

## Intermediary role of self-efficacy in relations with temperament and character and positive and negative affections with shame and guilt: presenting a structural model

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### Abstract

**Introduction:** Concerning the many attempts made to understand the affecting factors of feeling of shame and guilt, this research aims to learn the Intermediary role of self-efficacy in relations with temperament, character and positive and negative emotions with shame and guilt to present a structural model.

**Method:** Research methodology of this study is fundamental, descriptive data gathering is done in a correlational fashion, data is numerical and the research is done through case study. The statistical universe of this study includes all female and male students of Islamic Azad Universities in Tehran in the academic year of 1398-1399. Sampling in this study is randomized and multi-stage. The respective sequence of data gathering is as stated in the following: First we prepare the lists of Islamic Azad Universities in Tehran and choose four of them in a randomized fashion. According to the basis of this study, modeling and developing a structural model, population of 500 people is mediocre, population of 700 is good and population of 1000 is the best. Hence the population of this study will contain 700 of the students of Islamic Azad Universities in Tehran. Data is analyzed through structural equations method.

**Results:** Outcomes of this research states that the relations between the intermediary role of self-efficacy and the proposed structural model of shame and guilt based on temperament, character and positive and negative emotions fits the necessary criteria and the direct and undirect ways of showing feelings of shame and guilt is meaningful. According to the results, direct effect of temperament and character on feeling of shame is respectively 0.13 and 0.21 and the effect of positive affections of feeling of shame in 0.10 and significant.

**Conclusions:** According to these results, positive affection training will reduce feelings of shame and guilt and consequently increases self-efficacy; hence positive affection training is suggested.

**Keywords:** Positive and Negative affections, Shame and Guilt, Self-efficacy, Temperament and Character

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## Introduction:

Shame is one of personal and interpersonal damages which can be experienced in different situations. It is expressed by words such as shyness, low self-esteem, timidity and etc (1). and in mental, physical and societal senses it's accompanied by humility, inferiority, worthlessness and rejection (2). Kaufman believed family to be the same factor which effects perception and relations of people and also is in contrast with human's social spirit (3, 4) .It has been seen that these types of people suffer from interpersonal and psychological problems and are deprived of familial independence and support, synergy between family members, sentiment and etc. which in turn forces them to experience shame (۴). This is in fact of the self-conscious emotions which differentiates a person behaviorally, cognitively and sentimentally (5). The main factor of it is hidden in "self" and one use it to facilitate sentiment and correct their behavior. Hence it can be considered as a comparative feeling which can be discordant in some cases (6). Hereof, one of the affecting factors on feeling of shame is positive affection (motivational system's expositor) and negative affection (irritant motivational system's expositor) which not only relates to mood but also relates to vast cognitive, motivational, biological and behavioral systems (7). principally positive affection system has a neurological basis and uses dopamine as neurotransmitter and is activated by desirable events; Negative affections have neurological basis to but they are activated by undesirable events and use dopamine and serotonin as neurotransmitters (8). There have been many studies on this topic which we can point out to (9) other models such as neuro-biological model which analyzes personality through two dimensions of temperament (emotional, motivational and adaptive aspects) and character (self-concept and personal differences in goals, values and choices) (10-12). Also we can point out to Cloninger's neuro-biological model with four dimensions of harm avoidance (worry, fear of uncertainty shame and embarrassment when encountering strangers and exhaustion and fatigue), novelty seeking (includes stimulation seeking, self-indulgence, impulsivity and disorderliness, also people with high novelty seeking are inclined to fast mood changes, emotional behaviors, exploring and curiosity), reward dependence (score centered, social and etc.) and persistence (diligent, hardworking and self-sustained) (13). In Bandura's self-efficacy it has also been stated and in fact, it's one of social-cognitive theory's aspects and some researches such and Durand & Barlow, has deemed internal and external control a fitting criterion for diagnosis of emotional disorders since they unveil themselves exactly when one is experiencing stress meaning a situation in which the person can't adapt to the situation. Hence, it can be said that as much as environmental factors change and shape people, people can also choose their environments, affect others and be affected by others (14). In social learning theory, self-efficacy's development is used as a way to judge how one acts in an expected situation (15). Self-efficacy is dependent to one's sense of control on their environment and behavior and is a cognitive belief which determines how much changes in behavior, how much effort and how much endurance is needed to face problems. Self-efficacy indirectly affects healthy behavior to reach the goal. It has an effect on the challenges one faces and in fact people with high self-efficacy choose more difficult goals and can attend to more situations and conditions (16). Self-efficacy effects endurance, commitment and the effort spent for reaching a goal (15). Low self-efficacy can

