

The Mediating Role of External Locus of Control in the Relationship Between Parenting Styles and Emotional and Academic Resilience

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As a multidimensional construct, resilience and its facilitators and inhibitors has attracted considerable attention in the literature. Present study examined the relationship between parenting styles and educational and emotional resilience within a socio-cognitive framework. The purpose was to present an explanatory causal model of educational and emotional resilience with the mediating role of locus of control. A total of 394 female students of Alzahra University of Tehran, residing in dormitories, were selected using random sampling method and participated in this study by responding to four questionnaires including: parental authority scale (PAQ), the Rotter's locus of control scale (LCS), academic resilience scale (ARS), and emotional resilience scale (ERS). Two separate theoretical models were proposed and tested using path analysis modeling. The goodness of fit indices indicated that the proposed models fit the data well. For the first model, the students' external locus of control (EXLC) significantly mediated both the relationship between authoritative parenting style and the students' academic resilience as well as the relationship between authoritarian parenting style and academic resilience. However, the permissive parenting style did not show any significant indirect effect on the students' academic resilience through EXLC. For the second model, the students' EXLC could significantly and separately mediate the relationship between all three different parenting styles and the students' emotional resilience. These results also supported the multidimensional nature of resilience among Iranian students.

Keywords: Parenting Styles, External Locus of Control, Emotional Resilience, Academic Resilience

Resilience as the process of employing the ability of successful adaptation in the face of threatening conditions (Masten, Best, and Garmezy; 1990; Mwangi, Okatcha., Kinai, Ireri, 2015; Masten, 2015) is among the topics that have attracted the most research attention. Rotter (1985, 1999) has defined resilience as a dynamic process involving an interaction between both risk factors and protective processes, internal and external to the individual, that act to modify the effects of an adverse life event.

Rotter 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 fact, resilience is one's capability to reintegrate in situations where the person has reached the state of growth and wisdom after overcoming imbalance and disruption and shows positive cognitive, emotional, and academic outcomes (Garmezy, 1991; Masten, 2001; Rotter, 1990; Luttar, Cicchetti, and Baker, 2001). Thus, resilience is not merely an innate ability; it rather requires effective cognitive and mental regulatory strategies which are called protective factors. The term “protective factor” generally denotes circumstances that mediate or moderate the effects of adversity and enhance good adaptation,

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adjustment, or competence (Masten, 1994). Protective factors balance the effect of adversity or threatening conditions on growth and its outcomes; they, moreover, encourage the positive compatibility strategies. Rotter defines protective factors as "features and variables that balance, improve, or change persons' responses in high-risk environments that are likely to cause adverse consequences" (Rotter, 1990, p. 340). In addition, Garmezy (1985) has classified protective factors into three levels: a) individual factors, b) family factors, and c) community-based factors. Individual protective factors can include biological, psychological, and personality traits. Past and contemporary studies on resilience highlight a number of personal (biological and psychological) factors associated with resilience (Garmezy, 1985; Luthar, 1991, 1999; Werner and Smith, 1982; Yates & Masten, 2004; Tommaso, Francesco, Francesca, Sergio 2018). Family protection influences are those that increase the ability of individuals to deal with undesirable conditions; some instances of such factors are parenting styles, relationships among family members, attachment, and socioeconomic levels and so on (Yates & Maston, 2004; Tailor & Lopez, 2005). Protective factors at the community level can also enhance the ability of the individual to deal with adverse conditions and affect the individual and the family characteristics: social institutions such as effective schools, religious centers and peer groups, good neighbors, high levels of social security, and others are instances of such factors (Yates and Maston, 2004; Gizir, 2004; Brooks, 2006; Vincent, 2007).

On the other hand, a review of the related literature reveals one of the main controversies of the notion of resilience: the specificity or multidimensionality of this structure. In recent years, special emphasis has been placed on the multi-dimensional nature of this structure.

The multidimensional nature of resilience's structure results from the fact that individuals in precarious conditions, while showing adjustment skills in some areas such as academic achievement, show serious maladaptive effects in other areas and suffer from depression and stress (e.g., Kaufman, Cook, Arny, Jones, and Pittinsky, 1994; Luttar, 1991; and Luttar et al., 2001).

Therefore, due to the complexity of the structure of resilience and the wide scope of the studied areas,

considering resilience as a single-dimensional structure has caused ambiguities. Today, researchers are more interested to study the multidimensional nature of this structure (Luttar et al., 2001; Kaufman et al., 1994).

