841	6.00	20.00	13.5025	2.65031	7.024
Positive CER	841	.00	43.00	28.5010	5.87674	34.536
Negative CER	841	.00	38.00	20.7386	5.28960	27.980
Educational resilience	841	10.00	42.00	29.8630	6.48828	42.098
REGR factor score 1 for analysis 1	841	-4.41082	2.06634	-.0188615	.92688470	.859
Valid N (listwise)	841					

Table2. Correlations matrix

Variables	1	2	3	4	5	6	7	8	9	10	11
Involvement	1										
Structure	.35**	1									
Autonomy Support	.32**	.45**	1								
Active coping	.24**	.17**	.12*	1							
Support seeking	.26**	.01	.13**	.18**	1						
Distracting	.05	-.17**	-.06	.14**	.19**	1					
Avoidance	-.04	-.10*	-.16**	.12**	.16**	.12*	1				
Positive cognitive E.R	.23**	.07	.08	.36**	.12**	.19**	0.07	1			
Negative cognitive E.R	.017	-.17**	-.15**	0.06	.16**	.12**	.30**	.24**	1		
Emotional Res.	.28**	.27**	.20**	.39**	.14**	0.04	-.34**	.16**	-.53**	1	
Educational res.	.39**	.17**	.29**	.49**	.19**	0.02	-.19**	.32**	-.23**	.27**	1

**p<0.001 *p<0.05

The following tables show the results of Regression.

Table 3. Regression of educational resilience on social Context

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	R	R ²
	B	Std. Error	Beta				
(Constant)	-2.242	.185		-12.092	.000		
involvement	.045	.006	.284	8.040	.000	0.37	0.14
structure	.028	.007	.158	4.229	.000		
autonomy	.012	.006	.090	1.933	.045		

Table4. Regression of coping strategies and cognitive emotion regulations on social Context

Variables	Support seeking				Avoidance				Distracting			
	p	Beta	R ²	R	p	Beta	R ²	R	p	Beta	R ²	R
involvement	0.002	0.21	0.08	0.29	NS	-0.03	0.01	0.11	0.04	0.15	0.02	0.15
structure	NS	0.13			NS	-0.06			NS	0.01		
autonomy	NS	-0.07			NS	-0.06			NS	-0.005		

Table5. Regression of coping strategies and cognitive emotion regulations on social Context

Variables	Positive emotion regulation				Negative emotion regulation				active coping			
	p	Beta	R ²	R	p	Beta	R ²	R	p	Beta	R ²	R
involvement	0.002	0.21	0.08	0.29	NS	0.04	0.05	0.23	0.05	0.23	0.09	0.29
structure	NS	0.13			NS	-0.26			0.03	0.16		
autonomy	NS	-0.07			NS	0.13			0.03	-0.14		

Table 6. Regression of educational resilience on coping strategies and cognitive emotion regulation and social Context

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	R	R ²
		B	Std. Error	Beta				
1	(Constant)	-2.987	.276		-10.819	.000		
	involvement	.029	.005	.183	5.618	.000		
	structure	.018	.006	.104	3.063	.002	0.57	0.33
	autonomy	.007	.006	.040	1.266	.206		
	Active coping	.045	.004	.364	10.599	.000		
	distracting	-.003	.006	-.016	-.540	.589		
	Support seeking	.016	.006	.078	2.548	.011		
	avoidance	-.037	.011	-.103	-3.393	.001		
	Positive CER	.010	.006	.063	1.811	.070		
Negative CER	-.032	.006	-.171	-5.622	.000			

Table 7. Regression of emotional resilience on social Context

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	R	R ²
		B	Std. Error	Beta				
1	(Constant)	-1.890	.191		-9.877	.000		
	involvement	.031	.006	.193	5.304	.000		
	structure	.033	.007	.183	4.775	.000	0.35	0.12
	autonomy	.007	.007	.040	1.067	.286		

Table 8. Regression of emotional resilience on coping strategies and cognitive emotion regulation and social Context

