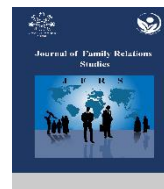




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Journal of Family Relations Studies

Journal home page: <http://jhfrs.uma.ac.ir/>



Research Paper

Casual Modeling of Resilience based on Basic Psychological Needs with the Mediating Role of Attachment Styles in Students from Single-parent Families



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Citation: Akhavi Samarein, Z., Pirsaghi, P., Amani, B. & Ghazizadeh, H. (2023). [Casual Modeling of Resilience based on Basic Psychological Needs with the Mediating Role of Attachment Styles in Students from Single-parent Families (Persian)]. *Journal of Family Relations Studies*, 3 (9): 4-10. <https://doi.org/10.22098/jfrs.2023.12206.1098>

doi: [10.22098/jfrs.2023.12206.1098](https://doi.org/10.22098/jfrs.2023.12206.1098)

ARTICLE INFO:

Received: 2023/01/22

Accepted: 2023/04/05

Available Online: 2023/06/03

Key words:

Basic psychological needs, Attachment styles, Resilience, Single-parent families

ABSTRACT

Objective: This research was conducted with the aim of causal modeling of resilience based on basic psychological needs with the mediation of attachment styles in students from single-parent families.

Methods: The current research was carried out through the descriptive-correlation method (path analysis). The statistical population included all students studying in Mohaghegh Ardabili University in the first half of the 2018-2019 academic year. Among them, 170 people were selected using the available sampling method and answered the Basic Psychological Needs questionnaire of Ryan et al. (2000), Hazen et al.'s Attachment Styles (1987), and Connor et al.'s Resilience (2003). The obtained data were analyzed using structural equation modeling by smart pls3 software.

Results: The results showed that basic psychological needs had a direct and significant effect on resilience, and the indirect effect of basic psychological needs through the mediation of attachment styles was confirmed. The results of regression analysis showed that the predictive variables predicted about 30 % of the resilience variation.

Conclusion: It is suggested that experts in the field of mental health use the findings of the present study in the framework of their educational and intervention programs, especially in working with children of single-parent families.

1. Introduction

Families are dynamic systems that change over time and adapt to crises, including the loss of a parent. Single-parent families have always existed due to divorce, separation, or the immorality of parents. The transition to single-parent families leads to unforeseen problems related to the family organization (Van Gasse & Mortelmans, 2020). Family belonging is considered an important need that affects the individual emotionally, mentally, and socially in all

family structures (Aslantürk & Mavili, 2020). Having both parents, and living in a single-parent family, will affect the sense of family cohesion in different ways (King, Boyd & Pragg, 2018; King & Boyd, 2016). Among these family structures, single-parent families are different from others due to the variety of reasons for being a single parent. Although the single-parent family is generally defined as "a family in which either the mother or the father is solely responsible for the

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care of their child", this type of family is considered a complex structure that can result from many different processes. Such as divorce, separation, death, child out of wedlock, one parent living outside the city or abroad, adoption, etc. Therefore, single-parent families have structural diversity, although they also refer to a family structure (Gladding, 2011). It seems that one of the basic concepts in these families is the state of resilience. Garnezy and Masten (1991) have defined resilience as an ability to process or outcome of successful adaptation to threatening conditions. Campbell-Sills and Stein (2007) defined resilience as the ability to withstand hardships and stressful situations, which promotes adaptation to difficult situations and has a protective role against stressors, and as a result, facilitates well-being. In a research, Joseph and McGregor (2020) concluded that resilience increases our adaptability and effort in life and can also increase people's flexibility, alertness, and innovative behaviors. Various factors affect students' resilience, and in this research, two important factors, namely, basic psychological needs and attachment styles, have been discussed.

Humans have different physical, social, and psychological needs that provide their satisfaction in life. Research on human needs was first started by MacDougall in 1908; it was continued by Freud, Murray, and Hall was finally popularized and operationalized by Maslow in the field of psychology. In the last century, different views about basic human needs have been formed. In this regard, we can refer to the approach of supporters of the innateness of needs and those who believe that needs are acquired over time. Basic Psychological Needs Theory (BPNT) is one of the six short theories in self-determination theory that was first proposed by Ryan and Deci in 2000 and focuses on three Basic Psychological Needs, i.e. autonomy, competence, and relation. Autonomy refers to a person's need for a sense of choice and self-initiation in performing actions and tasks. Competence is the need to be effective in interacting with the environment, and it shows the desire to use talents and skills, and to pursue challenges and assignments in line with abilities and to master them; finally, the need for connection refers to the need to feel confident when having a relationship with others, and the need to be accepted as a person worthy of love and respect by others (Ryan & Deci, 2017). Abualkibash and Lera (2017) showed in their research that satisfying basic psychological needs had a positive and significant effect on resilience factors of caregiving (physical and psychological caregiving), individual (personal skills, peer support, and social skills), and context (spiritual,

