ACADEMIC MOTIVATION OF MIDDLE SCHOOL STUDENTS: PERCEIVED
TEACHER AFFECTIVE SUPPORT, NUMBER OF INTERACTION PARTNERS,
PRIOR ACHIEVEMENT, AND HOMOPHILY

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ABSTRACT

ACADEMIC MOTIVATION OF MIDDLE SCHOOL STUDENTS: PERCEIVED

TEACHER AFFECTIVE SUPPORT, NUMBER OF INTERACTION PARTNERS,

PRIOR ACHIEVEMENT AND HOMOPHILY

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The study aims to explore possible sources of middle school students' achievement

motivation. Therefore, two main research questions were examined. In this regard, firstly,

the relationship between student's achievement motivation and students' past

performance, perceived teacher support, and the number of peers they interact with was

examined. Secondly, it was examined whether there is homophily among peer group

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members in terms of motivation. In order to measure student motivation, the Expectancy-Value Scale for Middle School was developed based on the Situated Expectancy-Value Theory. With the scale, students' expectancies for success, utility values, and intrinsic values were measured. Results of structural equation modeling analysis revealed that while students' achievement motivations were associated with their prior achievement and perceived teacher affective support, there was no relationship between the number of peers they interacted with and their achievement motivation. When the peer groups were examined to answer the second research question, the peer groups were found to be homogeneous in terms of achievement motivation. However, it was found that the girl groups were more homogeneous in terms of subjective task values compared to the boy groups.

Keywords: expectancies for success, subjective task value, peer group, homophily, teacher affective support

ÖZ

ORTAOKUL ÖĞRENCİLERİNİN AKADEMİK MOTİVASYONU: ALGILANAN ÖĞRETMEN DUYGUSAL DESTEĞİ, ETKİLEŞİM PARTNERİ SAYISI, ÖNCEKİ BAŞARI VE HOMOFİLİ

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Bu araştırma, ortaokul öğrencilerinin başarı motivasyonlarının olası kaynaklarını incelemeyi amaçlamaktadır. Bu nedenle iki ana araştırma sorusu vardır. Öncelikle öğrencilerin başarı motivasyonu ile öğrencilerin geçmiş performansları, algılanan öğretmen duyuşsal desteği ve etkileşimde bulundukları akran sayısı arasındaki ilişki incelenmiştir. İkinci olarak, akran grubu üyeleri arasında motivasyon açısından homofili

olup olmadığı incelenmiştir. Öğrenci motivasyonunu ölçmek için Ortaokul için Beklenti-Değer Ölçeği, Durumlu Beklenti-Değer Teorisi temel alınarak geliştirilmiştir. Ölçek ile öğrencilerin başarı beklentileri, fayda değerleri ve içsel değerleri ölçülmüştür. Yapısal eşitlik modeli analiz bulgularına göre öğrencilerin başarı motivasyonları önceki performansları ve algılanan öğretmen duyuşsal desteği ile ilişkiliyken, etkileşimde bulundukları akran sayısı ile başarı motivasyonları arasında bir ilişki bulunmamıştır. İkinci araştırma sorusu için akran grupları incelendiğinde ise, akran gruplarının başarı motivasyonu açısından homojen olduğu bulunmuştur. Ancak kız gruplarının erkek gruplarına göre öznel görev değerleri açısından daha homojen olduğu tespit edilmiştir.

Anahtar Kelimeler: başarı beklentileri, öznel görev değeri, akran grubu, homofili, öğretmen duyuşsal desteği

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LIST OF ABBREVIATIONS

CFA   Confirmatory Factor Analysis

CFI   Comparative Fit Index

EFA   Exporatory Factor Analysis

EVS-MS   Expectancy-Value Scale for Middle School

NNFI   Non-Normed Fit Index

PTAS   Perceived Teacher Affective Support

RMSEA   Root Mean Square Error of Approximation

SCM   Socio-Cognitive Mapping

SEM   Structural Equation Modeling

SEVT   Situated Expectancy-Value Theory

SPSS   Statistical Package for the Social Sciences

SRMR   Standard Root Mean Square Residual

TLI   Tucker Lewis Index

CHAPTER 1

INTRODUCTION

In the academic context, motivation is defined as "the energy students bring to academic tasks, the beliefs, values, and goals that determine which tasks they pursue, their persistence in achieving them" (Wentzel & Wigfield, 2006, p.1). Academic motivation of the students is quite revealing in understanding the sources of students' academic achievements, as students' motivated behavior predicts students' four educational outcomes. First of all, motivated behavior is related to what kind of activities students choose, such as choosing between listening to the lesson and playing with his/her phone instead. Secondly, motivated behavior is related to how much the student is involved in the task. While a student is satisfied with just listening to the lesson, another student might prepare for the lesson before the class and continue to study what s/he learned after the course. Thirdly, motivated behavior is related to students' persistence. For example, while one student gives up due to the difficulty of an academic task, another student might continue to show effort to complete that task. Finally, motivated behavior is related to actual achievement or performance. Therefore, motivated behavior, due to its effects on various behaviors, directly and indirectly, affects academic achievement (Pintrich, 2003). As can be seen from the definitions of motivation, it is a highly complex structure, and

therefore various achievement motivation theories have been developed to examine these structures.

Eccles et al. (1998) classify motivational theories based on three motivational questions students can ask themselves. These questions are as follows: "Can I do this task?", "Do I want to do this task and why?" and "What do I have to do to succeed on this task?" (p.12). The first two are directly related to motivation, while the third is related to self-regulation (Wigfield et al., 2006). The theories that focus on the question of "Can I do this task?" are self-efficacy based on social-cognitive theory, self-concept and self-worth theories, attribution theory, mindset theory, control theories, and situated expectancy-value theory. The theories that focus on the question of "Do I want to do this task and why?" are situated expectancy-value theory, intrinsic motivation theories, self-determination theory, flow theory, interest theories, goal theories, and goal orientation theory.

Situated Expectancy-Value Theory (SEVT) (Eccles & Wigfield, 2020) is concerned with the two fundamental motivational questions with two different constructs, which are subjective task values and expectancies for success (Wigfield & Eccles, 2002). Therefore, it proposes a comprehensive model for understanding students' achievement motivation. SEVT is established based on Atkinson's (1957) motivation theory and initially proposed to understand gender differences in mathematics achievement motivation by Eccles et al. (1983). Afterward, the theory became a frequently used framework for understanding students' academic motivation. In the theory, expectancies for success can be defined as

"children's beliefs about how well they will do on an upcoming task" (Wigfield, 1994, p.52).

Expectancies for success and competence beliefs are theoretically defined separately in the literature; however, empirically, they do not differ (Eccles et al., 1993). Eccles et al. (1983) defined competence beliefs or ability beliefs as a person's evaluations of their competence. When it comes to defining the value, there are narrower and broader definitions of the value in the achievement motivation literature. However, it is basically defined as "how a task meets different needs of individuals" (Wigfield, 1994, p.52). Eccles et al. (1983) examined the value under four dimensions. These are as follows: attainment value, intrinsic value, utility value, and cost. Attainment value is defined as the importance given to doing a task well. Intrinsic value is how much an individual enjoys performing the task they do or how much they like the field that the task is related to. The utility value is how the task relates to an individual's future goals. Finally, the cost is defined as what a person gives up to accomplish a task or the effort he/she has to make to perform that task (Wigfield & Eccles, 1992).

Previous research points out that both constructs in the model are influential in predicting different educational outcomes. While students' expectancies for success are the most powerful predictor of their academic performance (Wigfield et al., 2009; Bong et al., 2002), students' subjective task values are the strongest predictor of their academic choices (Rosenzweig et al., 2019).

Research on these two constructs aimed at understanding how these constructs developmentally decomposed (Eccles et al., 1993; Eccles & Wigfield, 1995). Findings are gathered under four headings. First of all, children's task values and expectancy-related beliefs differ from the age of six. Secondly, expectancies for success and competence beliefs of children between the ages of 6-18 are combined under the same factor. Third, from the fifth grade on, task values of students differ from each other factorially. Finally, students' expectancy-related beliefs and task values change from domain to domain, starting from the age of six (Wigfield et al., 2009).

In addition to the developmental changes, contextual factors also have been of interest to the researchers. Wigfield et al. (2006) examined the contextual factors on the development of achievement motivation under the heading of socialization of motivation and reported that student motivation is influenced by their parents, peers, and teachers.