Emotional resilience is defined as "the ability to avoid being affected by, to recover, or even to gain more ability or growth from experiencing or living in difficult conditions." (Carbonel, Rinherz, and Giaconia, 1998, p. 259). On the other hand, resilience in the academic context is defined as a factor increasing the probability of success in school despite unpleasant or even adverse environmental conditions or traits of the individual (Wang et al., 1994, p. 46 as cited in Ciccetti and Rogosch, 1997).

Likewise, Masten (2004) also define academic resilience as the students' ability to deal with hurdles, stress, and threatening factors in general.

Locus of Control and Resilience

In studying the factors affecting resilience, the role of cognitive elements is of a great significance. According to attribution theory, causes to which people attribute adverse events, whether in real or in academic life, affect their motivation, emotion, wishes, and performances. The perceived cause of an outcome is hypothesized in three dimensions: source, stability, and control (Wainer, 1994, as cited in Martin, 2003).

Control is among the most important factors in emotional and academic resilience. It is the perception of students about how well they are to achieve positive outcomes and avoid negative consequences under their control. Individuals with internal locus of control believe that events per se and achieving positive while avoiding negative outcomes in dealing them are the result of their own behaviors, while those with an external locus of control do not consider such consequences to be due to their own behavior and, therefore, they do not believe that the conditions are under their control (Rotter, 1999). A desirable profile of beliefs includes high control, high effort strategy, and high empowerment beliefs along with a low trust in all causes of uncontrollable strategies (ability, power, influence, chance, and other unknown factors). In contrast, a maladaptive profile of beliefs includes low control, inefficiency of effort, low empowerment beliefs and the use of uncontrollable

strategies (Connell, Spencer, and Aber, 1994; Skinner, Zimmer-Gembeck and Connell, 1998).

Many studies have supported the role of perceived control as an important factor affecting the individuals' motivation, academic performance, educational engagement, and mental health (e.g., Werner, 1989; Dowick, 1999; Schunk and Zimmerman, 1994; Masten and Coatsworth 1998; Skinner et al., 1998; Stipek 2002; Wigfield, Eccles, Schiefele, Roeser, and Davis-Kean, 2006; Martin and Marsh, 2003; Martin & Marsh, 2006; Reis, Colbert, and Hebert 2005; Taylor 2007; April, Dharani, & Peters, 2012; Stocks, April, Lynton & Nandani, 2012; White 2007; Skinner and Zimmer-Gembeck, 2007; Quevedo & Abella, 2014; Norouzinia, Heidari, Ahmadi & Ahmadi, 2017; Munoz, Brady, & Shane, 2017; Brown, Tsen, Aboh, Austine, Raymond, Makam, Gideon, Taiwo, Emmanuel, 2021; Strong & Gore, 2020; Türk-Kurtçıl & Kocatürk 2020, Gatezadeh & Mplaei Rad, 2021).

On the other hand, research has revealed the role of cultural differences in moderating the relationship between individual's perceived locus of control and their psychological well-being. For example, Stocks et al. (2012) found positive relationship between internal locus of control and psychological well-being in Western culture, while there was a negative relationship in Chinese culture and it was non-significant in South Africa. How such a relationship is in Iran is a question that needs to be investigated.

Identifying the basic factors affecting the development of control beliefs is of great importance. Some belief that the locus of control as a psychological structure is dependent on social learning (April et al., 2012) and thus the family, as the first socialization and learning base, can play a significant role in shaping these beliefs.

From Parenting Styles to Locus of Control

Theories in developmental psychopathology like transactional ecological systems theory of Bronfenbrener (1981) highlight the role that the interaction of effective factors plays on children and adolescents' development. Theories maintain that from the moment of birth, genetic preparations and environmental factors interact to create the behavioral patterns (Sumeroff, 2000).

Parenting styles is among important environmental factors playing a role in the development of control beliefs in children and

adolescents. Parents, in essence, transfer their beliefs, values, and attitudes to their children through parenting styles. As such, Baumrind (1991) makes a distinction between effective and non-effective methods based on acceptance and close relations, control, and independence and offers three different styles of parenting: authoritative, authoritarian, and permissive parenting styles. Later, to complete the different methods of parenting, Baumrind also offered neglectful parenting as the fourth style. Generally, authoritative parenting leads to high levels of acceptance, warmth, accountability, compatible control methods, and appropriate independence. The authoritarian style is characterized by decreased acceptance, close relationship and independence, while it is high in terms of compulsory control. Parents who use permissive style are typically considerate and impose less control over their children's actions and allow them more independence even if the children might not be able to do so. Finally, neglectful parenting is characterized by low acceptance, low relations, low control, and general inattention to the child's independence (Berk, 2013).

