

Analysis of the Relation between Perfectionism and Negative Automatic Thoughts with Structural Equation Model

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ABSTRACT The aim of this study is to analyze the relations between perfectionism and negative automatic thoughts of teacher candidates. The participants of the study are composed of 243 teacher candidates who still continue their education in their 1., 2., 3., 4. grade in the School Teaching Programme of the Faculty of Education of Recep Tayyip Erdogan University in the academic year of 2011-2012 in Turkey. In order to determine the perfectionism feature of the teacher candidates "Positive and Negative Perfectionism Scale" is used and in order to determine their negative automatic thoughts "Automatic Thoughts Scale" is used. In the analysis of the data obtained, Pearson moments multiplication correlation coefficient is calculated and Structural Equation Modelling is practiced. In the consequence of the research, it is seen that positive perfectionism thoughts of teacher candidates affect negative automatic thoughts significantly in a negative way. In addition to that, it is seen that negative perfectionism features of the teacher candidates affect negative automatic thoughts in a positive way. In the light of these consequences, some suggestions have been made for this practice and for the researches to be conducted in the future.

INTRODUCTION

It is an undeniable fact that the profession of teaching contributes to the development of the individuals and societies. Teachers are important models followed by students in sense of what they teach and how they act. It is considered that school teaching has a unique place among all teaching programs. It is seen that classroom teachers have more interactions with the students than the branch teachers when the age group of the students and the time the students spend with their teachers are taken into consideration. In this point, it is possible to say they have a very important role in the development of the students in the intellectual, individual and social fields. It is an important necessity that the teacher candidates to be future teachers are the individuals not only having knowledge about teaching profession during their education but also providing their own individual and social developments. The other point is that the teacher candidates should be known very well, their development should be supported and they should be assisted with the problems they are facing. In this scope, one of the features that is thought to be effective in the mental health of the individuals and that should be identified and that should be assisted in removing the nega-

tive consequences when required is perfectionism.

Perfectionism has been described as that the individuals' determining standards beyond their performances for themselves and the other people and having no tolerance for not reaching this will (Frost et al. 1990; Hollander 1965). For some researchers perfectionism is solely a negative structure, for some it is regarded as a structure having both positive and negative sides. Freud accepting the perfectionism as a feature affecting the individuals negatively regarded perfectionism as a unidimensional structure and mentioned of the general specialties of obsessional neurosis (Whittaker 2002). Similarly Horney (1950) stressed on the neurotic side of the perfectionism and defined perfectionism as putting off the things to be done for the sake of not making mistakes. Burns (1980) supporting the expressions above; regarded it normal that people strive for more success and pleasure giving things. He doesn't regard it normal that the individuals strive by force and constantly for impossible aims and high standards they can't reach and they determine their values according to their successes in this point. He also mentioned that these kinds of cases also affect the egos of the individuals in a negative way. Similarly Patch (1984) expressed that an individual's

will to be perfect may lead him suffer from some psychological problems.

In the relevant literature, the views accepting that perfectionism doesn't only consist of a negative structure, but it also has some positive sides are also available. Adler (1956) mentions of two different dimensions: "healthy and unhealthy". Healthy perfectionists strive for reasonable aims whereas unhealthy perfectionists determine unrealistic aims for themselves and they don't like being criticized and they try to be faultless and exaggeratedly tidy. And also whereas healthy perfectionists are having adaptive social relations, unhealthy perfectionists face more problems in their interpersonal relations (Rice and Preusser 2002). Similarly Rice et al. (1998) mentioned of two dimensions as adaptive and maladaptive in defining the perfectionism. Whereas adaptive perfectionists are the ones having reachable personal standards and minding to be tidy; maladaptive perfectionists are evaluated as the people thinking too much of the mistakes, criticizing the events they experience, procrastinating their tasks and having more concerns.

When the explanations above are examined, it is possible to say that the individuals with negative perfectionism trends develop some unrealistic and negative thoughts. In the cognitive therapy Beck developed, rather than the event experienced, it is mainly stressed how an individual perceives and interprets an event experienced and it has been mentioned that there is a relation between the misinterpretations the individual develops against himself, others and the events and the negativities in the thought dimension. According to cognitive therapy, the thoughts in the minds of people are split into two groups: These are the *schemas* where the *intermediate* and *core beliefs* take place and *automatic thoughts*. Schemas are the structures in the base of the intelligence of the individuals. These structures are about how the individuals perceive themselves and the stimuli in the environment, how they code, organize and evaluate them (Beck 1967; Beck et al. 1991). The core beliefs taking place under the schemas and expressed as cognitive triad are composed of the thoughts the individual develops for himself, for the world and for the future (Beck et al. 1979). The other structure taking place under the schemas is intermediate beliefs. Intermediate beliefs are the rules, expectations and the predictions

the individual utilizes in the interpretation of the events he and the others experience (Beck 1976). The other structure in the thought structure of the individuals is automatic thoughts. Automatic thoughts are the kind of thoughts which are the products of individual's own perception, and not developing without planning, not being manipulated, developing quite fast and rapidly and easily accessible (Calvete and Connor-Smith 2005; Haaga et al. 1991).