Parental factors are defined as family demographic characteristics, general child-rearing climate, parents' general beliefs, parents' child-specific beliefs (Wigfield et al., 2015). Research on parental factors indicated that when children are criticized too much, they doubt their own academic competencies (Burhans & Dweck, 1995), on the other hand, when parents' behaviors are autonomy-supportive, it creates a more suitable environment for the development of strong self-competence beliefs (Pomerantzet al, 2007). When parents offer activities for their children to improve themselves in different domains, children gain competence in these areas leading to an increase in their expectancies for success (Muenks et al., 2018).

Moreover, student motivations are associated with peer relationships through peer acceptance, having friends, and membership in peer groups (Wentzel & Muenks, 2016). Students' different types of peer relationships are found to be related to various academic and social outcomes of the students, one of which is motivation (Wentzel & Muenks, 2016). Peer relations of students can be conceptualized at three different levels: individual, dyad, and group. Sociometric status, the oldest tradition in peer relations research, gives us information about individual-level through students' acceptance or rejection (Cillessen, 2009). Researchers found a positive relationship between students' peer acceptance and classroom activity engagement (Buhs & Ladd, 2001; Ladd, 1990) and academic self-concept (Flook et al., 2005). Dyadic friendships were also related to student motivation in various aspects. For example, having friends is related to school liking (Ladd et al., 1997), engagement (Wentzel, 2005), adjustment to school (Berndt & Keefe, 1995), attributions and values (Altermatt & Pomerantz, 2003). Peer group research is considered the third level of social complexity, and it emerged later. However, the methods used in determining sociometric status and dyadic friendships were also used to identify the peer group. While sociometric approaches determine sociometric categories, dyadic friendship approaches determine friendship groups. Social Cognitive Mapping (SCM) approach (Cairns et al., 1985) has been developed to determine the interaction-based groups. SCM approach is based on the fact that students are active participants and observers of the class (Kindermann & Gest, 2009). Basically, in the SCM approach, students in the classroom or school are asked "who hangs around together" (Cairns et al., 1985; Gest et al., 2003; Kindermann, 1993; 2007). Composite social maps created as a result of SCM data show

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students who interact with each other and give interaction-based peer groups formed due to these interactions patterns.

Peer group studies generally focus on the effects of the peer group on the individual and the similarities of the group members. Peer group members can be similar in terms of various characteristics, and the term "homophily" is used for this similarity (Lazarsfen & Merton, 1954). According to Kandel (1978), similarities between people may occur when people influence each other in the process (socialization), as well as people choose to affiliate with each other according to their similarities (selection). There is homophily among peer group members in terms of school intrinsic value (Ryan, 2001), academic engagement (Kindermann, 1993; 2007), and effort regulation (Jones et al., 2010). Some of the studies testing homophily among peer group members also investigated the effects of selection and socialization and reported that peer groups' motivation at the beginning of the year predicts individual students' motivational change end of the year (Kindermann, 1993; 2007; Ryan, 2001; Wentzel, 2005).

Finally, the academic motivation of students is influenced by teachers' general beliefs and relationships with their teachers (Wigfield et al., 2006). The nature and quality of teacher-student relationships are highly influential in students' achievement motivation (Wentzel, 2009). In a study with high school students, Martin et al. (2007) found that teacher-student relationships are more influential than peer relationships and child-parent relationships. Also, Martin (2007; 2009) found that teachers' interests significantly predicted students' motivation and engagement. In the elementary school sample, Hughes (2011) found that

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students who are accepted by teachers and students who trust their teachers have higher self-efficacy and more school belonging. Also, a meta-analytic study highlighted that those affective qualities of the student-teacher relationship are related to student engagement and academic achievement (Roorda et al., 2011). Also, Perceived Teacher Affective Support (PTAS), which brings together affective teacher characteristics such as "caring, respecting and encouraging students, valuing their opinions, maintaining high expectations for all students, actively listening, concerning for their students and treating them fairly" (Sakiz, 2017, p.238), is an important dimension of student-teacher relationship and motivation. PTAS is strongly related to students' sense of belonging, academic self-efficacy, academic enjoyment, academic hopelessness, and educational effort in mathematics classrooms (Sakiz et al., 2012) and behavioral engagement in science classrooms (Sakiz, 2017).

Student motivation is highly related to academic achievement (Wentzel & Wigfield, 2009). Therefore, a significant body of research examines motivation with different constructs using different theoretical frameworks. Because of the high association between motivation and performance, it is also essential to examine the social and contextual factors that influence its development (Gottfried, 2009). Also, with the transition to middle school, students' motivation tends to decrease (Wigfield et al., 2009). In order to prevent the decrease in students' motivation, there is a need to examine the factors that influence their motivation in the middle school period. The Situated Expectancy and Value model (Eccles & Wigfield, 2020) provides a comprehensive framework for understanding the development of motivation with the model structure.

However, human development research findings are generally carried out in the Western culture, but they are generalized to the whole world, so research from different cultures is needed (Arnett, 2008). In Turkey, some studies investigate SEVT (Agbuba, 2011; Saritepeci, 2016; 2019). However, some of the domain-specific scales (Saritepeci, 2016; 2019) developed within the framework of Situated Expectancy-Value theory do not show compatibility with the factor structure proposed by the theory. According to Wigfield et al. (2016) scales of more specific or broader areas could be developed for SEVT. Therefore, in this study, students' school motivation scale was developed and used.

In addition, although PTAS is a relatively new construct, there are studies investigating various motivational variables with PTAS (Sakiz, 2007; Sakiz 2012, Sakiz et al., 2012), but there are no studies testing PTAS with SEVT. For these reasons, there is a need to analyze the expectancy-related beliefs and subjective task values from SEVT with various variables (academic achievement, PTAS, number of interaction partners).

Also, in recent years, interest in peer relationships has been increasing, especially in Western countries (Ladd, 2009). Although there is an increase in studies examining the role of peer support in the development of motivation (Calp et al., 2018; Atmaca & Koccu, 2019), there are no studies examining the influences of peer groups on students' motivation in Turkey. While Özdemir and Keser (2019) examined the social network roles of students in the classroom and social media, they did not examine the motivational variables in their study. In this study, the social cognitive mapping method was used to

identify peer groups in the Turkish context, and these groups were examined whether these groups are homogeneous in terms of motivational variables.

1.1. Purpose of the Study

This study had two main purposes. Firstly, this study aimed to examine the relationship between the number of interaction partners, perceived affective teacher support, prior academic achievement, and motivational variables (expectancy-related beliefs, utility value, and intrinsic value). Secondly, the purpose of the study is to examine homophily among peer group members' academic motivation.

1.2. Research Questions

1. What are the relationships among the number of interaction partners, perceived teacher affective support, prior academic achievement, and academic motivation?
   a. Does prior academic achievement predict motivational variables (expectancy-related beliefs, utility value, and intrinsic value)?
   b. Does perceived teacher affective support predict motivational variables (expectancy-related beliefs, utility value, and intrinsic value)?
   c. Does the number of interaction partners predict motivational variables (expectancy-related beliefs, utility value, and intrinsic value)?
2. Is there homophily among peer group members in terms of academic motivation?

a. Is there homophily among male peer group members in terms of academic motivation?

b. Is there homophily among female peer group members in terms of academic motivation?

1.3. Significance of the Study

The significance of this study is fivefold: Firstly, although many studies demonstrate the effect of teachers on students' academic motivation (Burchinal et al., 2008; Eccles & Roeser, 2015; Martin, 2007; 2009; Hughes, 2011; Wang & Eccles, 2012), studies on the association between motivational constructs and student-teacher relationships within the framework of the situated expectancy-value theory are quite limited (Wigfield et al., 2015). Also, PTAS is a relatively newly developed construct; its relationship with various motivational variables has been examined (Sakiz et al., 2012; Sakiz, 2015), but its association with motivational variables within the framework of SEVT has not been studied.

Secondly, although the peer context is directly related to the development of the students, it is a field that has not been researched enough (Bukowski & Sippola, 2001). In addition, Eccles and Wigfield (2020) stated that peer roles should be examined in developing motivational variables within the scope of SEVT. According to Kindermann et al. (1996), there are three main reasons why peer groups are under-researched. First of all, unlike other contextual factors, they are primarily chosen by students. Secondly, peer groups overlap each other, and finally, peer group memberships of children can change quickly

and unexpectedly. However, the SCM approach has come to the fore in peer-group research in the last 20 years due to its various advantages. Thus, the SCM approach and homophily among peer group members will be tested for the first time in the context of Turkey. In addition, SCM is often used to create peer groups, but it also gives us individual frequent interaction partners. In this study, the number of interaction partners is taken as a variable, and the relationship between the number of interaction partners and student motivation will be examined.