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	R	R ²
		B	Std. Error	Beta				
1	(Constant)	-.698	.389		-1.794	.074		
	involvement	.010	.007	.067	1.459	.145		
	structure	.020	.008	.121	2.516	.012		
	autonomy	.005	.008	.000	.007	.994	0.67	0.45
	Active coping	.031	.006	.262	5.515	.000		
	distracting	.022	.008	.111	2.623	.009		
	Support seeking	-.011	.009	-.058	-1.332	.184		
	avoidance	-.084	.015	-.240	-5.607	.000		
	Positive CER	.022	.008	.138	2.800	.005		
	Negative CER	-.065	.008	-.373	-8.484	.000		

2.4. Conclusions

The major aims of this study were to examine the mediation role of coping strategies and cognitive emotion regulation in relationship with teacher - student interaction climate in high school with emotional and educational resilience, also, investigation the equation predicts profiles of academic resilience and emotional resilience. Results showed that involvement, structure, and autonomy support were directly predictors of educational resilience, while involvement is a stronger predictor. Also structure and involvement were directly predictors of emotional resilience. Results of multiple regression showed that the active coping strategies (positively), and the negative cognitive emotion regulation (negatively), and the support seeking (positively), and avoidance strategies (negatively) acted as partial mediator between teacher-student interaction climate and educational resilience respectively. The Findings also revealed mediation role of the negative cognitive emotion regulation (negatively), the active coping strategies (positively), the avoidance strategies (negatively), and the positive cognitive emotion regulation (positively), and distracting strategies (positively) respectively between teacher-student interaction climate and the emotional resilience. The different profiles of predictors, provide evidence for a multidimensional construct of academic resilience and emotional resilience.

REFERENCE LIST

- Alva, S. A. (1991). Academic invulnerability among Mexican-American students: The importance of protective resources and appraisals. *Hispanic Journal of Behavioral Sciences*, 13(1), 18-34.
- Belmont, M., Skinner, E., Wellborn, J., & Connell, J. (1992). *Teacher as social context (TASC). Two measures of teacher provision of involvement, structure, and autonomy support*. Technical Report, University of Rochester, Rochester, NY.

- Brooks, J. E. (2006). Strengthening resilience in children and youths: Maximizing opportunities through the schools. *Children and Schools*, 28, 69-76.
- Carbonell, D. M., Reinherz., and Giaconia, R. M. (1998). Risk and resilience in late adolescence. *Child and Adolescent Social Work Journal*, 15, 251-274. Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum Press.
- Compas BE, Connor-Smith JK, Saltzman H, Thomsen AH, Wadsworth ME. (2001). Coping with stress during childhood and adolescence: problems, progress, and potential in theory and research. *Psychol. Bull.* 127:87–127.
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227-268.
- Garnezy, N., (1985). Stress Resistant Children: The Search for Protective Factors. In: Recent Research in Developmental Psychopathology, *Book suppl number 4 to Journal of Child Psychology and Psychiatry*, Oxford Pergmon Press.
- Garnefski and N., Kraaij, V. (2006). Cognitive emotion regulation questionnaire– development of a short 18-item version (CERQ-short) *Personality and Individual Differences*. Volume 41, Issue 6, Pages 1045-1053.
- Gizir, Cem Ali. (2004). Academic Resilience: An Investigation of Protective Factors Contributing to the Academic Achievement of Eight Grades Students in Poverty. Ph.D., Department of Educational Sciences. Middle East Technical University.
- Gordon Rouse, K. A. (2001). Resilient students' goals and motivation. *Journal of Adolescenc.* 24, 461–472.
- Gross (Ed.), *Handbook of emotion regulation*. (2007). New York: Guilford Press.
- Gross, J.J., & Thompson, R.A. (in press). Emotion regulation: Conceptual foundations. In J.J. Gross (Ed.), *Handbook of emotion regulation*. (2007). (pp. 3–24). New York: Guilford Press.
- Hashemi, Zahra. & Jowkar, Bahram. (2012). An Explanatory Model of Educational Resilience and Emotional Resilience. Ph.D Dissertation in Psychology and Education. Shiraz University Faculty of Education & Psychology .
- Howard, S., & Johnson, B. (2000). What makes the difference? Children and teachers talk about resilient outcomes for children “at risk.” *Educational Studies*, 26, 321–337.
- Kaufman, J., Cook, A., Arny, L., Jones, B., & Pittinsky, T. (1994). Problems defining resiliency: Illustrations from the study of maltreated children. *Development and Psychopathology*, 6, 215-229.
- Lazarus, R. S. (1991). *Emotion and adaptation*. New York: Oxford University Press.
- Luthar, S. (1991). Vulnerability and resilience: a study of high-risk adolescents. *Child Development*, 62, 600–616.
- Luthar, S.S., & Cicchetti, D., & berker, (2000). The construct of resilience: Implications for interventions and social policies. *Development and Psychopathology*, 12, 857–885.
- Martin Andrew j. & Herbert W. Marsh. (2006). Academic Resilience and its Psychological and Educational Corolates: A Construct Validity Approach. *Psychology in the Schools*, Vol. 43(3),
- Masten, A. S., and Reed, M. J. (2002). Resilience in development. In C. R. Snyder and S. J. Lopez (Eds.). *The handbook of positive psychology* (pp. 74-88). Oxford University Press.
- Masten, A. S. (1994). Resilience in individual development: Successful adaptation despite risk and adversity. In M. C. Wang and E.W. Gordon (Eds.), *Educational resilience in inner-city America: Challenges and prospects* (pp. 3-25). Hillsdale, NJ: Erlbaum.
- Olsson, C. A., Burns, J. M., Vella- Brodrick, D. A., and Sawyer, S. M. (2003). Adolescence resilience: A concept Analysis. *Journal of Adolescence*. 26, 1-11.
- Piers, D., (2004). The Effects of A Cognitive Behavioral and Emotional Resilience Program on the Emotional Resilience, Social Competence and Scool Adjustment of Elementary Students. California State University Long Beach.