The types of thoughts mentioned above are sometimes involved in a negative and unrealistic content. Individuals may develop core negative thoughts such as "I am a loser" for themselves; for the world; "the world is a cruel place" and "my future is dark" for the future. With this, the expression "this exam is very hard, I will take it but I already know I can't pass it" can be given as an example to intermediate thought (Beck 1976). When the individual reads a book and can't understand it or when certain things go wrong, that he regards as "it is all my mistake" and worries or that an individual worries for "what is going to happen next" can be given as example for the negative automatic thoughts (Turkcapar 2012). In cognitive therapy, it is accepted that the psychological problems people have stem from general processes such as the wrong thinking taking place in the thought structures mentioned above, wrong deducing relying on the inadequate and wrong information and not being able to separate the dreams from the reality (Beck 1979; Corey 2005). These thought types expressed as "cognitive distortions" lead to automatic thoughts causing inappropriate and various emotional and behavioral problems, as a consequence of faulty processing of the information (Turkcapar 2012). When the researches made in this subject are analyzed, it has been put forward that negative automatic thoughts are significantly in a positive relation with depressive tendencies (Gotlib and Coyne 1983; Tunca 1995), predisposition towards psychological problems (Calvete and Smith 2005; Tanrikulu 2002), test anxiety (Wong 2008), stress, anxiety and moodiness (Akbag 2000). Some other researchers have reached the conclusion that negative automatic thoughts are significantly in a negative relation with high learned powerfulness (Chang 2004; Zausniewski et al. 2002; Zausniewski et al. 2005), social competence expectation (Karahan et al. 2006) and the usage of problem solving strategies in a logical way (Tumkaya and Iflazoğlu 2000).

When the researches about the perfectionism are analyzed, it is seen that negative perfectionism has more relations with various problematic issues than the positive perfectionism. In the researches made in this subject, it has been found that negative perfectionism feature is in a positive relation with negative interpersonal relations (Ommundsen et al. 2005); academic failure (Rice and Mirzadeh 2000; Schuler 2000); depression (Enns et al. 2002; Rice and Mirzadeh 2000) and low self respect (Rice et al. 1998). It is concluded that positive perfectionism feature is related with appropriate attachment styles (Rice et al. 2005); life satisfaction (Gilman and Ashby 2003) and coping skills (Burns and Fedewa 2004). When the researches mentioned above are evaluated; it is understood that as in the negative perfectionism, negative automatic thoughts are also related with the problems experienced. In this point, the question that whether there is a relation between the perfectionism and negative automatic thoughts arises. When the researches in the relevant literature (Besser et al. 2008; Flett et al. 1998, 2007, 2012a,b, Hollon and Kendall 1980) are analyzed, positive relations have been found between perfectionism and negative automatic thoughts. But in these researches, it is also mentioned that perfectionism has solely negative structure and it is related with the fact that the individual starts feeling an inconsistency between his real ego and ideal ego. In other words, it is accepted that the individuals find themselves in uneasiness when reaching the aims they have determined. In the research made by Ingram and Wisnicki (1988), the perfectionism is similarly handled as a uni-dimensional and negative structure and they have reached the conclusion that they have nothing to do with positive automatic thoughts. For this reason, it is understood that these researches did not directly touch upon the relation between negative automatic thoughts and positive or negative perfectionism. As mentioned before, perfectionism is possible to be dimensioned in two different ways as positive and negative. Above various research results mention that negative perfectionism is more related with the problems the individuals experience than the positive perfectionism. When we consider the fact negative automatic thoughts affect the lives of the individuals in a negative way as well, it is also regarded important to de-

termine whether the dimensions of perfectionism are more related with negative sides than positive sides. When considered from this perspective, it is supposed that this research will contribute to the literature. In the light of these informations, the aim of this research is to analyze the relation between the perfectionism and the negative automatic thoughts. The hypotheses developed for this aim are presented below:

H₁ = Positive perfectionism affects negative automatic thoughts significantly in a negative way.

H₂ = Negative perfectionism affects negative automatic thoughts significantly in a positive way.

METHODOLOGY

In this part, in the research oriented for the determination of the relation between the perfectionism and the negative automatic thought the participants have, the information about process, participants and data collection tools are given relatively.

Process

In the light of the data obtained from the participants, firstly the exploratory and confirmatory factor analysis for the scales of "Positive and Negative Perfectionism" and "Automatic Thoughts" are realized and then the correlations between the variables and Cronbach Alpha reliability factors are calculated. After these processes, the tests of structural equation model made for the research and the goodness of fit tests of the model are made. When the goodness of fit tests was realized, the results of regression analysis among the variables and the test results of the hypothesis were presented. The research model composed by utilizing the relevant literature and the researches made has been given in Figure 1.

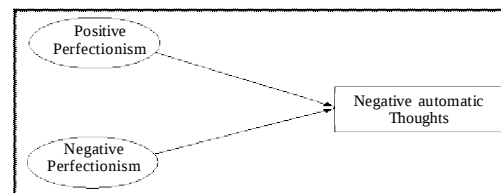


Fig. 1: Research model

Participants

The participants of the research is composed of the teacher candidates who have been studying in the 1, 2, 3, 4 grades of the Elementary School Teaching Programme of Faculty of Education of Recep Tayyip Erdogan University in the 2011-2012 academic year in Turkey (Table 1).

Table 1: Information about the participants

S. Grade No.	Gender		Total (%)
	Female (%)	Male (%)	
1. Grade	66 (65.3)	35 (24.7)	101 (25.1)
2. Grade	50 (55.5)	40 (45.5)	90 (22.3)
3. Grade	79 (58.1)	57 (41.9)	136 (33.7)
4. Grade	48 (63.2)	28 (26.8)	76 (18.9)
Total	243 (60.3)	160 (39.7)	403 (100.0)

When Table 1 is examined, it is seen that totally 403 candidate (101; 1. grade (25.1%), 90; 2. grade (22.3%), 136; 3. grade (33.7%) and 76; 4. grade (18.9%)) have participated in the research. And it is also seen that 243 of the participants are female (60.3%) and 160 of them are male (39.7%).