Thirdly, this study will contribute to the achievement motivation field, peer relationships field, and the teacher-student relationship field with its findings. According to Kağıtçıbaşı (2007), most of the psychological research is conducted in western countries, but these results should be tested in the "majority world," outside of the Western countries. Therefore, the relationship between academic achievement, achievement motivation, number of interaction partners, and perceived teacher affective support is vital to examine the context of Turkey. In addition, pioneers in the peer studies field have emphasized the need for research from the majority world. According to Rubin et al. (2015), investigation of peer interactions, relationships, and groups in understudied countries, are essential for understanding the effects of culture on peer relationships.

Fourthly, in Turkey, a variety of domain-specific expectancy-value scales have been developed (Agbuba, 2011; Akın et al., 2016; Sarıtepeci, 2019), but none of them are targeting to measure the expectancies for success and task values of the middle school students about the school. The scale developed within the scope of this study will be a

functional tool for researchers and school counselors who want to examine the motivations of middle school students. Also, the SCM questionnaire (Kindermann, 2007) was adapted to the Turkish context. Thus, this questionnaire can be used by researchers, who want to examine interaction partners and peer groups, and school counselors who want to create a composite social cognitive map of the school.

Finally, students' academic motivation is one of the most important predictors of their academic choices and performance. For this reason, it is one of the most studied and discussed areas in educational psychology (Hattie et al., 2020). Keeping the motivation of students high in order to support their academic and social development is one of the primary duties of educators. However, to support this, it is necessary to understand the sources of students' motivation and accordingly create educational environments and contexts suitable for enhancing their motivation. Thus, this study aims to contribute to this field by examining the relationship between students' motivation and various variables.

1.4. Definitions of Important Terms

Motivation: In terms of the situated expectancy-value framework used in this study, motivation consists of students' expectancy-related beliefs and task values.

Expectancy-related beliefs: Expectancy-related beliefs consist of students' expectancies for success and competence beliefs. While the expectancies for success are about the future results, the competence beliefs are about students' current abilities. These

two constructs are gathered under the title of expectancy-related beliefs because the two constructs do not diverge factorially (Wigfield & Eccles, 2002).

Subjective Task values: Although Eccles et al. (1983) examined the task values under four sub-dimensions, in this study, subjective task values refer to the intrinsic value and utility value. The intrinsic value indicates the students' interest in the task and the enjoyment they receive from it. In contrast, the utility value indicates the task's benefit to the future plans of the students.

Perceived teacher affective support: PTAS refers that perceived teacher affective support is "how students perceive that their teacher cares for, values, and supports them, whether students feel respected, encouraged, and listened to by their teacher, and whether students feel that their teacher is fair and holds high expectations" (Sakiz et al., 2012, p.238).

Prior Achievement: It shows how successful the student is in the tasks assigned to the student in line with the goals of the educational institution. It can be measured by exams held in the classroom or by national central exams. In this study, prior achievement points to students' GPA of the last semester. The GPA of the students was obtained by asking the students.

Interaction Partners: In this study, interaction partners refer to students who are hanging out frequently together.

Peer group: In this study, peer groups are defined as the clusters of students who interact and spent time more frequently at school.

Homophily: In this study, homophily refers to the similarity between group members in terms of academic motivation.

CHAPTER 2

LITERATURE REVIEW

This chapter aims to examine the literature related to the variables in the research. The first part explains the situated expectancy-value theory of achievement performance and choice and covers the development, effects, and measurement of the structures the theory contains. In the second part, perceived teacher affective support is explained, and findings related to the relationship between this structure and other academic outcomes are presented. In the third section, peer interaction, peer groups and their identification in school context and their influences are examined. Finally, a summary of the literature review is presented.

2.1. Situated Expectancy-Value Theory of Achievement Performance and Choice

Expectancy-Value Theory (EVT) of achievement performance and choice is introduced by Eccles and her colleagues (1983), which actually expanded the expectancy-value model developed by Atkinson (1957). Eccles and Wigfield (2020) described the constructs included in the model in more detail and identified the determinants of these constructs (Figure 2.1) and tested the theory in real-world achievement situations such as schools (Wigfield et al., 2009). Eccless et al. (1983) initially developed this theory to examine the

gender differences in the choices and achievements of early adolescents and adolescents in mathematics. They examined how expectancies, values, and their determinants affect students' academic choices, persistence in achieving academic tasks, and academic success. Later, this theory was used in other areas of success, especially in sports and physical activities (Wigfield et al., 2009). EVT provides a framework for understanding how students view themselves, how people assess them, and how their educational environment affects their educational aspirations, choices, and, ultimately, their achievement (Rosenzweig et al., 2019).
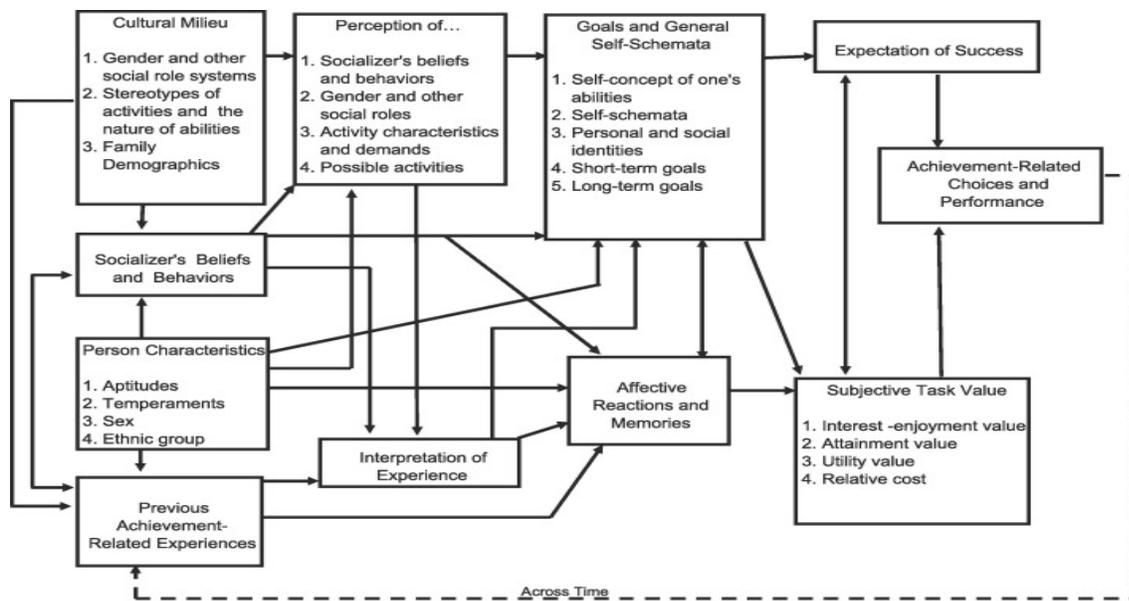
Figure 2.1. Situated Expectancy-Value Model. Retrieved from "From expectancy-value theory to situated expectancy value theory: A developmental, social cognitive, and sociocultural perspective on motivation" by J. S., Eccles & A. Wigfield, *Contemporary Educational Psychology, 61*, p.2. (https://doi.org/10.1016/j.cedpsych.2020.101859) Copyright by 2020 Elsevier

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As can be seen in Figure 2.1, students' expectancies and subjective task values directly affect students' achievement-related choices and achievements. Task values and expectancies of the students are shaped by broader cultural factors starting with the socializers.

As a result of the studies carried out for four decades since the theory was introduced, the structures and outcomes of the theory have been tested, and the areas of uncertainty, in theory, have become much clearer. As a result, expectancies for success and subjective task values, which are the two basic structures of the theory, have been used in motivational research for nearly forty years, as they directly predict students' academic choices and academic achievements of students. In line with the recent discussions on this accumulation of the theory, the name of the theory has been changed (Eccles & Wigfield, 2020) to the Situated Expectancy-Value Theory (SETV) (Eccles & Wigfield, 2020).

2.1.1. Expectancy-Related Beliefs

Expectancy-related beliefs are formed by combining two main concepts, which are expectancies for success and ability beliefs or academic self-concepts. Eccles et al. (1983) defined expectancies for success as children's beliefs about how well they will do on upcoming task. Also, they defined ability beliefs as "the individual's perception of their current competence at a given activity." Ability beliefs focus on the present, whereas expectancies concentrate on the future, so they are conceptually separated from each other (Wigfield & Eccles, 2000). Also, while the ability beliefs are more stable, the expectancies for success may change over time (Eccles & Wigfield, 2020). However, studies have

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shown that these two structures are not empirically distinguished (Eccles & Wigfield, 1985; Eccles, et al., 1993).