exterminate motivation, pass on reaching for dreams and deem them as impossible, interfere with cognitive abilities and have an undesirable effect on physical health (16). Rajabi & Abbasi in 1390 has also used this factor, explicitly, as self-criticism, social anxiety and fear of failure variables' positive relations with internal shame (17). To analyze the design of the structural model of feelings of shame and guilt based on temperament and character and positive and negative affections with the intermediary role of self-efficacy, the conceptual model is illustrated in figure 1. Afterwards this conceptual is examined by maximum likelihood estimation in structural equation modeling method. Therefore this study aims to answer this question: does feeling of shame and guilt's structural model based on temperament and character and positive and negative affections with intermediary role of self-efficacy pass the fitting criteria for college students?

### Methods:

The research presented is descriptive and correlational. Since in this research the designed model will be examined by theoretical basis and past studies, the structural equation model will be used. Data is numerical, goal of the study fundamental, it is done by case study and is on the ordinal scale. Statistical universe, sample size and sampling method:

Statistical universe of this study includes all female and male students of Islamic Azad University in Tehran in the academic year of 1398-1399. Sampling method in this study is done randomized and multi-staged. The respective sequence of data gathering is as stated in the following: First we prepared the lists of Islamic Azad Universities in Tehran and four of them (Centered Tehran, West Tehran, Research & Science and North Tehran) were chosen in a randomized fashion. According to the type of this study, modeling and designing a structural model, the sample size of 360 people was chosen. Inclusion criteria of the study are stated as such: Consent to answering questions, age range of 19-24, students of Islamic Azad University of Tehran, baccalaureate students, no records of psychiatric medicine usage in the last 6 months through self-report and no records of extreme psychiatric disorders through self-report. Tools and scales of the research:

**Shame and guilt proneness scale:** This scale was designed by Cohen, Wolf, Panter & Insko (18) and has 16 versions for assessment of two dimensions of shame and guilt. In this scale, scenarios about day to day and routine events and people's response to them is presented. Afterwards the participants will be asked to imagine themselves in those events and rate the possibility of their reactions in those events in a 5-level range. Active analysis by the creators of the scale indicates that the feeling of guilt has two subscales of negative evaluation and compensation for the person's infringement and the feeling of shame has two subscales of negative self-evaluation and avoidant behavior for public exposure. Cohen & et al (18) have demonstrated that even though there is a strong correlation between subscales of feeling of guilt, the relation between subscales of feeling of shame is weak. In two separate assessments they concluded desirable alpha coefficients (between 0.61 and 0.71) for the subscales of these scales. Results of the final assessment of internal homology of the scales of feelings of shame and guilt in the study of Jokar & Kamali (19) shows