education and cultural context). Resilience is complexly related to behavioral autonomy, self-regulation, and psychological empowerment (Weston & Parkin, 2010). Neufeld and Malin (2019) reported in their studies that among the basic psychological needs, the satisfaction of competence predicts resilience. Weinstein and Ryan (2011) also stated that psychological needs act as an important factor in times of stress, so it reduces initial appraisals of stress and is related to better coping with demanding events.

It seems that one of the variables related to resilience is attachment styles. Attachment refers to the relationship that a child establishes with his primary caregiver. In the first month after birth, babies get used to interpersonal and social interaction and show increasing sensitivity towards the external environment and the ability to establish a special relationship with the primary caregivers. In the beginning, the attachment behavior is in the form of reactions to maintain the closeness of the child and the parents, and gradually during normal development, they are always present and active to ensure emotional relationships throughout life and are not limited to childhood in any way and their existence cannot be a pathological regression to a lower stage or underdeveloped behaviors. Attachment behavior is involved in the survival of the type of company and the experiences of the person with the attachment figure during the years of childhood and adolescence determine the path of his behaviors and attachment patterns. In this way, a person's emotional relationships throughout his life depend on how the attachment behavior is unified in the framework of personality (Dadsetan, 1997). The type of attachment style of students can lead to creating or not creating a suitable emotional bond with others. Safe attachment with others gives people emotional satisfaction and makes people be able to take refuge in each other in times of distress and not be afraid of the presence of strangers, especially in childhood. A sense of safety strengthens self-confidence, facilitates learning, and makes you compatible with your own and others' opinions. When communication is based on safety, people can better support others and deal with psychological pressures and conflicts effectively. Such relationships are more enjoyable, stable, and satisfying. Research has also shown that secure attachment is associated with positive beliefs about oneself (Zarei, 2017). In research, Shibue, Y., & Kasai, (2014) showed that there is a positive relationship between secure attachment and resilience, and a negative and significant relationship between ambivalent and avoidant attachment with resilience.

Sam, Ghosh, and Richardson (2015) reported in their studies that resilience has a significant relationship with attachment styles (secure, avoidant, and ambivalent). In another study, Craparo, Magnano, Zapparrata, et al. (2018) reported that there is a significant relationship between attachment styles (secure, ambivalent, and avoidant) with coping strategies and resilience. Another study showed that a higher avoidant attachment score may disrupt the process of predicting self-awareness (Emery, Gardner, Carswell, & Finkel, 2018).

According to the research records mentioned above, this research was conducted to find a causal model of resilience based on basic psychological needs with the mediation of attachment styles in students from single-parent families in the form of the following conceptual model (Figure 1).

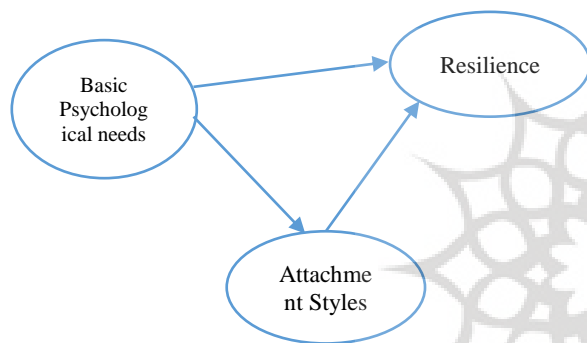


Figure 1. Conceptual model of the research

2. Materials and Methods

The research method used in this study was applied in terms of purpose and descriptive correlation in terms of nature, and its statistical population included all students studying at Mohaghegh Ardabili University in the first half of the academic year 2018-2019. The sample size in the present study, taking into account the possibility of sample loss, was considered to be 200 people, and after removing distorted data, 170 questionnaires were included in the statistical analysis. The sampling method used was available sampling. Data collection was done by field method and by combining 3 questionnaires in the form of a package. With the presence of the researcher in the university and the class, first, the purpose of the research was explained to the students, and then, they were asked to answer the questionnaires: basic psychological needs of Ryan et al. (2000), Hazen et al.'s (1987) attachment styles and Connor et al.'s resilience (2003). In this research, all subjects had full freedom to participate in the research, and before completing the questionnaire, to comply with ethical considerations, the objectives of the research were explained to them and they were assured that the collected information would be

analyzed in a group. Also, the criteria for entering the research included being from a single-parent family and the desire to participate in the research; Reluctance to participate in the research and having two parents were also exit criteria. Smartpls software was used for data analysis.