Children's expectancy-related beliefs vary depending on different factors. First of all, children can distinguish their expectancy-related beliefs in different domains such as math, science, reading, and general school from the early primary school years (Wigfield & Eccles, 2002). Secondly, mean levels of students' expectancy-related beliefs tend to decrease with advancing age (Eccles et al., 1998; Wigfield et al., 2006; Muenks, et al., 2018). The reason for this may be the fact that students are making more realistic assessments with their advancing ages or the decline in students' self-assessment with the change of evaluation methods in schools (Wigfield & Eccles, 2002). Social and cultural factors also affect the development of students' expectancy-related beliefs (Wigfield & Eccles, 2000). Moreover, students' prior achievement experiences and feedback from their families and teachers are particularly effective (Wigfield et al., 2009; Muenks et al., 2018). There are also gender-related differences in expectancy-related beliefs. For example, in Wigfield, et al.'s study, (2015) male students' expectancy-related beliefs in mathematics and science were found to be higher than girls, whereas girls' expectancy-related beliefs in language were found to be higher than boys.

Students' expectancy-related beliefs predict the activities they choose to participate in, their level of engagement, their persistence, and their performance (Bong, 2001; Simpkins et al., 2006). Literature shows that expectancy-related beliefs predict students' academic performance and achievement more strongly than subjective task values (Wigfield et al.

2009; Bong et al., 2012; Muenks et al., 2018; Rosenzweig et al., 2019). The relationship between expectancy-related beliefs and performance gets stronger with advancing ages (Simpkins et al., 2006). Another critical point is that expectancy-related beliefs predict future achievement and performance even when their past performance and achievement are controlled (Muenks et al., 2018).

2.1.2. Subjective Task Values

Task value refers to how much a person wants to accomplish a given task (Rosenzweig et al., 2019). Eccles (Parsons) et al. (1983) examined task values differently and much broader from Atkinson's original expectancy-value theory. Atkinson (1957) suggested that the task value was inversely related to the expectancies for success, but SEVT suggested and proved that this relationship was positive (Eccles et al., 1983; Eccles & Wigfield, 1995; Eccles et al., 1993). Eccles and Wigfield (2020) emphasized that task values are subjective because the same task will be valued differently by different students and the value of a given task consists of four main structures as intrinsic value, utility value, attainment value, and cost.

Intrinsic subjective task value (which is sometimes called interest) defined as "the anticipated enjoyment one expects to gain from doing the task for purposes of making choices, and as the enjoyment, one gets when doing the task". Literature points that intrinsic subjective task value differs from interest and intrinsic motivation in terms of theoretical bases they have (Eccles & Wigfield, 2020, p.4). When students give an

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intrinsic value to a task, they engage more deeply and can follow the task for a long time (Wigfield & Eccles, 2020).

The utility subjective task value, which is also called as usefulness, is related to how well the task fits into the person's future plans. For instance, students take the compulsory course required to graduate or take the course necessary for their professional careers. With some features, the utility value is similar to extrinsic motivation, because performing the task is a means to an end rather than an end in itself in both of them (Wigfield et al., 2009). This task can also be an expression of one's goals, so utility value is in some ways related to personal goals (Eccles & Wigfield, 2020).

Attainment subjective task value is defined "as the importance of doing well on a given task" (Eccles et al., 1983). Attainment value also includes identity issues because tasks are essential when people view these tasks as a center for their own identities (Wigfield et al., 2017).

Lastly, perceived cost is one of the most discussed topics of the theory in recent years. Cost refers that what a person gave up to doing a task, as well as possible negative consequences (Wigfield et al., 2020). Researchers suggested that there are sub-dimensions of costs (Flake et al., 2015). Eccles et al. (1983) suggested three types of costs: effort cost, opportunity cost, and emotional cost while Flake et al. (2015) developed a cost scale with four dimensions: task effort cost, outside effort cost, loss of valued alternatives cost, and emotional cost.

Like expectancy-related beliefs, subjective task values also vary with age (Eccles & Wigfield, 1995; Eccles et al., 1993) and the mean scores of subjective task values tend to decrease with advancing age (Rosenzweig et al., 2019). Subjective task values and expectancies for success diverge from the age of six and subjective task values among the fields differ from the age of six (Eccles & Wigfield, 1995; Eccles et al., 1993). Eccles et al. (1993) found that students' intrinsic value, utility value, and attainment value up to the fourth grade were loaded on a single factor and they could separate these subjective task values from the fifth grade on (Eccles & Wigfield, 1995). Wigfield et al. (2009) claimed that students' subjective task values are first formed in the form of interest and other subjective task values develop later because usefulness requires higher cognitive skills, and importance also requires a certain level of sense of self. Children's own experiences, as well as the feedback from their families and teachers, are effective in the formation and development of subjective task values.

Expectancies for success and subjective task values do not affect all academic outcomes in the same way (Rosenzweig et al., 2019). Subjective task values found to be more effective on course-taking decisions and other academic choices compared to expectancies for success (Durik et al., 2006; Simpkins et al., 2006; Meece et al., 1990). In addition to the direct effects of subjective task values and expectancies for success, they also have indirect effects on academic outcomes arising from their impact on each other (Rosenzweig et al., 2019).

2.1.3. Measurement of Expectancy-Related Beliefs and Subjective Task Values

Various scales, which measure ability beliefs, expectancies for success, and subjective task values, have been developed for nearly four decades since the theory came out. The scales that are developed by Eccles and colleagues (Eccles et al., 1983; Eccles et al., 1993; Wigfield & Eccles, 2000; Wigfield et al., 1997) are frequently used due to "their clean factor structure, good psychometric properties and demonstrated relations to different achievement and choice outcomes" (Wigfield et al., 2009, p.58). Flake et al. (2015) and Kosovich et al. (2015) have developed scales that include the cost structure and measures the sub-dimensions of the cost.

In addition to these comprehensive scales, scales focusing on only one of these dimensions such as expectancies for success, ability beliefs, or task values have been developed. For example, the Motivated Strategies for Learning Questionnaire (Pintrich et al., 1991) contains questions that measure some subjective task values. But according to Wigfield et al. (2009), it does not include sufficient items to develop the subjective task value subscale.

According to Muenks et al. (2018) scales used in measuring expectancies for success and ability beliefs also adopted different theoretical frameworks such as Self-efficacy Scales that are guided by Bandura (2006), Marsh's Self-Description Scales (Marsh et al., 1984; Marsh & O'Neill, 1984), and Harter's Self-Perception Scales (1982,1988) (Muenks et al., 2018). Despite their conceptual distinctions, expectancies for success, ability self-concept,

self-efficacy are very similar in empirical studies and even give overlaping results (Eccles & Wigfield, 2020).

In the last decade, researchers in Turkey have developed and adapted various SEVT based scales that aimed to measure students' expectancies for success and subjective task values on a specific domain. Agbuba (2011), examined elementary school students' expectancies for success and subjective task values relationship with disruptive behaviors in physical education. He reviewed and modified the questionnaires of Eccles et al. (1983; 1993) and Xiang et al. (2003). Koksal and Yaman (2013) developed a subjective task value scale for high school biology classes. Akin et al. (2016) developed Mathematics Self-Report Inventory for Turkish Elementary Students, which covers both expectancies for success and subjective task values. Sarıtepeci (2016) developed the achievement motivation scale in social studies, which is based on SEVT and later he adapted that scale to high school students (Sarıtepeci, 2019). However, the factors in the scales of Sarıtepeci (2016; 2019) do not fit the SEVT. Because he named one of the factors as expectancy and value the second as belief in success.

2.1.4. Research on Expectancy-Related Beliefs and Teacher Influence

SEVT model (Figure 2.1) demonstrated that students' perceptions of beliefs and behaviors of the socializers' impact students' expectancy-related beliefs. During the instructional practices, teachers' expectancies from students strongly influence the students' expectancies for success and ability beliefs or self-concepts (Muenks et al., 2018).