that the coefficient of Cronbach's alpha for the feeling of guilt, feeling of shame and the entire scale are respectively 0.82, 0.79, 0.86. This demonstrates an eligible reliability for the subscales and the entire scale of feelings of shame and guilt. Confirmatory Factor Analysis (CFA), Construct validity and scale reliability of feelings of shame and guilt were used in the study of Hashemi & et al (20) to do confirmatory factor analysis and analyzation of construct validity of feelings of guilt and shame scale in the conceptual 16 version model relating to the two subscales of this scale as indicators and observed variables, and two subscales of emotion and guilt as latent variables. All things considered, results from the table indicate that the confirmatory factor analysis of feelings of guilt and shame scale has an ideal and appropriate befitting with the experimental data obtained from samples of the study. These results exhibit construct validity and affirm the factorial structure of feelings of shame and guilt scale in Iranian society. In the study of Hashemi & et al (20) parameters of the confirmatory factor analysis of feeling of shame and guilt scale were inspected. The resulted outcomes point out to the significance that all versions relating to the confirmatory factor analysis of feelings of shame and guilt scale model have on the latent grade factor relating to self (subscales). These outcomes also exhibit structural validity and affirmation for the confirmatory factor analysis of the feelings of shame and guilt scale in the study of Kalantari (1388) are the reliability coefficients for the two factors of feeling of guilt and feeling of shame which are respectively 0.84 and 0.82.

**Temperament and Character Inventory (TCI):** The questionnaire mentioned was designed by Robert Cloninger on the basis of a general model containing typical and atypical personality. He presented his neurobiological model to explain components of temperament (21). This tool is a self-report pen and paper scale which has 215 articles which in this study, the summarized 125 article form will be used and each participant will answer each question with yes or no. This questionnaire is used to examine personality traits and characteristics which are developed by genetics (temperament) or by the environment (character). This model measures seven factors. The reliability and validity of this questionnaire has been confirmed in Iranian society(22). Sentences used in this questionnaire are mainly used by people to express their personal views, opinions, desires and emotions. This questionnaire has 125 questions and each participant has to answer them with yes or no. This questionnaire measures 4 dimensions of temperament (Novelty Seeking, Harm Avoidance, Reward Dependence and Persistence) and 3 dimensions of character (Self-Directedness, Cooperativeness and Self-Transference). In this questionnaire each of the 7 factors will be measured individually. In a way that every positive version and vice versa will have a score according to their respective questions. Kaviani & Pournaseh (22) presented and validated an issue of this questionnaire in Iran and reported the following: The reliability coefficient of reexamination of subscales of this questionnaire are in the range of 0.73 (for Reward Dependence) and 0.9 (for Self-Directedness) and the Cronbach's alpha of the subscales are in the range of 0.66 (for Self-Directedness) and 0.9(for Persistence). Ketabi & et al (1387) achieved Cronbach's alpha of 0.66, 0.85, 0.64 respectively for three subscales of Novelty Seeking, Harm Avoidance and Reward Dependence in sample of 300 Iranians.

**Positive and negative affect schedule (PANAS):** Panas is a self-examination tool with 20 articles which is used to measure two mood dimensions meaning positive and negative affections (23). Each subscale has 10 articles which are ranked by the participant on a Likert scale (1= Strongly disagree & 5= Strongly agree). Panas is a self-examination tool which with change in instructions, can also measure attitude and attribute. If the time frame refers to the current mood and the current week, the attitude of affection will be measured and if it refers to longer time frames, attributes will be measured. Validity and reliability of this test have been deemed desirable by its designers Watson, Clark & Tellegen (23). This scale includes 10 articles relating to positive affections and 10 articles relating to negative affections. In both the latter and the former stages of emotional experience induction, participants are asked to determine “to what extent they are experiencing those characteristics right now?” on a 5-level range from 1 (Extremely Low) to 5 (Extremely High)

**General Self-Efficacy Scale (GSE):** GSE was translated to Farsi by Nezami & et al in 1996 to be used a measurement for self-efficacy and has been used in many researches in Iran. This scale has 10 questions such as “If I try hard enough, I can always overcome any hard problem”. To answer these questions, participant will grade their answers from 1 to 5, “Not at all true” to “Exactly true”. Achieving high scores in this scale indicates higher than average general self-efficacy and vice versa (24). Thereupon, general self-efficacy scores can be between the range of 0 and 50 and the theoretic average is 25. The reliability and validity of this questionnaire has been confirmed in Iranian society (25).