Data Collection Tools

For the determination of the positive and negative perfectionist specialties of the teacher candidates Positive and Negative Perfectionism Scale (PNPS); for the determination of the negative automatic thoughts of the teacher candidates Automatic Thoughts Scale (ATS) have been used. The information about the data collection tools have been given below:

Positive and Negative Perfectionism Scale (PNPS): For the determination of the perfectionist specialties of the students, for each item quaternary Likert type rating

(1=certainly not proper, 2= improper, 3= proper, 4=certainly proper) have been made in the scale developed by Kirdok (2004). The point that is possible to be taken from the positive perfectionism subscale of PNPS composed of 10 items varies between 10 and 40, the point that is possible to be taken from the negative perfectionism subscale composed of seven items varies between 7 and 28. The positive perfectionism subscale is composed of the items numbered: 1, 3, 5, 6, 7, 9, 11, 12, 14 and 16; the negative perfectionism subscale is composed of the items

numbered: 2, 4, 8, 10, 13, 15 and 17. There is no total point in the scale. The more the points obtained from the both subscale rises, the more level of perfectionism rises. Moreover, there is no reversed expression in the scale.

In the scope of this research, firstly exploratory factor analysis has been made in order to test the construct validity. In consequence of the exploratory factor analysis made by using Spss 16.0 package programme, it is seen that the data are in harmony with the two factor structure of the scale. The Kaiser Meyer Olkin (KMO) analysis results of the scale have been found .91 for the positive perfectionism substructure and .86 for the negative perfectionism subscale. For all the dimensions, Bartlett test has been determined significantly ($p=.000$). And also in consequence of the analysis made, the factor loading of the positive perfectionism scale composed of 10 items has been determined to be between .32 and .69; the factor loading of negative perfectionism scale composed of seven items have been determined to be between .37 and .55.

After these analyses, confirmatory factor analysis has been made with the Amos 18.0 package programme in order to test whether the factors determined in PNPP are in harmony with the database obtained from the research model sample. In consequence of confirmatory factor analysis, the data has been observed to accommodate to two factor structure of the scale and the factor loading of positive perfectionism scale consisting of 10 items has been calculated to be between .50 and .77; the factor loading of the negative perfectionism scale consisting of seven items has been calculated to be between .53 and .68. In consequence of the reliability analysis made, the Cronbach Alpha reliability coefficients of the total scale have been determined as .90 for positive perfectionism and as .83 for negative perfectionism.

Automatic Thoughts Scale (ATS): The adaptation of the Automatic Thoughts Scale developed by Hollan and Kendal (1980) in order to determine the negative thoughts of the students was realized by Sahin and Sahin (1992). This scale is intended for measuring how often the automatic negative thoughts related to depression appear. Automatic Thoughts Scale (ATS) is a Likert type scale consisting of 30 items and rated between 1 and 5. For each item, it is required to pick up and select one of the choices of "I never thought that", "I thought it rarely",

"I thought it occasionally", "I often thought it" and "I always thought it". The answers given have been assessed with the points ranging from 1 to 5. The points that could be taken from the scale vary between 30 and 150. That the total points taken from the scale are high show that the automatic thoughts of the individual appear frequently (Savasir and Sahin 1997). Automatic Thoughts Scale consists of five subscales. These subscales are ranged as "The Negative Emotions and Thoughts of the Individual for Himself (2, 3, 5, 7, 8, 16, 17, 18, 21, 23, 24, 27 and 30)", "Astonishment-Escaping Fantasies (13, 14, 15, 19, 20 and 22)", "Individual Dissonance and The Wills of Change (9, 26 and 29)", "Loneliness-Isolation (1, 4, 10 and 28)" and "Despair (6, 11, 12 and 25)". In the scope of this research, the total point of the scale is evaluated. In the scope of the research, the Kaiser Meyer Olkin value for the validity of the scale has been determined as .95 and Barlett test ($p=.000$) significantly. The Cronbach Alpha reliability coefficient for the total scale has been determined as .94. The values of goodness of fit obtained in the result of Confirmatory Factor Analysis (DFA) made for the scales used in the research are given in Table 2.

When we analyze Table 2, we can say that the values of goodness of fit are in the acceptable levels (χ^2/df , *GFI*, *AGFI*, *CFI*, *NFI*, *TLI*, *RMSEA* and *SRMR*) (Arbuckle 2007; Bayram 2010; Hu and Bentler 1999; Kline 2011; Sumer 2000; Simsek 2007).

RESULTS

The data obtained in the end of the research are analyzed in Spss 16.0 and Amos 18.0 pro-

grams. In this context, the averages, standard deviations, correlations of the data obtained for the positive perfectionism, negative perfectionism and negative automatic thoughts have been examined in the first phase. In the second phase of the analysis, the path analysis of the model composed with the structural equation modeling has been made. The averages, standard deviations and correlation values obtained for the scales are given in the Table 3.

According to Table 3, there are significant relations among all the dimensions. It is seen that there is a positive significant relation between positive perfectionism and negative perfectionism ($r=.251$, $p<.01$). And also it is observed that there is a negative relation between negative automatic thoughts and positive perfectionism ($r=-.152$, $p<.01$), it is also seen that there is a positive significant relation with negative perfectionism ($r=.447$, $p<.01$).