Madon, et al., (2001) investigated the influence of teachers' expectations on students' math ability beliefs in sixth grade math classrooms. The sample of the research consists of 108 teachers and 1692 students. As a result of their longitudinal study, they found that the perceptions of the teachers at the beginning of the year predicted the change in students' mathematic ability beliefs. Similarly, Ding and Rubie-Davies (2019) tested the effects of teacher expectation on students with an intervention study with eight English teachers and 229 eight grade students in China. In the intervention study, they trained teachers on three type of behaviors: challenging tasks, immediacy, and detailed feedback. They reported that as a result of the intervention, students' academic achievement and self-concept increased at the end of the year, particularly the most significant increase was seen in low expectation students. In a similar vein, Pesu et al. (2016) examined the role of teachers' beliefs in children's ability beliefs development in the Finnish context with 152 first grade students and found a positive relationship between teachers' beliefs and students' mathematics and reading competency beliefs. However, they found that this relationship was related to the students' level of achievement. For high performer students, as their teachers' beliefs about students increase, it affects the students' ability beliefs positively. However, this relationship has not been found for low achiever students.

Brattesani et al. (1984) studied the relationship of differential treatment of teachers with the students' expectancies for success in their study with 234 fourth, fifth, and sixth grade students. As a result of the hierarchical regression analysis, it was found that teacher expectations in the high differentiated treatment classrooms predict students' expectations and achievements more than the low differential treatment classrooms. Besides teacher

expectations, there are also studies investigating the effects of teacher behaviors on student self-concept. Chen et al. (2011) investigated the relationship between student perceptions of teacher feedback and school self-concept with 1598 children in grades three to six from Taiwan. The results of the study indicated that there is a strong relationship between positive academic feedback and students' academic self-concept.

Guay et al. (2019) examined the relationship between teacher relatedness, intrinsic motivation, reading self-concept, and reading achievement of students transitioning from kindergarten to elementary school with 820 students at Canada. Results revealed that kindergarten teachers' relatedness predicted students' intrinsic motivation in first grade, and self-concept for reading positively mediate the relation between intrinsic motivation and reading achievement. Similarly, Jensen et al. (2018) investigated the relationship between perceived teacher emotional support, reading self-concept, and reading achievement with 2888 first grade students in Norway. The results of the study showed that while there is no direct relationship between perceived teacher emotional support and reading achievement, perceived teacher emotional support predicts reading self-concept, and reading self-concept predicted reading achievement. Moreover, Erkman et al. (2010) examined the effects of perceived teacher acceptance, self-concept, school attitude, and achievement with 208 fifth grade students in Istanbul, Turkey. Results indicated that perceived teacher acceptance is strongly associated with both students' self-concept and school attitude. However, while there was no relationship between female students' perceived teacher acceptance and academic achievement, a significant association was observed among male students.

To sum up, literature shows that teacher expectations and behaviors influence students' expectancies for success. In addition, the quality of the relationship between teacher and student affects students' expectations of success positively.

2.1.5. Research on Subjective Task Values and Teacher Influence

Research mainly focuses on understanding the influence of teachers on the development of subjective task values of students. The nature of the teacher-student relationship is known to be very effective in students' motivation and participation (Wentzel, 2009). For example, instructional practices of teachers are reported to have both positive and negative effects on students' interests (Wentzel, 2002) and teachers' feedback on the importance and usefulness of tasks affects students' subjective utility and attainment task values (Wigfield et al., 2006),

Wentzel (2002) investigated the relationship between five teaching dimensions (fairness, teacher motivation, rule setting, negative feedback, and high expectations) and students' motivational outcomes with 452 sixth grade students in the US. Research results show that the interest of students has a negative relationship with negative feedback, while the interest of students has a positive relationship with teacher motivation, rule setting, and high expectations. Another study was conducted by Upadyaya and Eccles (2014), with 849 students from kindergarten to sixth grade about their interest in mathematics. They examined the relationship between teachers' beliefs about students' achievements and students' interests in mathematics. The findings of the study revealed that teacher's beliefs about students' potential performance and effort predicted students' math interest.

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However, teachers' beliefs on students' math abilities predicted students' mathematics interest only at the beginning of elementary school. Frenzel et al. (2010), examined the development of adolescents' mathematics interest with longitudinal data with 3196 participants, students between the fifth and ninth grades from Germany. According to the study findings, students' interest in mathematics declines with advancing age, but teachers were not been associated with this decline. In addition, a positive correlation was found between the enthusiasm of teachers and students' interests.

Schmidt et al. (2019) designed a mixed-method study to understand teachers' relevance statements and their effect on middle school students' science utility. The students stated that science is generally useful, but science lessons at school are not. However, when teachers used relevance sentences more frequently, students found the course contents more useful, and their beliefs about the utility of science in general increased. Tas et al. (2019) investigated the relationship between perceived science teacher support and motivational variables about science with 1006 middle school students in Turkey. Results showed that perceived teacher support positively predicted both science task values and science self-concepts of students.

In summary, teachers' classroom practices, instruction methods, feedbacks, and the relationships they establish with the student affect the students' utility value and interest.

2.1.6. Research on Expectancy-Related Beliefs, Subjective Task Values and Performance

Many studies demonstrated that students' expectancy-related beliefs and subjective task values predict their educational outcomes in different domains (Wigfield et al., 2020), such as grades, academic engagement, course-taking decisions, career decisions such as choice of college majors (Rosenzweig et al., 2019). Research shows that these two constructs do not affect educational outcomes in the same way, while expectancies for success are found to be stronger predictors of actual performance, subjective task values reported to predict intentions and decisions about academic activities more strongly (Wigfield et al., 2017).

Meece et al. (1990) examined the associations between mathematics ability perceptions, performance expectancies, and task values with academic outcomes using data from 250 students from the seventh to the ninth grade. According to the study results, the performance expectancies of the students predicted their math grade, while the subjective task values predicted course enrollment intentions.

Durik et al. (2006) examined how ability beliefs, intrinsic value, and importance predict students' achievement decisions about literacy using longitudinal data from 606 students. Researchers tried to predict children's weekly time spent on reading in the 10th grade for pleasure, the number of lessons taken about language arts in high school, reading-related career aspirations in twelfth grade. The results of the study revealed that ability beliefs predicted all outcomes, importance predicted students' career aspirations and course

choices, and intrinsic value predicted weekly time spent on reading and number of courses.

Simpkins et al. (2006), examined the relationship between students' out-of-school activities, task beliefs (ability beliefs, interest and importance), and high school course enrollment in math and science domain. The data were collected from 227 students. The involvement of male students in out-of-school math and science activities in the fifth grade positively associated with their sixth and even tenth grade task beliefs. It was also associated positively with girls' task beliefs, but the relationship was not significant. Students' ability beliefs, and task values predicted the number of high school courses.

Bong et al. (2012) tested whether self-concepts, self-efficacy, and self-esteem in different age groups and different domains predicted success with 234 elementary 512 middle school students from. Task value and test anxiety are also assumed to mediate these relationships. Self-efficacy and self-concept positively predicted achievement in mathematics and language arts. However, this relationship was not found for self-esteem Test anxiety and task value mediated only with self-efficacy. Also, students' subjective task values did not strongly predict the academic achievement of students.

Rosenzweig and Wigfield (2017) investigated whether students' self-efficacy, perceived difficulty, value, and devalue for reading school information texts of students predict students' language art grades, science information text comprehension, and dedication to reading. As a result of the study, that 1134 secondary school students participated, the

comprehension scores and the reading grades of the students with high expectancy-related beliefs were found to be higher.

Musu-Gillette et al. (2015) examined the long-term connections between motivational constructs and educational outcomes with 421 students' longitudinal data. They found that the value that students give to mathematics predicts their choice of college major more than ability beliefs.

In recent years, the effects of the interaction of expectancy-related beliefs and subjective task values have also begun to be studied. These studies show that these two structures influence each other and also predict educational outcomes (Wigfield et al., 2017). Nagengast et al. (2011) examined science self-concepts and science enjoyment interaction with data consisting of 398750 15-year-old students from 57 different countries. The result of the research demonstrated that students' science self-concept and science enjoyment impact both their engagement and career preferences in science. However, the interaction of these two constructs increases the predictive power of both.

Trautwein, et al., (2012) examined the impact of subjective task values and expectancy interaction on academic outcomes with 2508 students at the end of secondary school education in Germany. When all of these variables predicted academic achievement separately, they found that when their interactions were examined, the predictive power of expectancy increased if the students' subjective task value was high.

Nagengast et al., (2013) examined the expectancies and subjective task values to predict the homework engagement in six (German, English, History, Mathematics, Physics, and Biology) different domains. According to the study results, in which 511 secondary school students participated, homework engagement of students increased when both their task values and expectancies were high.

Guo et al. (2015) investigated the relationship between expectancy, value interaction, and academic outcomes, using 10.370 15-year-old Australian students' data. According to the results of the research, the interaction of students' mathematics expectancies and task values predicts students' selection of advanced mathematics courses, their entrance to university, and STEM fields of study.