### Findings:

In this section descriptive indicators of average and standard deviation, most and lowest scores among variables seen through the study are presented. Table 1 demonstrates these results.

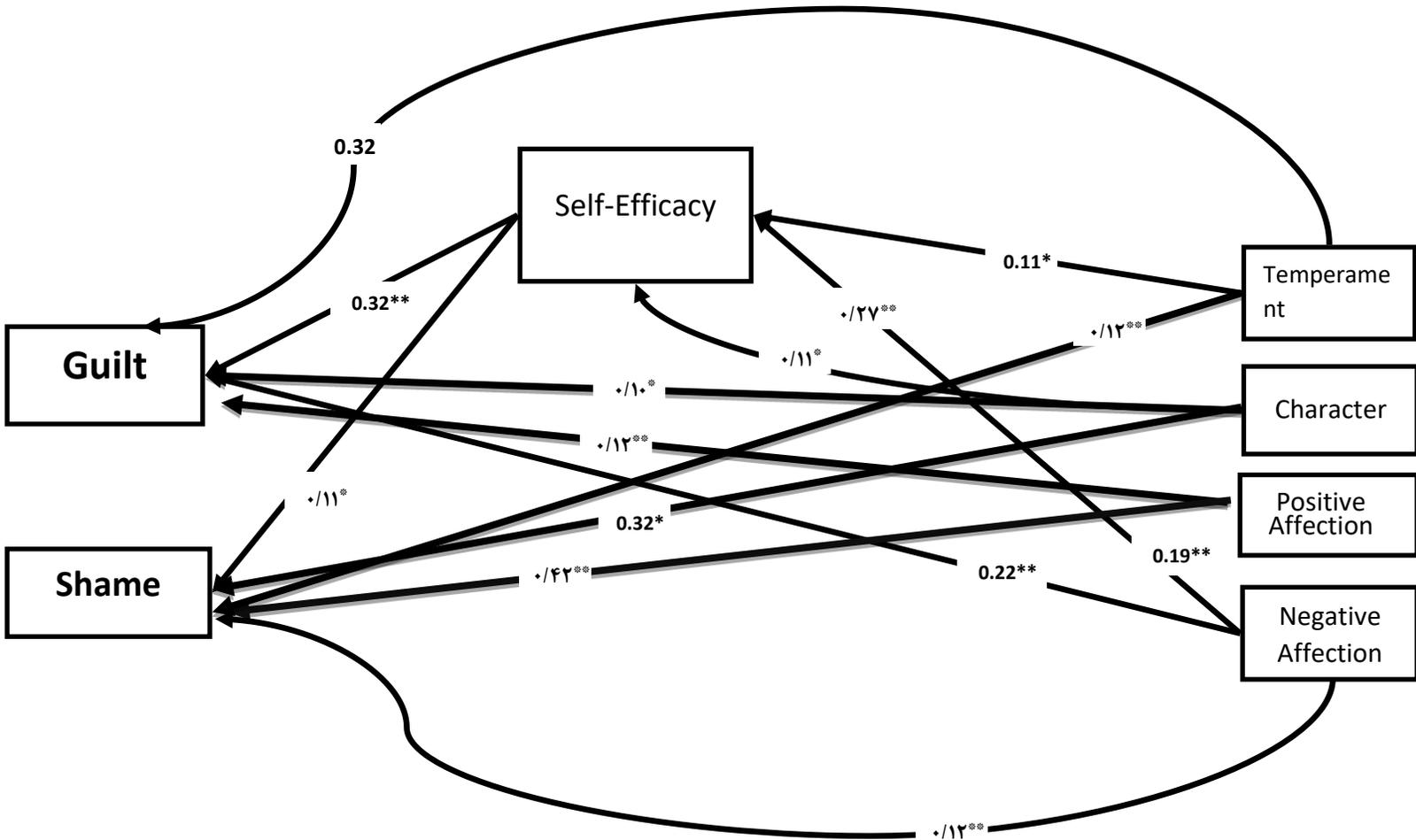
Table 1. Descriptive characteristics of study's variables and their normalcy