With the findings obtained significantly, a path analysis has been made in the scope of structural equation model and the effects among the variables and the goodness of fitness of the model have been examined. The structural equation model appearing as a consequence of the analysis is given in Figure 2 and the results of the goodness of fit test are presented in Table 4.

For the validity of the analyses made for the structural equation model, some adaptive values should be provided. These values could be ranged as: chi-square/ degree of freedom (χ^2/df); chi-square statistic is sensitive to sample volume. While significant results are found statistically in the large sample values, it is hard to get significant results when the data is small. For this reason, in the cases where the value is

Table 2: The values of goodness of fit of the scales used in the research

Scales	χ^2/df	GFI	AGFI	CFI	NFI	TLI	RMSEA	SRMR
Positive Perfectionism	3.439	.942	.946	.957	.941	.943	.078	.041
Negative Perfectionism	4.609	.958	.911	.946	.932	.912	.095	.047
Negative Automatic Thoughts	3.031	.818	.788	.859	.805	.847	.071	.054

Table 3: The average, standard deviation and correlation values for the scales

Scales	Average	Standard deviation	1	2	3
1.Positive Perfectionism	2.95	0.61	1 (.90)		
2. Negative Perfectionism	2.30	0.66	.251**	1 (.83)	
3. Negative Automatic Thoughts	1.99	0.65	-.152**	.447**	1 (.94)

** $p<.01$, () Reliability

Table 4: Goodness of fit values for the model

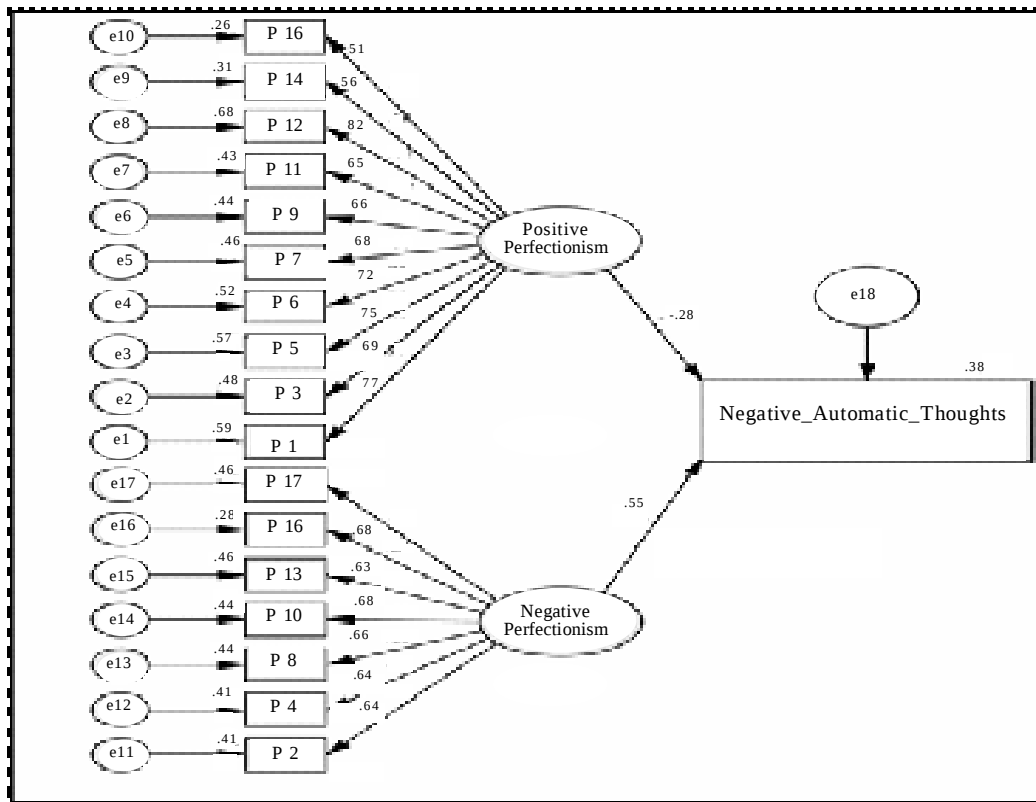
	<i>CMIN/DF</i>	<i>GFI</i>	<i>AGFI</i>	<i>CFI</i>	<i>NFI</i>	<i>TLI</i>	<i>RMSEA</i>	<i>SRMR</i>
SEM*	3.721	.875	.839	.880	.843	.862	.082	.052

SEM: Structural Equation Model

found very large and statistically significant, the rate of χ^2 to the degree of freedom (χ^2/df) provides an assessment for the fit of the model (Bayram 2010). In this case, that χ^2/df rate is less than 3 (for some authors than 5), shows that the ensemble of the model is acceptable. (Meydan and Sesen 2011).