While students' subjective task values and expectancies for success predict students' performance, the opposite happens too. Students give higher value the given task which they achieved before, they also think that they will be more successful in these domains (Wigfield et al., 2009). Reciprocal effects models claimed that academic self-concepts and academic achievement mutually affect each other (Marsh, 1990; Marsh & Yeung, 1997). Bandura (1986) states that previous performances are influential on students' self-efficacy beliefs. Also, Eccles and Wigfield (2020) showed in their models that students' past performances influence students' subjective task values and expectancy-related beliefs.

Huang (2011) conducted meta-analysis of the longitudinal relations of self-concept and academic achievement. She examined 39 independent and longitudinal samples. The mean observed correlations ranged from .20 to .27 between prior self-concept and

subsequent achievement, and from .19 and .25 between previous academic achievement and subsequent self-concept.

Marsh et al. (2005) expanded their models of mutual influence to include academic interest. They conducted the study with two nationally representative samples which includes 7913 students from Germany. They found that prior self-concept significantly affected later math interest, school grades, and standardized test scores. However, prior math interest had only a small effect on later math self-concept.

Pinxten et al. (2014) investigated the effects of enjoyment and competence beliefs on mathematics achievement. Longitudinal data were collected from 4724 students in the Grade 3-7. They found that prior enjoyment in math had a small but positive effect on subsequent achievement. However, this positive relationship disappeared when mathematics competence beliefs were controlled simultaneously.

2.2. Perceived Teacher Affective Support

The quality of teacher-student relationships reported to be positively related to students' school belonging, academic competence, behavioral engagement, and achievement (Hughes, 2011) and teacher-reported academic skills while it was found to be negatively related to behavior problems (Maldonado-Carreño, & Votruba-Drzal, 2011). Research points out that teachers' interest can predicts students' motivation and engagement (Martin, 2007; 2009). Teachers who are warm, sensitive, and caring for students have a

positive relationship with students' engagement, achievement (Roorda et al., 2011; Pianta et al., 2012; Brackett et al., 2012).

The nature and quality of teacher-student relationships plays a central and essential role in students' motivation, engagement, and learning (Wentzel, 2010) starting from the very beginning of their education. For example, students' closeness with their teacher in kindergarten has a positive relationship with their language skills, socialization, and attention skills (Peisner-Feinberg et al., 2001), their school liking and academic functioning (Birch & Ladd, 1997). Moreover, closeness with the teacher is found to be negatively associated with problem behaviors (Peisner-Feinberg et al., 2001), internalized problems (Pianta & Stuhlman, 2004), and aggressive behavior (Silver et al., 2005). In line with this related research, studies reports that student-teacher relationships that involve conflict are positively associated with aggressive behavior and peer rejection (Ladd & Burgess, 2001), but negatively related to school liking (Birch & Ladd, 1997) and academic achievement (Hamre & Pianta, 2001). Longitudinal studies also show consistency with these results (Birch & Ladd, 1998; Ladd & Burgess, 1999; Pianta & Stuhlman, 2004).

The affective quality of student-teacher relationship is also crucial for older students too. Studies reported that positive student-teacher relationship boosts fifth grade students' engagement (Rimm-Kaufman et al., 2015) and has a negative association with depression and anxiety in students at late elementary school (Murray & Greenberg, 2000). In middle school context, it is reported to predict students' motivation (Ryan et al., 1994; Zimmer-

Gembeck & Locke, 2007) and found to be more effective on educational outcomes than relationships with family and peers at high school level (Martin et al., 2007).

In addition to the quality of the student-teacher relationship perceived teacher social support is also one of the predictors of students' academic performance in middle school (Ryan, & Patrick, 2001; Wentzel, 1997, 1998) and high school (Crosnoe et al., 2004; Felner et al., 1985; Isakson, & Jarvis, 1999) and has a positive relationship with students' social goal pursuits (Wentzel, 1997; 1998; Wentzel et al., 2010), prosocial actions (Wentzel, 1994) and subsequent peer acceptance (Hughes & Kwok, 2006), it also has a negative association with students' aggressive behaviors (Chang, 2003; Isakson, & Jarvis, 1999), disciplinary problems (Crosnoe et al., 2004) and their judgments of the acceptability and likelihood of cheating (Murdock et al., 2004). Teacher support is also reported to be related to self-regulation and task-related interaction, and these are mediated by motivational outcomes (Patrick et al., 2007).

In relation to teacher support, research also highlights the importance of self-fulfilling prophecy, which occurs in classrooms when teachers' erroneous expectations of students affect the students and the students demonstrate behaviors that confirm these erroneous expectations and verify them (Jussim et al., 2009). Self-fulfilling prophecy effect varies according to the characteristics of students, age groups, school period and ethnic and socio-economic background (Smith et al., 1999). Moreover, it is important to note that positive effects of teachers' high expectations on students have a stronger effect compared to the negative effects of teachers' low expectations, especially on low performing

students (Madon et al., 1997). In addition, while self-fulfilling prophecy is reported to be more effective in the first grade rather than following elementary schoolyears (Kuklinski & Weinstein, 2001), teacher expectations at the beginning of the year are also reported to be more effective than later period (Raudenbush, 1984).

Self-fulfilling prophecy does not occur directly as a result of the expectations of the teacher; it is due to the differentiating treatments that result from the expectations of the teachers (Jussim et al., 2009). Rosenthal (1974) examined the differential treatment of teachers under four topics: first of all, teachers create a more supportive emotional climate for high expectancy students, secondly, they also provide clearer and positive feedback to high expectancy children, third, they give more time and attention to high expectancy students and sometimes offer them more material and finally, they provide more options for their outcomes of high expectancy students. Therefore, the predictive power of teacher expectations varies according to the level of differentiating treatments of the teacher. Teacher expectations in high differential treatment classrooms can be more influential on students' self-expectations and achievement than low differential treatment classrooms (Brattesani et al., 1984).

2.2.1. Research on Perceived Teacher Affective Support

Sakiz et al. (2012) conducted a study to examine the relationship between perceived teacher affective support, the sense of belonging, academic enjoyment, academic hopelessness, academic self-efficacy and academic effort with middle school students in mathematics classrooms. 317 middle school students from the seventh and eighth grades

participated in their study. As a result of the structural equation model, they reported that perceived teacher support has a positive relationship with the perceived sense of belonging, academic enjoyment, and academic self-efficacy. However, perceived teacher affective support has a negative association with academic hopelessness. As a result, they concluded that the affective climate perceived by the students promotes motivational and academic outcomes.

Sakiz (2012) tested the perceived teacher affective support structure under the name of perceived instructor affective support to examine the effects of the teachers at the college. The research aimed to investigate the relationship between perceived instructor affective support and academic enjoyment, behavioral engagement, academic hopelessness, and academic help-seeking. The study was conducted with 277 college students, who are students at the education faculty in Turkey. Results of the study showed that perceived teacher affective support has a significant relationship with all variables in the model. As a result, she concluded that perceived teacher affective support is important not only for K12 students but also for college students.

Sakız (2015) also examined the roles of perceived teacher affective support, and perceived teacher mastery goal orientation, academic enjoyment, behavioral engagement, self-efficacy on students' academic achievement with 138 fourth and fifth grade students in science classrooms. The findings of the study demonstrated that PTAS and academic self-efficacy have a positive relationship with student achievement.

Sakız (2017) also tested the association of perceived teacher support with various emotional and motivational variables with primary school students in science classes. More specifically, she examined the relationship between perceived teacher support and academic enjoyment, academic anxiety, academic hopelessness, academic self-efficacy, and behavioral engagement with 633 fourth and fifth grade students. According to the findings of the research, the affective teacher support perceived by the students has a positive relationship with academic self-efficacy, academic enjoyment, and engagement. In contrast it has a negative association with academic anxiety and academic hopelessness.

Kök (2017) examined the relationship between perceived teacher affective support and peer relatedness with academic emotions in middle school English Foreign Language classes. 810 (fifth, sixth, and seventh grade) students participated in the research. The results of the study show that perceived teacher affective support and peer relatedness have a positive relationship with students' positive academic emotions (enjoyment, pride) and a negative association with students' negative academic emotions (boredom, shame, anger, hopelessness, and anxiety).