Variables	Average	Standard deviation	Lowest score	Highest score	Skewness	Kurtosis
Temperament	15.64	3.82	7	25	-0.242	-0.179
Character	22.97	3.71	8	30	-0.017	-0.836
Positive Affection	41.21	6.82	10	50	-1.678	0.6251
Negative Affection	19.34	5.60	10	32	0.228	-0.569
Self-Efficacy	15.11	2.54	7	20	-0.418	0.653
Feeling of Guilt	34.34	3.52	18	40	-0.659	-0.327

<b>Feeling of Shame</b>	27.41	4.18	16	35	0.302	-0.530
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As shown in the table 1 average, standard deviation and highest and lowest scores for each variable is presented. Average of feeling of guilt is 34.34, standard deviation is 3.52, lowest score is 18 and highest score is 40. Average of feeling of shame is 27.41, standard deviation is 4.18, lowest score is 16 and highest score is 35. Other results are presented in the table. Analyzing the structural equation modeling assumptions went as such: Before entering the examination the conceptual model of study, structural equation modeling assumptions were analyzed. In this section, the three main structural equation modeling assumptions including missing data, outliers and normal distribution were analyzed. Missing data: Even though the study was supposed to have gather full data from samples, there was missing data. In the study presented, average value of variables was placed instead of missing data. Outliers: To analyze outliers in this study the explore function of SPSS was used. Results of analyzing outliers in study's variables exhibited an absence of outliers in any of study's variables. Hence, there aren't any obstacles for analyzing structural equation modeling in this sense. Analyzing normal distribution of presented variables: To analyze the normalcy of distribution of presented variables in the current study, two indicators of skewness and kurtosis were used. If these indicators ranged between 3 and -3, distribution of study's variables will be deemed normal; hence there are no obstacles for this analysis.

Figure 1. Study's conceptual mode



First hypothesis: Temperament and character have direct impact on feeling of shame. To examine the first hypothesis, the results of estimated straight path's coefficient of temperament and character on feeling of shame from structural equation analysis of study's refined model were examined. Table 2 presents these results.

Table 2. Results of examining the first hypothesis

<b>First hypothesis</b>	<b>Nonstandard path's coefficient</b>	<b>Standard path's coefficient (<math>\beta</math>)</b>	<b>Critical values</b>	<b>Significance level</b>
<b>Temperament on Feeling of shame</b>	0.11	0.13	2.42	0.008
<b>Character on Feeling of shame</b>	-0.21	-0.13	-4.55	0.001

Analysis of first hypothesis in study's model presented in table 2 shows that direct impact of temperament on feeling of shame with standard path's coefficient ( $\beta$ ) of 0.13 on 0.05 alpha is significant. Similarly, direct impact of character on feeling of shame with standard path's coefficient ( $\beta$ ) of -0.21 on 0.05 alpha is significant. Hence, concerning these findings, first hypothesis is validated.

Second hypothesis: Positive affection has direct impact on feeling of shame. To examine the second hypothesis, the results of estimated straight path's coefficient of positive affection on feeling of shame from structural equation analysis of study's refined model were examined. Table 3 presents these results.

Table 3. Results of examining the second hypothesis

<b>Second hypothesis</b>	<b>Nonstandard path's coefficient</b>	<b>Standard path's coefficient (<math>\beta</math>)</b>	<b>Critical values</b>	<b>Significance level</b>
Positive affection on Feeling of shame	0.05	0.10	1.94	0.026

Analysis of second hypothesis in study's model presented in table 3 shows that direct impact of positive affection on feeling of shame with standard path's coefficient ( $\beta$ ) of 0.10 on 0.05 alpha is significant. Hence, concerning these findings, second hypothesis is validated.