Measuring tools:

1. Basic Psychological Needs Questionnaire:

Psychological needs are the needs of relation, competence, and autonomy from the Basic Psychological Needs Scale of Ryan et al. (2000). This test includes 21 statements and 3 subscales. The subscales include the need for competence, with 6 statements (3-5-10-13-15-19), the need for relation, with 8 statements (2-6-7-9-12-16-18-21), and the need for autonomy, including 7 statements (1-4-8-11-14-17-20). To better performance and scoring, the questions of the scale were arranged in each subscale one after the other. The scoring of this scale consists of 7 degrees, where 1 is considered for the answer "not at all true" and 7 is considered for the option "perfectly good". In this study, the 7-grade answer has been converted into a five-grade answer. Statements 4, 11, 20, 3, 15, 19, 7, 16, and 18 are scored in reverse. Ryan et al. (2001) have reported the reliability of this scale using Cronbach's alpha method for the subscales of need for autonomy, need for competence, and need for communication as 0.79, 0.73, and 0.84 respectively. Psychometric characteristics were investigated in a sample of 927 subjects in two groups: the general population (n = 560; 274 women and 256 men) and students (n = 397; 216 girls, 181 boys). Cronbach's alpha coefficients were calculated for the subscales of autonomy, competence, and relation for the subjects of the general population, respectively, 0.87, 0.89, and 0.92, and for students, respectively, 0.89, 0.87, and 0.91; so they indicate good internal consistency of the scale. Correlation coefficients were calculated between the scores of several subjects from the general population (= n 127) on two occasions with an interval of two to four weeks to measure retest reliability. These coefficients were significant for the subscales of autonomy, competence, and relation, $r=0.77$, $r=0.73$, and $r=0.76$, respectively, at the $p<0.001$ level, which is a sign of satisfactory retest reliability of the scale (Besharat, 2011).

2. Attachment styles questionnaire: Hazen and Shaver's (1987) attachment styles questionnaire was used to measure the variable of attachment styles. The basic assumption of this tool is to generalize infant-caregiver attachment styles in adult relationships. This questionnaire is a self-description form that compares the infant - caregiver relationship with adult

relationships. This tool has 15 questions and its three components are secure attachment (5 questions), avoidant insecure attachment (5 questions), and ambivalent insecure attachment (5 questions). Hazen et al. (1987) obtained a test-retest reliability of the instrument equal to 0.78 and reported high construct and content validity.

3. Resilience questionnaire: Coner and Davidson's (2003) Resilience Scale was used to measure resilience. This questionnaire was prepared by Coner et al. (2003), by reviewing the research evidence of 12 years, during 1979-1991. The developers of this scale believe that this questionnaire is well able to separate resilient people from non-resilient ones in clinical and

non-clinical groups and can be used in research situations. Coner and Davidson's Resilience Scale has 25 items with a Likert scale between 0 (completely false) and 5 (always true).

3. Results

The sample number was 170 students of Mohaghegh Ardabili University. Among them, 89 (52.35%) of the subjects were girls. The average age of the female subjects was 21.62 and the standard deviation was 1.62. 81 people (47.65 percent) of the subjects were boys who participated in this research with an average age of 22.54 and a standard deviation of 2.24 years.

Table 1. Mean and standard deviation of variables of basic psychological needs, attachment styles, and resilience

Variable	M	± SD
Basic Psychological Needs	92/15	±11/73
Need for competence	26/67	±4/13
Need for relation	36/05	±6/48
Need for autonomy	29/58	±5/36
Secure attachment	13/41	±2/33
Insecure attachment	14/37	±3/20
Ambivalent attachment	13/72	±2/56
Resilience	58/7.	±14/36

The results of Table 1 show the mean and standard deviation of the research variables. The general fit of the model:

