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Analysis on professional maturity levels of secondary school students according to their ruminative thinking skills

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Abstract

Ruminative thinking, which could be defined as the domination of mind by negative thoughts, is mainly the most intensive way of thinking “I wish I had done it in that way” in an individual’s mind. Individuals experience serious complexities in their worlds of feelings and thoughts during their secondary level education years, where they are also expected to make successful decisions about their future professions. Therefore, it is important to determine whether secondary schools students possess the thinking skills and professional maturity required to decide on their future professions before they make this decision. In the light of this thought, this study focused on the analysis of secondary school students’ levels of ruminative thinking and professional maturity. The sampling consisted of 565 secondary school students. The data were collected through “The Scale of Ruminative Thinking Pattern” ($\alpha=0.907$) developed by Brinker and Dozois (2009), which was adapted to Turkish by Karatepe (2010) along with the “Professional maturity Scale” ($\alpha=0.89$) developed by Kuzgun and Bacanlı (1991).

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1. Introduction

Human beings are patterns of thoughts, which reflect their objective environment and themselves. Therefore, it is very important to know about their worlds of thoughts, opening the doors of this world and reaching the mysteries behind these doors. Many studies have been made for centuries with the aim of obtaining some concrete data about individuals’ worlds of thought. One of the most common topics of research on structures of thoughts in recent years is the ruminative thinking. The concept of ruminative thinking could be defined as “the continuous engagement with a single topic or thought” (Kaplan et al., 2007) or “repetitive thoughts that are usually temporary, difficult to control and overcome and obstacle the actions of individuals” (Clark & Rhyno, 2005; Adapted by: Karatepe, 2010). According to the theory, rumination is a process of thought that accompanies sadness and depression. The research on students in their adolescence years, when they experience long periods of ruminative cycles, has concluded that their depressive periods have extended, the volume of depression has increased and depression was experienced more densely in the following periods of their lives (Abela, et al, 2002). Therefore, it is very important to determine the ruminative levels of students during their high school years as they experience adolescence transitions. As a result of ruminative thinking, the feeling of hopelessness for the future and the negative approach for evaluating oneself emerge during those years, which are the key indicators of depression (Abramson, et al, 1989; Beck, 1967).

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In addition to the emotional instability that high school students experience in their lives, they also experience the decision making process. High school students, who are challenged between negative and positive feelings, are expected to decide on their future professions. However, students at this period are not mature and aware enough to decide about their future professions. Professional maturity means the readiness for managing the professional tasks, attitudes, skills and behaviors regarding the professional development process (Crites, 1981; Adapted by: Ulu, 2007). Therefore, it is thought to be very important to determine secondary school students' professional maturity and thought structures in order to assess their availability to decide on their professional choices. The findings of the research in the literature about ruminative thinking and professional maturity have shown that there could be a significant relationship between ruminative thinking and professional maturity; however, no study was observed to analyze this theory in practice where the outcomes are verified. This study, therefore, aimed to analyze the ruminative thinking and professional maturity levels within the scope of some variables.

2. Method

The main belief embraced within the scope of this study is in the favor of interactions between students' ruminative thinking levels and their professional maturities. The sampling consisted of 565 secondary school students studying at high schools in Ankara. In order to determine the ruminative thinking levels of secondary school students the "Ruminative Thinking Pattern Scale" developed by Brinker and Dozois (2009) and adapted by Karatepe (2010). The studies on the scale's adaptation to Turkish concluded with a Cronbach Alpha value of .907. The second data collection tool used in the study was the "Professional Maturity Scale" developed by Kuzgun and Bacanlı (1991) aiming to determine the secondary school students' professional maturity levels. The reliability and validity assessments of the scale concluded with a Cronbach Alpha value of .89. The scale, which consisted of 40 statements, was prepared in 5-point Likert-type. Scores below 143 in the scale stands for the lack of professional maturity; scores between 143 and 155 means that the individual needs to develop his/her professional maturity levels; and scores above 155 means that the professional maturity level is reached.

3. Findings

Since the professional maturity levels of students are targeted to be determined, students were divided into 3 groups according to their professional maturity scores. Students with scores below 143 were rated as "Inadequate", students with scores between 143 and 155 were rated as "Partially Adequate" and students with scores higher than 155 were rated as "Adequate". This grouping indicated that most of the students were inadequate in terms of professional maturity. In order to determine students grouped under different ratings in terms of their ruminative thinking levels, the scores were analyzed for their averages and standard deviations.

Table 1. Analysis of students' ruminative thinking levels according to their professional maturities

	N	\bar{x}	sd
Inadequate	300	4.87	1.15
Partially Adequate	117	4.93	1.06
Adequate	148	5.05	1.24
Total	565	4.90	1.15

As Table 1 displays, students with adequate professional maturity levels had higher ruminative thinking levels (5.05) than the other students while those with inadequate professional maturity levels had the lowest (4.87) amongst the group. In order to determine whether these difference between students from different groups were statistically significant or not, ANOVA analysis was conducted and the results were displayed on Table 2.

Table 2. The ANOVA analysis of students' ruminative thinking levels according to their professional maturity levels

	Sum of Squares	df	Mean Square	F	p
Between Groups	2.485	2	1.243		
Within Groups	749.429	562	1.334	.932	.394
Total	751.914	564			

According to Table 2, the single-dimensional variance analysis results showed that the difference between students' ruminative thinking levels according to their professional maturity levels was not statistically significant [$F_{(2-562)} = .394$, $p > .05$].