Third hypothesis: Negative affection has direct impact on feeling of shame. To examine the third hypothesis, the results of estimated straight path's coefficient of negative affection on feeling of shame from structural equation analysis of study's refined model were examined. Table 4 presents these results.

Table 4. Results of examining the third hypothesis

<b>Third hypothesis</b>	<b>Nonstandard path's coefficient</b>	<b>Standard path's coefficient (<math>\beta</math>)</b>	<b>Critical values</b>	<b>Significance level</b>
<b>Avoidant attachment style on Feeling of shame</b>	0.25	0.28	4.98	0.001
<b>Anxious attachment style on Feeling of shame</b>	0.07	0.14	2.38	0.010

Analysis of third hypothesis in study's model presented in table 4 shows that direct impact of Avoidant attachment style on feeling of shame with standard path's coefficient ( $\beta$ ) of 0.28 on 0.05 alpha is significant. Similarly, direct impact of Anxious attachment style on feeling of shame with standard path's coefficient ( $\beta$ ) of 0.14 on 0.05 alpha is significant. Hence, concerning these findings, third hypothesis is validated.

Fourth hypothesis: Temperament and character have direct impact on feeling of guilt. To examine fourth hypothesis, the results of estimated straight path's coefficient of temperament and character on feeling of guilt from structural equation analysis of study's refined model were examined. Table 5 presents these results.

Table 5. Results of examining the fourth hypothesis

<b>Fourth hypothesis</b>	<b>Nonstandard path's coefficient</b>	<b>Standard path's coefficient (<math>\beta</math>)</b>	<b>Critical values</b>	<b>Significance level</b>
<b>Temperament on Feeling of guilt</b>	0.04	0.04	0.71	0.473
<b>Character on Feeling of guilt</b>	0.15	0.22	2.88	0.001

Analysis of fourth hypothesis in study's model presented in table 5 shows that direct impact of temperament on feeling of guilt with standard path's coefficient ( $\beta$ ) of 0.04 on 0.05 alpha is not significant but the direct impact of character on feeling of guilt with standard path's coefficient ( $\beta$ ) of 0.22 on 0.05 alpha is significant.

Fifth hypothesis: Positive affection has direct impact on feeling of guilt. To examine the fifth hypothesis, the results of estimated straight path's coefficient of positive affection on feeling of shame from structural equation analysis of study's refined model were examined. Table 6 presents these results.

Table 6. Results of examining the fifth hypothesis

<b>Fifth hypothesis</b>	<b>Nonstandard path's coefficient</b>	<b>Standard path's coefficient (<math>\beta</math>)</b>	<b>Critical values</b>	<b>Significance level</b>
<b>Positive affection on Feeling of guilt</b>	0.15	0.21	3.99	0.001

Analysis of fifth hypothesis in study's model presented in table 6 shows that direct impact of positive affection on feeling of guilt with standard path's coefficient ( $\beta$ ) of 0.21 on 0.05 alpha is significant. Hence, concerning these findings, fifth hypothesis is validated.

Sixth hypothesis: Negative affection has direct impact on feeling of guilt. To examine the sixth hypothesis, the results of estimated straight path's coefficient of negative affection on feeling of shame from structural equation analysis of study's refined model were examined. Table 7 presents these results.

Table 7. Results of examining the sixth hypothesis

<b>Sixth hypothesis</b>	<b>Nonstandard path's coefficient</b>	<b>Standard path's coefficient (<math>\beta</math>)</b>	<b>Critical values</b>	<b>Significance level</b>
<b>Negative affection on Feeling of guilt</b>	0.06	0.12	2.55	0.006

Analysis of sixth hypothesis in study's model presented in table 7 shows that direct impact of negative affection on feeling of guilt with standard path's coefficient ( $\beta$ ) of 0.12 on 0.05 alpha is significant. Hence, concerning these findings, sixth hypothesis is validated.