2.3. Peer Interactions, Relationships, and Groups

Children spend an important time during the day with their peers. In particular, schools as a context create a unique opportunity for students to spend time with their peers during which they can establish various networks of relationships through their interaction with each other. The socialization of children with their peers differs from their socialization with their families. Because peer relations are more egalitarian, voluntary and transitory

and therefore, peer relationships of children provide them with a special opportunity to socialize (Rubin et al., 2015). It is important for children to spend time with each other because children contribute to each other's development with these interactions (Hartup, 2009). Thanks to their peers, children acquire a variety of behaviors, skills, attitudes and experiences that will affect their lives (Rubin, Bukowski, & Parker, 2006). For these reasons "peers are necessities, not luxuries in human development" (Hartup, 2009, p.3).

"The term peer relations refers to broad set of direct and indirect experiences that individuals of all ages have with their nonfamilial age-mates" (Rubin et al., 2015, p.177). In order to understand these experiences, Hinde (1987; as cited in Rubin et al., 2015) divided these experiences into social complexities at various levels. These are individuals, interactions, relationships, and groups. According to the model interactions occur with the contribution of individuals' characteristics. However, the interaction of the individual with other people differs over time. Because interaction is a dyadic process and both sides affect the process and each other (Hinde, 1995). As a result of regular interaction, a relationship emerges. If interactions are positive, it can manifest itself as friendship, romantic relationship, and if negative, it may appear as enmity or bully-victim relationships (Rubin et al., 2006).

2.3.1. Peer Interactions

Peer relationships, according to Wentzel (2005), are one of the most fundamental socializers in the development of students' academic functioning at school. When it came to identifying peer influences in the development of students' competencies, Wentzel

(2009) classified them into three types: a) communicating performance goals and expectations, b) providing assistance and assistance, c) providing emotional support and security. Children need peers with whom to interact in order to benefit from these interactions. According to research, sociometrically rejected children struggle intellectually, whereas sociometrically popular kids excel academically (Wentzel, 2009).

In elementary and middle school, having friends has been linked to higher grades and test scores (Berndt & Keefe, 1995). Furthermore, having friends at school has been associated with the motivation in school-related tasks (Berndt & Keefe, 1995; Wentzel et al., 2004). However, not every peer that students interact with is their friend, because friendship requires mutual feelings as well as interaction (Kindermann, 2016). The concept of students' interaction partners is based on the Social-Cognitive Mapping approach. According to this approach, peer groups consist of interaction partners of students. Motivational studies using social cognitive mapping in the literature have studied peer groups (Kindermann, 1996; 2007), or students who have been isolated (Norwalk, 2013). However, the number of interaction partners was not investigated as a variable.

2.3.2 Peer Groups

The peer group refers to "collection of interacting individuals who have some degree of reciprocal influence over one another (Rubin et al., 2006, p. 578). Peer groups allow children to experience collaboration, exist in social structures, acquire social skills, and control their emotions (Rubin et al., 2015). Peer groups can be divided into two as formal and informal. Formal groups are groups in which students are assigned by adults, for

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example, class, out-of-school program. Informal groups, also known as natural groups or cliques, and are initiated and maintained by children (Brown & Dietz, 2009).

Peer groups in infancy and early childhood are mostly under the parents' control, but the main feature of the groups is the social dominance hierarchy (Rubin et al., 2015). By the time of upper elementary and middle school, children take control of peer groups' formation and maintenance (Değirmencioğlu et al. 1998). The number of members of these groups generally varies from three to nine (Kindermann et al., 1995). While the groups usually consist of same-sex children (Chen et al., 2003), boy groups are more crowded than girl groups (Benenson et al., 1997).

2.3.2.1. Identifying Peer Groups

There are different forms of peer groups (Figure 2.3) and different approaches to determine these different forms. The first is the sociometric approach is developed by Moreno (1934). Various sociometric categories can be obtained as a result of sociometry such as popular, rejected, neglected, controversial (Newcomb & Bukowski, 1983). Students in a specific category are included in the same category because of their similarity rather than because they interact with each other (Kindermann, 2016). The social crowd approach is divided into categories according to the students' reputations among their peers (Brown, 1999). These categories, which can be created with ethnographic methods or information obtained from students, are called brains, nerds, and jocks.
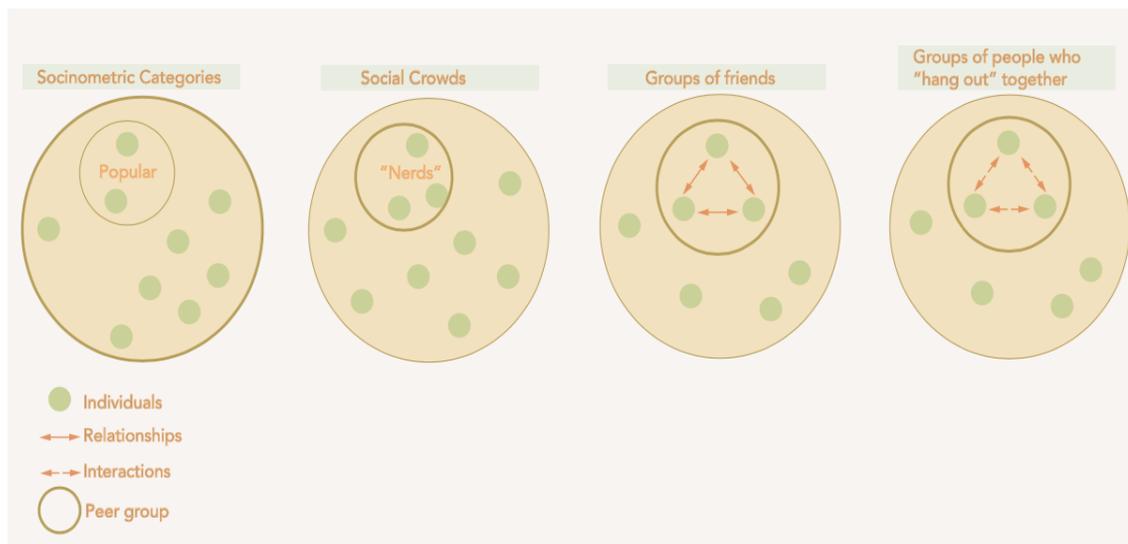
Figure 2.2. Typical forms of peer groups. Adapted from "Peer group influences on students' academic motivation" by T. A., Kindermann, 2016, In K. R. Wentzel, & G. B. Ramani (Eds.), *Handbook of social influences in school contexts: Social-emotional, motivation, and cognitive outcomes* p. 33. 2016, Routledge

In these two approaches, groups are socially and culturally assigned, and it is not essential for students to have interactions for being in the same category (Kindermann & Gest, 2009). In contrast, there are two other approaches in which interaction between members of the same group is necessary for them to be placed in the same group and therefore, they are called social groups (Kindermann & Gest, 2009). The first approach of identifying social groups is based on identifying children's friends (Berndt, 2004) and friendships are defined as close relationships between people in this approach (Berndt & McCandless, 2009). Social network analysis, for example, University of California Irvine NETwork (UCINET) (Borgatti et al., 1999) and NEGOPY software (Richards, 1995), are based on

this approach. They focus on the groups formed as a result of dyadic friendships (Kindermann, 2016).

Another approach used to determine peer groups is social-cognitive mapping (SCM), which is developed by Cairns et al., (1985). SCM method is based on two fundamental insights. Firstly, children are expert observers of the peer network they are in, and secondly, the individual social cognitive maps are aggregated into the composite social-cognitive map, which gives a valid estimation of actual students' interaction partners (Gest et al., 2003). In this approach, the question of "who hangs around together" is asked through an interview (Cairns et al., 1985; Cairns et al., 1988; Gest et al., 2003) or questionnaire (Kindermann, 2007) and that way individual social-cognitive maps are taken from each student. Students are told to write as many names as possible, but it is stated that they do not have to write everyone's names (Kindermann & Gest, 2009). Individual social-cognitive maps are brought together to create a co-occurrence matrix. The co-occurrence matrix can also be analyzed with various methods. Here, two approaches come to the fore. The first method examines the correlate profiles. Cairns et al. (1985) created the groups using correlation, and then they used confirmatory factor analysis to create non-overlapping groups. In another method, children whose profiles are correlated above .40 are assigned to the same group (Rodkin et al., 2006). Lately, Gest et al. (2007) suggested using principal component analysis to identify peer groups. These methods are often used to create non-overlapping groups. However, these approaches also receive various criticisms. According to Neal and Neal (2012) and Neal et al. (2021) the SCM method gives false positives about peer groups. They tested SCM 4.0 software,

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which is highly used software for SCM data, and reported some issues with reliability. SCM 4.0 software correlate profiles of the students, and students who have .40 correlation are assigned to the same group. However, Kindermann (2007) using the binomial z-score for analyzing SCM data, tests whether students are reported to be in certain groups by chance or not. This approach focuses directly on the students who interact one another, rather than the similarity of the students' frequent interaction partners.