Furthermore, various experimental studies including Werner (1989), McClun & Merell (1998), Tarise and Buck (2006), Marsiglia (2007), Carlo (2007), Quazi (2009), Farbsein (2011), Butler, Skinner, Gelfand, Berg, & Weibe (2007), Tailor (2007), Vincent (2007), Fletcher, Walls, Cook, Madison, & Bridges (2008), Lin, Lian (2011), Yaffe (2021), Zhong, Daxing, Xueqing, Jie, Li, Feng, Haikel, and Mahendran (2016) have been carried out regarding the relationship between parenting styles and locus of control. Georgiou, Stelios, Ioannou, Myria, Stavriniades & Panayiotis (2016) have highlighted the relationship between permissive and authoritarian parenting styles on the development of external locus of control (EXLC) and as well the role of authoritative parenting style in the development of internal locus of control (INLC). In addition, the results of the research by Chorpita, Brown, and Barlow (2016) on a mixed clinical and nonclinical sample of 93 children and their families showed superior fit for the model in which the dimension of perceived control mediated the relationship between family environment and negative affect. Moreover, Nowicki, Gregory, Iles-Caven, Ellis, Golding (2018) found that inadequate early maternal interactions with their children leads

to the development of external orientation. In the context of Iranian culture, Keshavarz, Baharudin, Siti, Nor, and Jopei (2012) studied the interrelationships among parenting styles and socio-economic status of the family and the locus of control.

The Current Study

The authors hypothesized that the locus of control would mediate the relationship between parenting styles and academic and emotional resilience. Accordingly, the hypothetical models of the present study are shown in Figure 1 and 2 below.



Figure 1. The Hypothetical Path Model of Academic Resilience



Figure 2. The Hypothetical Path Model of Emotional Resilience

Methods

Participants

Participants were randomly selected from the population of female students of Alzahra University, Tehran, Iran. Some of the participants were removed from the study due to their incomplete responses to the questionnaires. Finally, 394 female participants, between 19 to 26 years old, living in university dormitories, were selected.

Measurement Instruments

The Parental Authority Questionnaire (PAQ). This questionnaire was first developed by Buri (1991) to measure Baumrind's parenting styles (1971). It consists of 30 items that evaluate authoritative, authoritarian, and permissive dimensions. PAQ has shown good internal consistencies with Cronbach's alpha ranging from 0.75 to 0.87, and test-retest reliabilities ranging from 0.78 to 0.86. In this study, internal consistencies with two different methods including Cronbach's alpha and split half methods showed acceptable to good reliability coefficients: 0.79 and 0.77 respectively for the authoritative style, 0.85 and 0.80 for the authoritarian, and 0.69 and 0.72 for the permissive styles.

The Rotter's Locus of Control Scale (LCS). 29-item LCS developed by Rotter (1966) to measure the external or internal locus of control in respondents. Of the 29 items, 6 are neutral and other 23 items measure the respondents' external or internal locus

of control (EXLC or INLC). The higher the person's score on EXLC subscale, the greater the intensity of his or her external locus of control is. Cronbach's alpha in this study was 0.79 for EXLC.

The Academic Resilience Scale (ARS). ARS was developed by Martin (2001, 2003) to measure the students' academic resilience as it appears in coping with challenges, pressure conditions, and academic stress. It is a one-dimensional scale consisting of 6 items. The validity was approved by the factor analysis method. Its external validity was also ratified by path analysis, correlation, and cluster analysis. The reliability and validity of this scale for Iranian population has been approved by Hashemi (2012). To examine the reliability of the measure, the Cronbach's alpha coefficient was used. The coefficient was 0.77. The validity of the measure was verified by factor analysis method (KMO= 0.83 and Chi square = 2.9, $P < 0.0001$, and all factor loadings found to be statistically significant and greater than 0.72).

The Emotional Resilience Scale (ERS). ERS is one of the subscales of mental health scale used by

Kelley and Piterson (1997) to measure adolescents' mental health in a longitudinal study. It includes 9 items and is rated on a Likert scale from 1=rarely to 4=always. Higher scores indicate higher mental health. Vincent (2007) reported its Cronbach's alpha reliability to be 0.87. The Cronbach's alpha in the present study found to be 0.85. The convergent and divergent validity of ERS was measured by correlating it with depression and negative and

positive emotion scales in which the following correlations were found respectively: -.64, -.55, and .56.

Results

Mean score, standard deviation and correlation coefficients among variables are shown in Table 1.