One of the important goals of this current study is to discuss model's exogenous variables' indirect impact including temperament, character, positive affection and negative affection on model's endogenous variables including feeling of shame and guilt through self-efficacy. In this section, indirect impact of model and mediation manner of self-efficacy in relations between temperament, character, positive affection and negative with feeling of shame and guilt will be discussed as indirect hypotheses. For this purpose, Sobel test (Sobel, 1982) was used to analyze the amount and significance of indirect impacts of temperament, character, positive affection and negative affection on feeling of shame and guilt and to analyze the mediation manner of self-efficacy. Sobel test, which in fact is a t test, uses critical values to calculate two paths of dependent-mediator variables and mediator-dependent variables and show the significance of their indirect impacts.

### **Discussion and conclusion:**

As it was stated, main goal of the current study is to compose the structural model of feeling of shame and guilt based on temperament, character and positive and negative affection with the intermediary role of self-efficacy. This study concludes that the pathological origin of feeling of shame is related to experience and personality traits in childhood and can also be related to the experiences in the first stage of life in regards to the reactions to rejection or separation from child's care givers. It needs to be stated that the results of this study are on the same page as results seen in Philip, Young & Zakalik (26) , Akbag & Erden Imanoglu (27), Passanisi & et al (28), Gross & Hansen (29) and Heidon & Shilkurt (30).

The presented study, like any other, has its own limitations which shall be stated to help future researchers to advance their affairs. Limits such as choosing a fixed age range (19-24), numerical nature of the study, analysis of the study only through temperament, character and positive and negative affections and only measuring relations between each one of them and the presented model being evident to a structural relationship between them. Results achieved by analysis of hypotheses expresses the following: In the first hypothesis the direct effect of temperament on feeling of shame with standard path's coefficient of 0.13 on 0.05 alpha and the direct effect of character on feeling of shame with standard path's coefficient of -0.21 on 0.05 alpha have been measured which resulted in their significance. In the second hypothesis the direct effect of positive affection on feeling of shame with standard path's coefficient of 0.10 in 0.05 alpha was significant. In the third hypothesis the direct effect of avoidant attachment on feeling of shame with standard path's coefficient of 0.28 on 0.05 alpha and the direct effect of anxious attachment on feeling of shame with standard path's coefficient of 0.14 on 0.05 alpha were also significant. In the fourth hypothesis the direct effect of temperament on feeling of guilt with standard path's coefficient of 0.04 on 0.05 alpha was deemed insignificant but the direct effects of character on feeling of guilt with standard path's coefficient of 0.22 on 0.05 alpha was significant. In the fifth hypothesis the direct effect of positive affection on feeling of guilt with standard path's coefficient of 0.21 in 0.05 alpha was also significant. In the sixth hypothesis the direct effect of negative affection on feeling of guilt with standard path's coefficient of 0.12 in 0.05 alpha was also significant.

### **Ethical considerations**

The ethical considerations in this study were as such: Presenting written information about the study to participants, reassuring college students about the security of their information and using them only for research purposes, voluntary participation of college students in the study and gathering written consent letter from participating college students.

### **Research limitation**

The voluntary nature of the study can affect the study's results achieved from statistical analysis and by doing so create undesirable side effects on the study's internal validity. Hence the limits should be considered when generalizing and relying on study's results. The other limit of the study was the limited statistical universe corresponding only to female and male college students of Islamic Azad University of Tehran and any generalization should be done with caution.

### **Research applications**

In the end, regarding the results of this study and the significant and important effect of the intermediary role of self-efficacy concerning temperament, character and positive and negative affections with feeling of shame and guilt, it is suggested for this method to be used in family counseling centers, mental health service centers and family crisis intervention centers.

### **Conflict of interests**

There was no conflict of interests between authors.

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