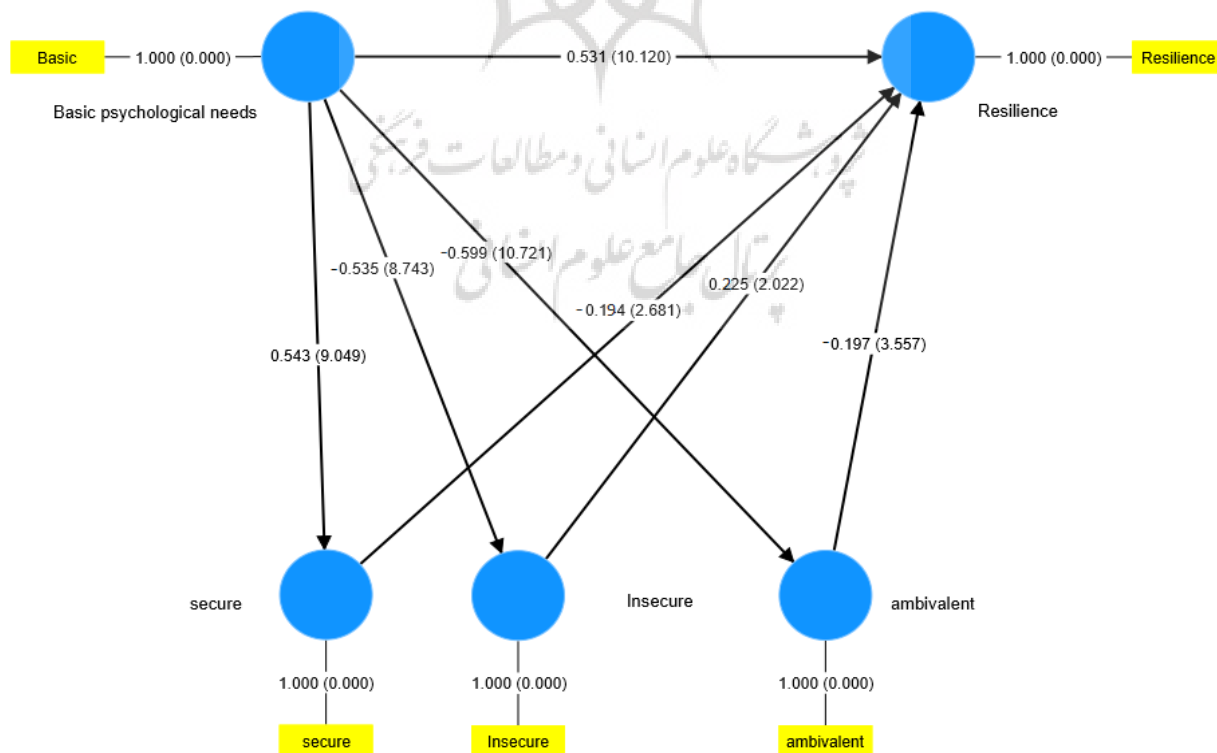


Figure 2. Coefficients and T values of the measurement model

Table 2. The path analysis of direct and indirect effects between the main research variables

direct path	direct path coefficient	the value of t	the result
basic psychological needs on resilience	0/531	10/120	approval
basic psychological needs on secure attachment style	0/543	9/049	approval
basic psychological needs on insecure attachment style	-0/535	8/743	approval
basic psychological needs on ambivalent attachment style	-0/599	10/721	approval
secure attachment style on resilience	-0/144	2/681	approval
insecure attachment style on resilience	0/125	2/022	approval
ambivalent attachment style on resilience	-0/197	3/557	approval
Indirect path	Path coefficient	the value of t	the result
basic psychological needs - secure attachment style - resilience	0/10	2/012	approval
basic psychological needs - insecure attachment style - resilience	0/12	2/120	approval
basic psychological needs - ambivalent attachment style - resilience	0/11	2/091	approval

According to the values of the significant coefficients of t and the path coefficient obtained in the above models and table number 2, it can be concluded that the significant coefficients of t are greater than 1.96, so the research hypotheses are confirmed at the confidence level of 95%. Also, our main hypothesis is confirmed with a probability of 95% and basic psychological needs have a significant effect on resilience through the mediation of attachment styles.