Goodness of Fit Index-GFI. The GFI value affected from the largeness of the sample varies between 0 and 1. 0.90 and above is considered to be good fit while the values above 0.85 are considered as acceptable values (Arbuckle 2007; Joreskog and Sorbom 1993). **(Adjusted Goodness of Fit Index- AGFI):** This value is calculated by taking the degree of freedom into consid-

eration. AGFI increases if the sample volume increases. AGFI is partly the GFI value adjusted by taking the sample volume into consideration. AGFI value varies between 0 and 1. The values near to 1 show that there is a good fit. 0.90 and above values are regarded as good fit (Bayram 2010; Meydan and Sesen 2011). **Comparative of Fit-CFI:** CFI is the index obtained with the regulation of Bentler Fit Index (BFI) by Bentler. As BFI can take values except 0-1, Bentler has regulated BFI and has obtained an index which doesn't get out of 0 and 1. The fact that CFI value is near to 1 reveals the goodness of fit (Hu and Bentler 1999). **Normed Fit of Index-NFI:** This

**Fig. 2. Structural equation model**

index takes value between 0-1. The values 0.90 and above reveals an acceptable fit; 0.95 and above reveal perfect fit (Arbuckle 2007; Simsek 2007). *Root Mean Square Error of Approximation-RMSEA*: RMSEA takes value between 0- 1 Equal to 0.05 or less than 0.05 reveals perfect fit; the values until 0.08 show acceptable fit (Hu and Bentler 1999; Joreskog and Sorbom 1993).

Tucher- Lewis Index (TLI): If the value of this fit index is or more .90, it reveals good fit (Arbuckle 2007; Simsek 2007). *Standardized root mean square residual-SRMR*: SRMR value is the standardized difference between the observed covariance and predicted covariance. That the value obtained after the measurement is near to 0 reveals perfect fit. The values below 0.05 show good fit (Bayram 2010).

Table 5: Adjusted goodness of fit values for the model

	CMIN/DF	GFI	AGFI	CFI	NFI	TLI	RMSEA	SRMR
SEM*	2.118	.926	.903	.952	.913	.943	.053	.044

*SEM: Structural Equation Model

Table 6: Standardized regression weight results

Independent variables	Effect	Dependent variables	β	Estimate	S.E	C.R	p
Positive Perfectionism	→	Negative Automatic Thoughts	-.29	-9,712	1,493	-6,51	***
Negative Perfectionism	→	Negative Automatic Thoughts	.55	18,567	1,836	10,11	***

***p< .01

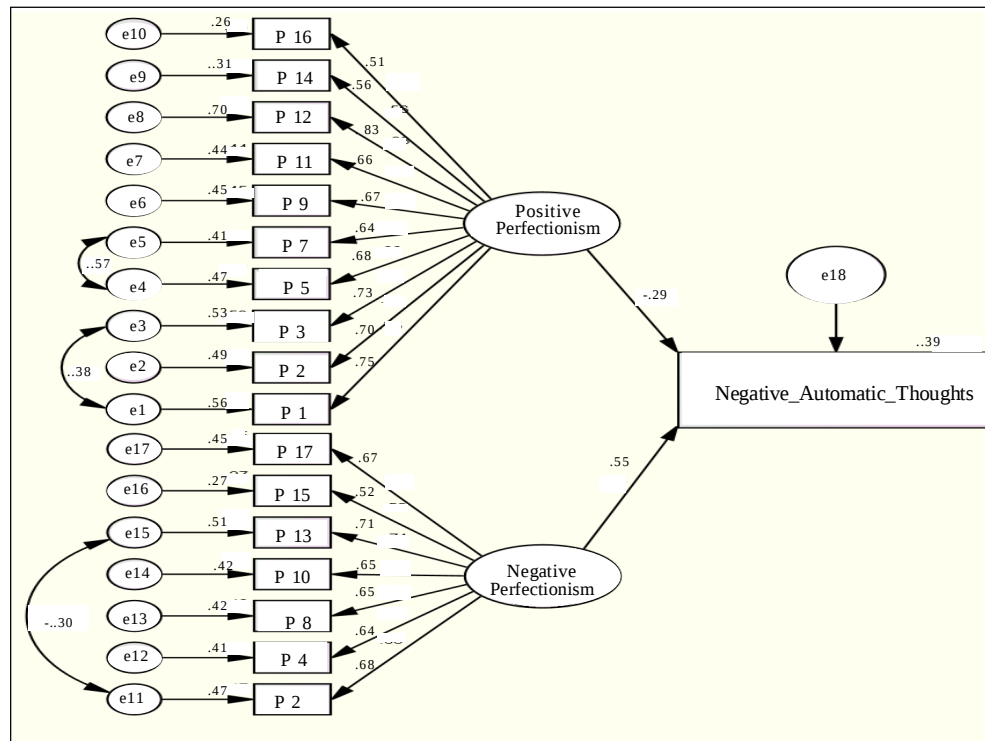


Fig. 3. Adjusted structural equation model

When Table 4 is examined, for the ensemble of the model $\chi^2/df=3.721$, GFI=.875, AGFI=.839, CFI=.880, NFI=.843, TLI=.862, RMSEA=.082 and SRMR=.052 values have been calculated. The goodness of fit indices appeared showed that there is not enough fit. The model has been modified in order to improve the model and to be able to find more appropriate models. Modification indices suggest additional co-variances among error terms respectively ($e1 \leftrightarrow e3$, $e4 \leftrightarrow e5$ ve $e11 \leftrightarrow e15$). Adjusted structural equation model results are given in Figure 3 and the goodness of fit are given in Table 5.

When the adjusted goodness of fit values in the Table 5 are examined, it is seen that $\chi^2/df=2.118$, GFI=.926, AGFI=.903, CFI=.952, NFI=.913, TLI=.943, RMSEA=.053 and SRMR=.044. According to these values, it is possible to say that structural equation model made for the research has enough harmony. After it is determined that the model has good adaptive values, standardized regression weights have been calculated in order to test the research hypotheses. The data obtained is presented in Table 6.