- Rutter, M. (1985). Family and school influences on behavioral development. *Journal of Child Psychology and Psychiatry*, 26, 349-368.
- Rutter, M. (1990). Psychosocial resilience and protective mechanisms. In J. E. Rolf, A.S. Masten, D. Cicchetti, K. Nuechterlein, & S. Weintraub (Eds.), *Risk and protective factors in the development of psychopathology* (pp.181-214). New York: Cambridge University Press.
- Rutter, M. (1999). Resilience concepts and findings: Implications for family therapy. *Journal of Family Therapy*, 21, 119-144).
- Sandler, I. N., Ayers, T. S., Bernzweig, J. A., Wampler, T. P., Harrison, R. H., & Lustig, J. L. (1990). *Children coping with divorce-related stressful events*. Paper presented at the American Psychological Association, Boston, MA.
- Skinner, E. A. (1999). Action regulation, coping, and development. In *Action and Self-Development*, ed. JB Brandstader, RM Lerner, pp. 465–503. Thousand Oaks, CA: Sage.
- Skinner, E. A., & Wellborn, J. G. (1994). Coping during childhood and adolescence: A motivational perspective. In D. Featherman, R. Lerner, & M. Perlmutter (Eds.) *Life-span development and behavior* (Vol. 12, pp. 91-133). Hillsdale, NJ: Erlbaum.
- Wang, M.C., Haertal, G.D., & Walberg, H.J. (1994). Educational resilience in inner cities. In M.C. Wang & E.W. Gordon (Eds.), *Educational resilience in inner-city America: Challenges and prospects* (pp. 45–72). Hillsdale, NJ: Erlbaum.
- Washington, A. R. (2010). Professional school counselors and African American males: Using school/community collaboration to enhance academic performance. *Journal of African American Males in Education*, 1, 26-39.
- Werner, E. and Smith, R. (1982). *Vulnerable but invincible: a longitudinal study of resilient children and youth*. New York: McGraw-Hill.
- Williams, J. M., & Bryan, J. (2013). Overcoming adversity: High-achieving African American youth's perspectives on educational resilience. *Journal of Counseling and Development*, 91, 290-299.