4. Discussion and Conclusion

The present study was conducted with the aim of causal modeling of resilience based on basic psychological needs with the mediation of attachment styles in students from single-parent families. The results of the path analysis showed that basic psychological needs have a direct effect on resilience and an indirect effect through the mediation of attachment styles (secure, ambivalent, and avoidant). These findings are in agreement with the study of Abolakibash et al. (2017) that showed satisfying basic psychological Needs had a positive and significant effect on resilience factors of caregiving (physical and psychological caregiving), individual (personal skills, peer support, and social skills), and context (spiritual, educational and cultural context), as well as with the research of Weston et al. (2010) who showed that resilience is complexly related to behavioral autonomy, self-regulation, and psychological empowerment.

In explaining this assumption, it can be said that psychological needs are known as internal and psychological food, which are necessary for psychological growth and survival, and well-being (Tian, Chen, and Hubner, 2013). The three psychological needs (autonomy, competence, and relation) are interrelated: feeling autonomy in doing tasks increases competence, and competence also provides the necessary trust to the feeling of being

accepted and connected to the surrounding environment. If the basic psychological needs are met, the feeling of self-confidence and self-worth is formed in people and it leads to high satisfaction with life and well-being of people, but if these needs are hindered and not met, people will develop a fragile, negative, alien and critical perception of themselves (Marshik, 2010). In addition, Neufeld et al. (2019) reported in their study that among the basic psychological needs, competence satisfaction is a predictor of resilience. Also, Weinstein et al. (2011) stated that psychological needs act as an important strategy in times of stress; so that they reduce initial appraisals of stress, also reduce adaptive coping after stress-related events. In other words, the richer a person is in terms of basic psychological needs, the more resilient she/he will be in challenging situations.

Also, the results of path analysis showed that attachment styles (secure, ambivalent, and avoidant) have a direct effect on resilience. In line with this finding, Shibue et al. (2014) showed that there is a positive relationship between secure attachment and resilience, and there is a negative and significant relationship between ambivalent and avoidant attachment and resilience. Also, the results of Sam et al.'s (2015) study determined that resilience has a significant relationship with attachment styles (secure, avoidant, and ambivalent). Also, Craparo et al. (2018) reported in their research that there is a significant relationship between attachment styles (secure, ambivalent, and avoidant) with coping strategies and resilience. Also, Emery et al. (2018) showed that a higher score of avoidant attachment may disrupt the process of predicting self-awareness.

In explaining this assumption, it can be stated that one of the psychological advantages of the secure attachment style is that close access to significant others and emotionally healthy people makes it possible to dedicate their attachment to growth-

oriented activities. These extensive and constructive processes strengthen their strengths that can lead to positive self-growth (Baumeister, Campbell, Krueger, & Vohs, 2003). Based on this, it can be said that these people do not have self-destructive behaviors. They are emotionally calm and can deal with adverse situations, including the loss of one of their parents. On the other hand, people with an ambivalent attachment style have a strong desire to communicate intimately with others, but at the same time, they worry about not being accepted by others. These people do not have a positive and good image of themselves. The important problem of people with an avoidant attachment style is rejection by their peers. By denying the need for attachment, these people try to deny the need to connect with others and maintain their positive image (Hazan and Shaver, 2017). Therefore, it can be concluded that these people have more resilience in demanding situations and are at a higher level in terms of mental health, and experience less stress, depression, and anxiety.

The findings of the present study showed that basic psychological needs have a direct effect on resilience and an indirect effect through the mediation of attachment styles (secure, ambivalent, and avoidant). The two major limitations of the present study were the limitation of the research to students of Mohaghegh Ardabili University, and the lack of control of demographic variables, including social and economic status. Based on this, it is suggested that future studies investigate this issue in other samples and by controlling demographic variables. From a practical point of view, it is suggested that experts in the field of mental health use the findings of the present study in the framework of their educational

and intervention programs, especially in working with children of single-parent families. Considering the role that basic psychological needs play both directly and indirectly through attachment styles on people's resilience, and also since the satisfaction of these important needs is largely dependent on the environment in which the individual lives, it is recommended to pay attention to the methods of satisfying these needs and address them in educational programs for different groups.

5. Ethical Considerations

Compliance with ethical guidelines

All ethical principles are considered in this article. The participants were informed about the purpose of the research and its implementation stages. They were also assured about the confidentiality of their information and were free to leave the study whenever they wished, and if desired, the research results would be available to them.

Funding

This research did not receive any grant from funding agencies in the public, commercial, or non-profit sectors.

Authors' contributions

All authors have participated in the design, implementation, and writing of all sections of the present study.

Conflicts of interest

The authors declared no conflict of interest.

Acknowledgments

We are extremely grateful to all participating students for their valuable cooperation in the implementation of this research.

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