In the structural equation model used in the research, latent variables are positive and negative perfectionism and the variable observed is negative automatic thoughts. In Table 6, the values standardized for the model paths and standardized regression weights utilized and in order to test the hypothesis are calculated. According to the findings obtained, positive perfectionism affects negative automatic thoughts negatively in a significant way (Standardize $\beta = -.29$; $p < 0.01$). According to this result; H_1 hypothesis is accepted. And also negative perfectionism affects negative automatic thoughts significantly in a positive way (Standardize $\beta = .55$; $p < 0.01$). According to this result H_2 hypothesis is accepted.

DISCUSSION

In this part, the findings obtained from the research are discussed in the framework of the hypotheses the research based on and comments and suggestions about the conclusions reached are given.

In the conclusion of the research, it is determined that positive perfectionism affects negative automatic thoughts significantly in a negative way. According to this conclusion, it is possible to say that positive perfectionism prevents

individuals from being in the negative automatic thoughts. For this reason, it could be interpreted that the circumstances caused by having negative automatic thoughts are not experienced by the individuals having positive perfectionism. When the researches made on this subject are examined, it has been put forward that positive perfectionism contributes that the individuals perform functional behaviors such as appropriate attachment styles (Rice et al. 2005); life satisfaction (Gilman and Ashby 2003) and coping skills (Burns and Fedewa 2004).

The other conclusion of the research is that negative perfectionism affects negative automatic thoughts in a positive way. It could be said that this conclusion obtained is parallel with the conclusion mentioned above. According to this conclusion, it is understood that negative perfectionism contributes that the individuals develop negative automatic thoughts. There are some clinical research conclusions revealing that negative perfectionism is related with the various psychological problems experienced by the individuals (Enns et al. 2002; Ommundsen et al. 2005; Rice and Mirzadeh 2000; Rice et al. 1998; Schuler 2000). In the researches made it can be also interpreted as an expected conclusion that negative automatic thoughts affected by negative perfectionism are related with various problematic issues (Akbag 2000; Calvete and Smith 2005; Chang 2004; Gotlib and Coyne 1983; Karahan et al. 2006; Tanrıyıkulu 2002; Tunca 1995; Tumkaya and Iflazoglu 2000; Wong 2008; Zausniewski et al. 2002; Zausniewski et al. 2005). For this reason, it is seen that the conclusions obtained match up with the related literature.

In Cognitive Therapy, rather than the event experienced, it is more stressed how the individual perceive it and interpret it. And it is also mentioned that the misinterpretations the individual has about himself, the others and the events is related with the negativities in the dimension of thought. As Turkcapar (2012) expressed before, these misinterpretations and non-functional beliefs existing in the cognitive structures shape the thought of the individual and lead to cognitive distortions. It is understood that negative automatic thoughts are shaped by these cognitive distortions. According to the results obtained from the researches, it is understood that the cognitive distortions described by Burns (1980) are associated with the mentality of the perfectionist individuals. As observed in the "All or None" principle-an ex-

ample for the cognitive distortion – evaluating a situation only in two ways namely regarding oneself faultless in a work or considering oneself unsuccessful may only be observed in perfectionists. As a result of the “Overgeneralization” thought, the perfectionists may tend to perceive a minor failure more significant than it actually is. To handle a situation by using the “Mental Filter” causes to focus on the negative aspects disregarding the positive sides. Since striving for doing something exactly perfect is possible by eliminating the negative sides, it may cause to focus more on the negative aspects. The thought of “Disregarding the Positive” has close relationship with the “Mental Filter”. Laying stress on the loss rather than the gains, more precisely, not regarding something which is not fully acquired as a gain may be an indication of the perfectionist attitude. The mentality of “Overestimating or Underestimating” is related to someone’s overcharging the importance of their objectives, and therefore undervaluing their own skills wrongly when they are unable to achieve overburdening goals. It resembles perfectionism from this aspect. Feelings and thoughts expressing “Obligation” cause the individual to be exhausted in the process. The perfectionists are not contented with their acquirements when they strive for an objective, and they may get disappointed when they feel exactly obliged to get the whole and expect the other people to do so. The thought of “Labeling and Mislabeling” is observed in perfectionists as making inability diagnosis against themselves and the unsuccessful people as they have difficulty in admitting failure. The thought of “Personalization” and the perfectionist characteristics of the taking too much responsibility and control over things resemble each other.

CONCLUSION

When the evaluations above are summarized, we can say that perfectionist thoughts have some similarities with the cognitive distortions. When it is taken into consideration that cognitive distortions have contribution in the forming of negative automatic thoughts; it is understood that it supports the hypothesis that positive perfectionism has a negative impact on the negative automatic thoughts and negative perfectionism has positive impact on negative automatic thoughts.

RECOMMENDATIONS

In the light of the conclusions obtained from the research, the suggestions for the practice below and for the researches to be carried out in the future are given below.

In the researches where cognitive behavior therapy program is practiced, it is found out that they had effective results in reducing cognitive distortions and social anxiety, in the recovery of anxiety disorders, in raising the levels of learned powerfulness, in reducing the levels of non-functional attitudes and in the correction of cognitive distortion. In addition to that, it has been stressed that using cognitive behavior therapy in schizophrenic treatment in the practices of psychiatric nursing and in the interference approach in the crisis cases will make great contributions in the researches to be conducted. When the researches above are analyzed, it is seen that no research is conducted for the correction of the negative perfectionism on the base of cognitive therapy. When evaluated in this context, it is necessary that various researches are conducted for the correction of the thoughts of negative perfectionism and negative automatic thoughts of the teacher candidates who will be future teachers and who are effective in the development of the students both with their actions and their discourses. These studies could be presented in the framework of individual or group psychological counseling services. In this way, some contributions could made for the individuals in knowing themselves better, having more healthy mentalities and being in harmony with the environment and in this way the problems could be prevented. Another point requiring attention is that these kinds of services to be presented to the individuals should have conducted in the past years. When we consider that mental development starts in the childhood, it is seen that the studies to be conducted should be conducted in the earlier teaching levels (primary, secondary and high schools).