Table 1

Mean, Standard Deviation, and Correlations among the Variables

Variables	M (SD)	1	2	3	4	5	6
1.Authoritative	33.93 (6.76)	1					
2.Authoritarian	24.96 (4.95)	-.70***	1				
3.Permissive	23.14 (3.75)	.12*	.14*	1			
4.External Locus of Control	23.16 (6.30)	-.39**	.24**	.15*	1		
5.Academic Resilience	14.59 (3.31)	.26**	.09*	-.80***	-.43**	1	
6.Emotional Resilience	34.09 (5.55)	.29**	.11*	.14*	-.52***	.31**	1

According to the correlation matrix, the authoritative parenting style showed a significant negative correlation with the external locus of control and a significant positive correlation with the academic and emotional resilience. Also, there was a positive correlation between the authoritarian style and external locus of control and emotional and academic resilience. Furthermore, the permissive style of parenting positively correlated with the external locus of control and emotional resilience while negatively with the academic resilience. To predict the academic and emotional resilience, the offered conceptual model was examined via path analysis and to estimate the pattern, maximum likelihood method was used.

The results of path analysis are shown in Figure 3. As it is seen, the direct effect of authoritative, authoritarian, and permissive styles on the external

locus of control, the direct effect of external locus of control on the academic resilience, and the direct effect of authoritative style on the academic resilience were all significant. Moreover, the indirect effect of authoritative style on academic resilience ($r = 0.09$) and the indirect effect of authoritarian style on the academic resilience ($r = 0.06$) were significant, too. However, the indirect effect of permissive style on the academic resilience ($r = 0.04$) was non-significant. Furthermore, the external locus of control, expect for the relation of permissive style and academic resilience, showed a mediation role. Finally, the authoritative, authoritarian, permissive styles of as well as the external locus of control accounted for 16 % of the variance of academic resilience.

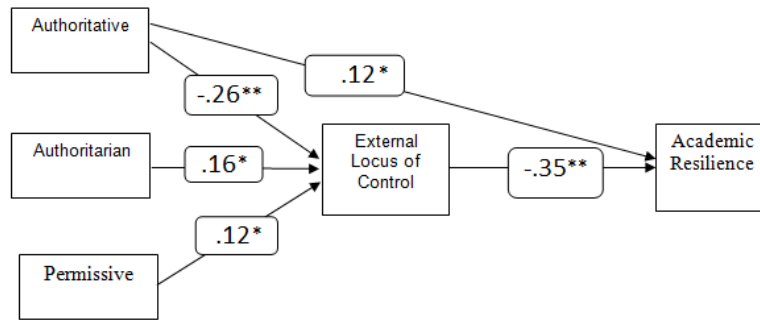


Figure 3 Standardized Path Coefficients for the Proposed Academic Resilience Model

Note: *: Statistically significant at $p = .05$ level; **: Statistically Significant at $p = .01$ level

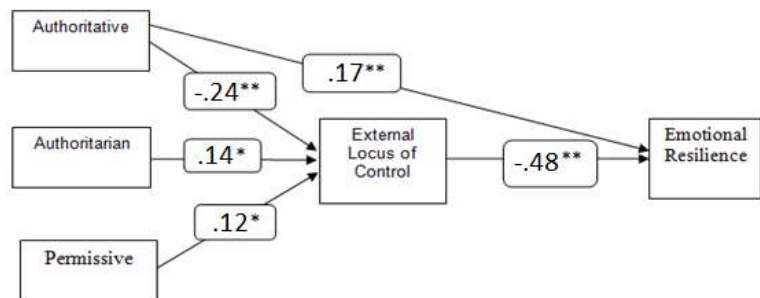


Figure 4 Standardized Path Coefficients for the Proposed Emotional Resilience Model

Note: *: Statistically significant at $p = .05$ level; **: Statistically Significant at $p = .01$ level

Table 2

Fit Indices of Academic and Emotional Resilience Models

Model	χ^2	df	χ^2/df	GFI	AGFI	RMSEA	CFI
Academic Resilience	3.82	2	1.91	.94	.63	.07	.96
Emotional Resilience	2.32	2	1.16	.96	.94	.03	.94

The direct model paths and the corresponding indices for the emotional resilience are shown in Figure 4. As it is observed, the direct effect of authoritative and permissive style on the external locus of control, the direct effect of external locus of control on the emotional resilience, and the direct effect of authoritative style on the emotional resilience were all significant. Furthermore, the indirect effect of emotional resilience ($r = 0.11$), the indirect effect of authoritarian style on the emotional resilience ($r = 0.07$), and the indirect effect of permissive style on the emotional resilience ($r = 0.06$) were all significant. Moreover, the external locus of control mediated the relationship between parenting styles and emotional resilience. Finally, the authoritative,

authoritarian, permissive styles, and external locus of control predicted 19 % of the variance of emotional resilience.