The study continued with a question on which profession students were aiming to choose. The evaluation of responses concluded with a group of professions classified in 3 groups named as "Science and Math", "Turkish and Math" and "Social Sciences". Science and Math group with 252 students aiming to become teachers, doctor, engineers etc. had the highest distribution in the sampling group. Students, who were distributed to three categories according to their professional choices, were analyzed in terms of their average scores and standard deviations of their ruminative thinking levels. The results are displayed on Table 3.

Table 3. Analysis of students' ruminative thinking levels according to the professions they aim to choose

	N	\bar{x}	sd
Science and Math	252	4.96	1.13
Turkish and Math	115	4.93	1.13
Social Sciences	198	4.81	1.19
Total	565	4.90	1.15

As Table 3 displays, students from the "Math and Science" groups ranked the highest in terms of ruminative thinking sequence and they were followed by Turkish and Math and finally by Social Sciences groups. The question on whether this difference was statistically significant or not was analyzed through ANOVA analysis and the results were displayed on Table 4.

Table 4. The ANOVA analysis of students' ruminative thinking levels according to the professions they aim to choose

	Sum of Squares	df	Mean Square	F	p
Between Groups	2.492	2	1.246		
Within Groups	749.422	562	1.333	.934	.393
Total	751.914	564			

According to Table 4, students, who were grouped according to the professions they wish to choose Table 4 were analyzed in terms of the differences they have in their ruminative thinking levels with the variance analysis and the difference was found to be statistically insignificant [$F_{(2-562)} = .934$, $p > .05$].

4. Conclusion And Discussion

Ruminative thinking, defined as the concentration of mind around negative thoughts, is the most intensive state of regret expressed with "I wish I had behaved the other way". The research concluded that the teenagers of today experienced the process of ruminative thinking at higher levels everyday by fighting against various negative situations such as depression, nervousness and stress (Harrington & Blankenship, 2002; Morrison & O'Connor, 2005; Johnson, McKenzie & McMurrich, 2008; Brinker & Dozois, 2009; Raes, 2010). Therefore, in order to reduce

these emotions to the minimum level, their ruminative thinking levels shall be determined. On the other hand, the secondary level education has a great importance in teenagers' lives as it is the time when they should make calm and successful decisions on their future professions while experiencing serious confusions in their worlds of emotions and thoughts. In the light of this fact, students were analyzed according to their maturity levels adequate to choose their professions. The results were in line with many other study results in the literature (Kagnici, 1999; Coban, 2005; Saya, Kazak & Dogan, 2009) stating that students failed to have the adequate professional attitudes and behaviors and therefore it was needed to ensure the development of their professional adequacies. Unfortunately, when deciding on their professions, students avoid their interests and skills in order to address the expectations of their families and social environment, which leads them to change their decisions about their future professions according to the scores they receive from exams (Vurucu, 2010). Students, who are aware of this process, prefer to leave this to the natural flow of their lives instead of setting early goals regarding their profession. Therefore, they fail to strive for developing their maturity levels, which is obstructed at the critical stages of their development. That is why the number of students with professional adequacy levels was rather low.

The ruminative thinking levels of secondary school students, who were grouped according to their professional maturity levels and the students with adequate professional maturity levels were found to be in more ruminative cycles. The reason for this is that while their highly adequate professional maturity levels lead them to pay more attention to choices of profession it increases their levels of anxiety towards taking conscious and confident steps for their future. Many students, despite having the adequate professional maturity, are led to negative beliefs because of the employment opportunities of their chosen profession as well as the expectations of the other individuals in their environment. This situation causes students to experience cognitive confusions and challenges such as ruminative thinking. It is known that professional maturity is affected by students' cognitive confusions and mental complexities (Super & Bohn, 1973). Moreover, students at the stage of making professional decisions often fall into instability by getting confused between the expectations of their family members and other individuals that are important to them. Such students fail to make others accept their requests and requirements as well as accepting the request and requirements of the others (Cakir, 2004). Hamamci and Coban (2007) concluded in their study that professional maturity and instability are closely related to failing beliefs about professional choices. Shortly, even students reach professional maturity levels, environmental factors cause them to experience intensive cognitive confusions and keep their illogical beliefs alive.

Students were asked later in the study the question that whether they had made their decisions on their future professions and they were classified under 3 groups according to their choices. Most students made their choices in for the professions listed under the Math and Science group. This is because the number of job opportunities related to these subject areas is high with better employment rates. Students do not choose professions according to their interests, skills, values, personal features and expectations; instead, they prefer professions that would provide jobs, money and reputation. A study by Kiyak (2006) concluded that students listed the reasons for choosing science and math tracks at high school because of employment guarantee, social security conditions, employment opportunities, salary rates and the contributions to human life. The study concluded that students preferring to choose professions related to the Science and Math track had higher ruminative thinking levels than others. A secondary school student has a wider scope of professional choice when compared to other students. Additionally, the changes in the popularities of some professions in time cause students to modify their professional choices. This activates the ruminative thinking process and leads them to a more intensive ruminative thinking chaos. The choices of student from the Social Sciences track would be more limited, which pacifies the ruminative thinking and creates new anxiety situations. For example, Baskal (2009) found that students studying at Social Sciences track had higher levels of anxiety for not being able to attend their target universities or achieve their target scores in the university placement. The same study concluded that Anatolian High School and Science High School students, who have tendencies towards choosing science-related professions, had anxieties regarding that their profession could lose its reputation or fail to satisfy them financially and emotionally. Considering the fact that the thinking systems of individuals are effective on their choices of professions, in order students to attend university and make a logical choice of profession, their ruminative thinking levels shall be evaluated. Therefore, the findings of this study on students' professional maturities and ruminative thinking levels determined before they attend the university would set invaluable knowledge resources for the educational literature.

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