For the studies to be conducted in the future, some suggestions might be considered for the similar studies to be conducted in more extensive and different groups by taking the restrictions of the research into account. The participants of this research are limited with the elementary teacher education candidates who still continue their university education. It is possi-

ble to reach more extensive information about negative automatic thoughts and perfectionism with different teaching programmes (science, elementary mathematic) or the researches that could be made in the primary, secondary and high schools. The generalizability of the results of the research in this way can be increased. In addition to that, the relations between perfectionism and negative automatic thoughts are possible to be researched by taking the different variables (personality, attachment style) into account. As it has been mentioned in the suggestions developed for this practice, it is seen that mainly descriptive researches are being carried out when we consider the researches made for this subject. In this point, it may be useful to conduct different researches in the experimental quality.

REFERENCES

- Adler A 1956. The Neurotic Disposition In: HL Ansbacher, RR Ansbacher (Eds.): *The Individual Psychology of Alfred Adler: A Systematic Presentation in Selections from His Writings*. New York: Basic Books, pp. 239-262.
- Akbag M 2000. *Stresle Basa Cikma Tarzlarinin Universite Ogrencilerinde Olumsuz Otomatik Dussunceler, Transaksiyonel Analiz, Ego Durumlari ve Bazi Degiskenler Acisindan Incelemesi*. PhD Thesis, Unpublished. Istanbul: University of Marmara.
- Arbuckle JL 2007. *Amos 16.0 User's Guide*. Chicago: SPSS Inc.
- Bayram N 2010. *Yapisal esitlik modellemesine giris amos uygulamalari*. Istanbul: Ezgi Kitabevi.
- Beck AT 1967. *Depression: Causes and Treatment*. Philadelphia: University of Pennsylvania Press.
- Beck AT 1976. *Cognitive Therapy and the Emotional Disorders*. Madison, WI: International Universities Press.
- Beck AT, Brown G, Steer RA, Weissman AN 1991. Factor analysis of the dysfunctional attitude scale in a clinical population. *Journal of Consulting and Clinical Psychology*, 3: 478-483.
- Beck AT, Rush AJ, Shaw BF, Emery G 1979. *Cognitive Therapy of Depression*. New York: Guilford.
- Beck AT 1979. *Cognitive Therapy and the Emotional Disorders*. New York: A Meridian Book.
- Besser A, Flett GL, Hewitt PL, Guez J 2008. Perfectionism, and cognitions, affect, self-esteem, and physiological reactions in a performance situation. *J Rat-Emo Cognitive-Behav Ther*, 26: 206-228.
- Burns DD 1980. The perfectionist's script for self-defeat. *Psychology Today*, 14: 34-52.
- Calvete E, Connor-Smith JK 2005. Automatic thoughts and psychological symptoms: A cross-cultural comparison of American and Spanish students. *Cognitive Therapy and Research*, 29(2): 201-217.
- Chang H-J 2004. *Test of a Model to Predict Adaptive Functioning and Depression in School-aged Children*. Master's Thesis, Unpublished. Cleveland, OH: Case Western Reserve University.
- Corey G 2005. *Psikolojik danisma, psikoterapi kuram ve uygulamalari*. Ankara: Mentis Publishing.
- Enns MW, Cox BJ, Clara I 2002. Adaptive and maladaptive perfectionism: Developmental origins and association with depression proneness. *Personality and Individual Differences*, 33: 921-935.
- Flett GL, Hewitt PL, Blankstein KR, Gray L 1998. Psychological distress and the frequency of perfectionistic thinking. *Journal of Personality and Social Psychology*, 75: 1363-1381.
- Flett GL, Hewitt PL, Whelan T, Martin TR 2007. The perfectionism cognitions inventory: Psychometric properties and associations with distress and deficits in cognitive self-management. *Journal of Rational-Emotive and Cognitive-Behavior Therapy*, 25: 255-277.
- Flett GL, Hewitt PL, Demerjian A, Sturman ED, Sherry SB, Cheng W 2012a. Perfectionistic automatic thoughts and psychological distress in adolescents: An analysis of the perfectionism cognitions inventory. *J Rat-Emo Cognitive-Behav Ther*, 30: 91-104.
- Flett GL, Stainton M, Hewitt PL, Sherry SB, Lay C 2012b. Procrastination automatic thoughts as a personality construct: An analysis of the procrastinatory cognitions inventory. *J Rat-Emo Cognitive-Behav Ther*, DOI 10.1007/s10942-012-0150-z.
- Frost RO, Marten P, Lahart C, Rosenblate R 1990. The dimensional of perfectionism. *The Cognitive Therapy and Research*, 14(5): 449-468.
- Gilman R, Ashby JS 2003. A first study of perfectionism and multidimensional life satisfaction among adolescents. *The Journal of Early Adolescence* 23: 218-235.
- Gotlib I, Coyne J 1983. The role of cognition in depression: A critical appraisal. *Psychological Bulletin*, 94(3): 472-505.
- Haaga T, Dyck M, Ernst D 1991. Empirical status of cognitive theory of depression. *Psychological Bulletin*, 110(2): 215-236.
- Hollan SD, Kendal PC 1980. Cognitive self-statements in depression: Development of an automatic thoughts questionnaire. *Cognitive Therapy and Research*, 4: 383-395.
- Hollander MH 1965. Perfectionism. *Comprehensive Psychiatry*, 6(2): 94-103.
- Horney K 1950. *Neurosis and Human Growth: The Struggle toward Self-realization*. NY: W.W. Norton and Company Inc.
- Hu L, Bentler M 1999. Cut-off criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1): 1-55.
- Ingram RE, Wisnicki KS 1988. Assessment of automatic positive cognition. *Journal of Consulting and Clinical Psychology*, 56: 898-902.
- Joreskog KG, Sorbom D 1993. *Lisrel 8: Structural Equation Modeling with the Simplis Command Lan-*