The Fit indices shown in Table 2 indicate that both model fit the data well.

Discussion

The aim of the current study was to investigate the mediation role of the external locus of control in the relationship between parenting styles and academic and emotional resilience.

The results showed that external locus of control is negatively related to authoritative parenting and positively related to authoritarian and permissive parenting. According to Rotter (1966) three important characteristics in the parenting

styles may affect the development of locus of control: warmth, acceptance, and allowing independent activities help children to independently search in their safe environment and as a result the ties between behaviors and their consequences is learned. Such conditions pave the way for the development of an internal locus of control which can also be generalized to other life situations (Supple & Small, 2006; Pong, Johnston, & Chen, 2010). While for authoritarian parenting style, low in acceptance, decreased independence and a lack of warmth beside high compulsory control decrease the opportunities for selection, independent activities, and warm interactions. Because authoritarian parents are critical, and threatening to children, they tend to show lack of self-confidence, being dependent, and indecisive. These conditions are likely to lead one towards external locus of control (Hart, Newel, & Olson, 2003; Nicks et al., 1999; as cited in Berk, 2013). In permissive parenting style, allowing high and non-responsible independence, lack of required discipline and rule, haphazard conditions, and the imbalance between the allowed independence and the appropriateness of the activities with the age of the child cause a disproportion between the behavior and the outcome which in turn results in external locus of control (Baumrind, 1993; Nowicki et al., 2018).

As previously mentioned there have been cultural differences in terms of the effects of parenting styles on locus of control. Regarding the cultural differences, findings of this study were more consistent with those of Tarise and Buck (2006), Marsiglia (2007), Usha & Chandarani (2006), Quazi (2009), Ferbeshtain (2011), Butler, et al., (2007), Fletcher et al., (2008), and in contrast with those of Keshavarz et al. (2012).

External locus of control mediated the relationship between parenting styles and academic resilience as well as the relationship between parenting styles and emotional resilience. These results are in the line with April and et al. (2012), Stocks and et al. (2012), White (2007), Skinner and Zimmer-Gembeck (2007), Quevedo & Abella (2014), Norouzinia and et al. (2017), Munoz, Brady, & Shane (2017), Brown Simon, Tsen, Aboh, Austine, Raymond and et al. (2021), Strong & Gore (2020), Tuğba Türk-Kurtçıl & Metin Kocatürk (2020), and Gatezadeh & Mplaei Rad

(2021) all of which show that external locus of control can mediate the effects of parenting styles on resilience.

As an explanation it can be stated that perceived control is among the most important cognitive factors influencing the individuals' academic and emotional resilience. Students with control beliefs find themselves responsible for dealing with challenges and stressful conditions they may encounter in their academic environments or other life situations and, therefore, they try to change the situations in a positive way and solve problems by focusing on positive aspects of their experience. On the other hand, having an active approach not only affects the external aspects of adaptive functioning but also improves mental health by influencing cognitions and positive emotions. In contrast, those who feel they have no control over their behaviors might feel hesitation in dealing with threats and challenging situations. Thus, they show maladaptive behaviors and might end up to a sense of inability (Martin, 2001). In addition, such a behavior motivates negative attitude, thereby causing maladaptive behaviors as well as emotional and mental problems.

As pointed out by Wigfield, et al. (2006) during the development of control beliefs, these beliefs have two main functions: 1) while dealing with tasks, control expectations have a regulatory function; that is, control beliefs determine the quality of participation and engagement and the way in which one deals with challenges and stressful situations, and 2) control beliefs serve an interpretive function as well. Simply put, they make use of previous experiences to control the future. The beliefs that control behaviors are, in essence, the generalized expectations of control. When a failure activates a belief attributing the adverse event to a stable internal factor (such as ability) not only lowers the individual's motivation and causes negative emotion (such as discouragement, disappointment-fatigue) in short term, but also leads to the development of such an expectation in the long term that behavioral consequences are out of the persons' control. The way from causal attributions to practical expectations, is a key process all theories that deal with interpretive beliefs (such as causal attributions, integrated disability, and locus of control) refer to.

Author Note:

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Statements:

There is no conflict of interest. This study was approved by the scientific and ethical committee of the department of educational psychology of the University of Tehran. All participants read and approved the informed consent forms.

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