- guage. Chicago, IL: Scientific International Software.
- Karahan TF, Sardogan ME, Ozkamali E, Montes Ö 2006. Lise öğrencilerinde sosyal yetkinlik beklentisi ve otomatik düşüncelerin, yaşanan sosyal birim ve cinsiyet açısından incelenmesi, *Türk Psikolojik Danışma ve Rehberlik Dergisi*, 3(26): 35- 45.
- Kirdok O 2004. *Olumlu ve olumsuz mükemmeliyetçilik olcegi gelistirme calismasi*. Master's Thesis, Unpublished. Adana: Cukurova University.
- Kline RB 2011. *Principles and Practice of Structural Equation Modeling*. 3rd Editon. New York, London: The Guildfor Press.
- Meydan HC, Sesen H 2011. *Yapısal esitlik modellemesi amos uygulamalari*. Ankara: Detay Publishing.
- Ommundsen Y, Roberts GC, Lemyre P, Miller BW 2005. Peer relationships in adolescent competitive soccer: Associations to perceived motivational climate, achievement goals and perfectionism. *Journal of Sports Sciences*, 23(9): 977-989.
- Patch AR 1984. Reflections on perfection. *American Psychologist*, 39(4): 386-390.
- Rice KG, Preusser KJ 2002. The adaptive/ maladaptive perfectionism scale. *Measurement and Evaluation in Counseling and Development*, 34: 210-222.
- Rice KG, Mirzadeh, SA 2000. Perfectionism, attachment, and adjustment. *Journal of Counseling Psychology*, 47: 238-250.
- Rice KG, Ashby JS, Slaney RB 1998. Self-esteem as a mediator between perfectionism and depression: A structural equations analyses. *Journal of Counseling Psychology*, 45: 304-314.
- Rice KG, Lopez FG, Vergara D 2005. Parental/social influences on perfection and adult attachment orientations. *Journal of Social and Clinical Psychology*, 24(4): 580- 605.
- Sahin NH, Sahin N 1992. Reliability and validity of the turkish version of the automatic thoughts questionnaire. *Journal of Clinical Psychology*, 48(3): 334-340.
- Savasir I, Sahin NH 1997. *Assessment in Cognitive and Behavioural Therapies; Scales that used Frequently*. Turkish Psychologist Association, Ankara.
- Schuler PA 2000. Perfectionism and gifted adolescent. *Journal of Secondary Gifted Education*, 11(4): 183-196.
- Simonet CT 1997. *The Relationship of Self-oriented and Socially-prescribed Perfectionism to State Anxiety, Negative Affect, and Task Performance: Validation of the Multidimensional Perfectionism Scale*. California School of Professional Psychology, San Diego.
- Simsek OF 2007. *Yapısal esitlik modellemesine giris: temel ilkeler ve lisrel uygulamalari*. Ankara: Ekinoks.
- Sumer N 2000. Yapısal esitlik modelleri: temel kavramlar ve örnek uygulamalar. *Türk Psikoloji Yazarları*, 3(5): 49-74.
- Tanrıyıkulu Taskin 2002. *Yetistirme yurtlarında ve aile ortamında yaşayan ergenlerin bilissel yapıları (olumsuz otomatik düşünceler) ve problem cozme becerileri acısından incelenmesi*. Master's Thesis, Unpublished. Istanbul: Marmara University.
- Tumkaya S, Iflazoglu A 2000. C.U. Sinif ogretmenligi öğrencilerinin otomatik düşünce ve problem cozme düzeylerinin bazı sosyo-demografik degiskenlere gore incelenmesi. *C.U. Sosyal Bilimler Enstitüsü Dergisi*, 6(6): 143-158.
- Tunca EM 1995. *Bedensel hastaligi olan bireylerde depresif semptomlar ve olumsuz otomatik düşünceler ile hastalik arasindaki iliskiler*. Dissertation, Unpublished. Ankara: Ankara University.
- Turkcapar H 2012. *Bilissel terapi*. Ankara: Hekimler Birliği Publishing.
- Whittaker PD 2002. *Perfectionism's Relationship to Anxiety, Depression, and Attributional Style within a Stressful Task Paradigm*. Texas Tech University.
- Wong SS 2008. The relations of cognitive triad, dysfunctional attitudes, automatic thoughts, and irrational beliefs with test anxiety. *Current Psychology*, 27(3): 177-191.
- Zausniewski JA, Chung C, Chang H, Krafcik K 2002. Predictors of resourcefulness in school-aged children. *Issues in Mental Health Nursing*, 23: 385-401.
- Zausniewski JA, Picot SJ, Roberts BL, Debanne SM, Wykle ML 2005. Predictors of resourcefulness in African American women. *Journal of Aging and Health*, 17: 609-633.