Due to the definition of friendship, it contains the intimacy and emotions that are required (Berndt & McCandless, 2009). Since there is no information about the content and quality of the interaction in SCM data, it is necessary to separate frequent interaction partners from friends. In addition, Kindermann's research (2007) with sixth grade students shows that friendship groups and interaction groups do not overlap. In addition, some students may become members of interaction groups when they do not have friends, and there are only students who have a mutual friendship relationship without being members of the interaction group.

2.3.2.2. Homophily among Peer Group Members

The peer group members are similar in terms of various characteristics. Lazarsfen and Merton (1954) and Kandel (1978) used the term "homophily", Hinde (1997) used "mesh", Kindermann (2003) used "assortativeness", and Cairns et al. (1989) used "synchrony" for this situation. According to Kandel (1978), similarities between people may occur when people influence each other in the process (socialization), as well as people choose to affiliate with each other according to their similarities (selection).

Research on similarity among students is shaped around three concepts. First, "do students' characteristics resemble those of the group?" (homophily). Second, "do students choose people who are similar to their own characteristics when forming the peer group?" (selection). Finally, "does the group that the student belongs change the characteristics of the student over time?" (socialization).

2.3.2.3. Research on Homophily among Peer Group Members

Studies that test homophily among students use cross-sectional data to examine the correlation between student characteristics and the average of group members' characteristics without themselves (Kindermann, 1996).

Chen et al., (2003) examined the similarity between students' academic achievements and the academic achievements of peer groups' members in Chinese context. 730 children and adolescents from various age groups participated in the study. The results show that peer group members are very homogeneous in terms of their academic success.

Kindermann (1993) investigated homophily among peer group members with the school engagement variable. A total of 109 students, who are fourth and fifth grade students, participated in the study. According to the results of the research, he found a significant correlation (r= .55) for teacher-rated engagement between student and peer group. Kindermann (2007) has retested the homophily with the students' academic engagement with a larger sample. As a result of his work with the participation of all sixth-grade

students in the town, similar results were obtained from his previous findings (Kindermann, 1993).

Estell, Farmer, Cairns, and Cairns (2002), examined the similarity of the students and the group they belong to, in terms of academic competence. According to the results obtained from 92 African American early elementary students participating in the longitudinal study, a significant relationship was found in both girls' groups and boys' groups. This correlation indicates homophily in peer groups. With further analysis, they found that homophily occurred mostly with the effect of selection.

Hamm et al. (2013) examined the similarities of students with peer groups with the variables of effort and achievement. A total of 237 African American early adolescents participated in the study. When peer groups were examined at the beginning of the year, the similarity was not found among the group members, but when the study was repeated at the end of the year, a significant correlation was found.

Ryan (2001) analyzed homophily among peer group members in terms of motivational variables (expectancies for success, utility value, and intrinsic value), and academic achievement. As a group determination approach, she created friend groups by using social network analysis. According to the results of the research, she found a significant relationship between the group members in terms of motivation and academic achievement.

Urberg et al. (1997), examined the similarity among group members with variables such as alcohol, cigarette and substance use with 1028 students from the sixth eighth and tenth grades. They defined their peer groups depending on networks of dyadic friendships and the results showed that students in the same group of friends showed similarities in terms of substance abuse.

2.4. Summary of Review of the Literature

Overall, Situated Expectancy-Value Theory is widely used theory to understand students' achievement motivation. The research studies in the literature reviewed so far demonstrated that expectancies for success and subjective task values are significantly related with personal experiences and social factors such as teacher and peer influences. When students achieved specific task, their expectancies for success in similar tasks increases. In addition, students attribute more positive values to the tasks they are already successful in and the tasks they believe will be successful. In addition, students' social interactions are also very influential in the development of students' expectancies for success and subjective task values. Teacher support is highly associated with students' motivation. The same is true for peer support, there is a positive relationship between peer support and motivation. However, studies examining peer support focused on the quality, rather than the quantity of the students with whom they interact. For this reason, the relationship between the number of peers interacted with and achievement motivation has not been adequately studied. In addition, although the Situated Expectancy-Value Theory literature in Turkey has expanded in the last decade, it is still quite limited.

When studies examining the relationship between peer group and motivation are reviewed, it is seen that there is homophily among peer group members in terms of achievement motivation. The homogeneity of the peer groups influenced by selection and socialization process. However, studies have not adequately examined the peer groups by gender. Since middle school peer groups are generally composed of students of the same sex, this unique context also needs to be examined. In this study, besides testing a model that examines the relationship of motivation with personal experiences and social influences, it was examined whether motivation was homogeneous in peer groups.

CHAPTER 3

METHOD

In this section, the methodology of the research will be explained in detail. First, the design of the study will be introduced, and research questions will be presented. Then the variables in the research will be defined and explained. After that, the sampling technique used in the research and the participants will be shared. Afterward, the information will be given about data collection instruments and data collection procedures and how to analyze the collected data. Finally, the research limitations and assumptions will be explained.

3.1. Design of the Study

The present study was based on a quantitative research approach, and the correlational research method was used to produce answers to research questions. Correlational research is one of the research methods that examine the degree of relationships between quantitative variables (Lodico et al., 2010). This research examines the relationship between specifically perceived teacher support, the number of student interaction partners, academic motivation (expectancy-related beliefs, intrinsic value, and utility value), and

academic achievement. In addition, it tests the homophily among peer groups obtained as a result of interaction partners.

Data were collected from fifth, sixth, seventh, and eighth-grade students in two public middle schools in Istanbul. The instruments used to collect data were the Expectancy-Value Scale for Middle School (which was developed within the scope of this study), the Perceived Teacher Affective Support Scale (Sakız, 2007; 2011), and the Social-Cognitive Mapping Questionnaire (Kindermann, 2007). Information about students' academic achievement came from their school GPAs.

3.2. Variables in the Study

Academic Motivation: The variable was measured by Expectancy-Value Scale for Middle School developed in this study. The scale includes three dimensions which are expectancy-related beliefs, intrinsic value, utility value. Since there is more than one dimension in the scale, mean scores were calculated for each dimension seperately. Students who score high in the expectancy-related beliefs dimension demonstrated that they believe that they have higher ability beliefs and will be successful in their courses at school. Students who score high in the intrinsic value dimension show that they are more interested in and enjoy the courses at school. On the other hand, students who score high in the utility value dimension indicate that the courses at school are more beneficial for their future plans.The scale of measurement of each dimension is considered interval.

Peer Group's Academic Motivation: The variables belonging to the peer group were obtained, as suggested by Kindermann's (1996) peer group score identification strategy. The score of each student's peer group was calculated by taking the average of the students in the group except himself/herself.

Perceived Teacher Affective Support: This is the exogeneous variable in the model, and the scale of measurement is considered interval. This variable will be measured through the PTAS scale. The scale was developed in English by Sakız (2007). Later, Sakız (2012) adapted it to Turkish. However, Sakız developed this scale according to a specific area. As part of this research, it was adapted to measure general perceived teacher affective support. The high scores obtained on the unidimensional scale show that the perceived teacher affective support of the student is also high.

Number of Interaction Partners: This is the exogeneous variable in the model. Each individual social-cognitive map obtained through the SCM questionnaire (Kindermann, 2007) was brought together to create a composite social-cognitive map. From this composite social map, each student's interaction partners are identified using a binomial z-test and Fisher's exact test. The variable indicates the number of students with whom the student has a statistically significant interaction.

Prior Achievement: This is the exogenous variable in the study. Prior achievement points here to students' self-reported grade point average (GPA) of the last semester.

3.3. Participants of the Study

The target population consisted of middle school students who studied at medium socio-economic level public schools in Istanbul. Initially, this study was planned as a longitudinal study before the announcement of the coronavirus pandemic. For this reason, the accessible population was limited to middle school students at public schools in İstanbul. However, in April, when the second data was planned to be collected, the schools were closed due to the coronavirus pandemic. Therefore, a longitudinal study was transformed into a cross-sectional study. The cluster sampling method was used to access participants in these schools. Classes to be included in the study were randomly selected from the classes in the two selected schools. With an accessible population of 1340 students, the minimum sample size suggested was 322 middle school students using Dillman's (2007) formula with a 95% confidence level and a 5% margin of error (Needham & Vaske, 2008). A total of 702 students (330 female, 372 male) participated in the study. The sample characteristics are presented in Table 3.1. The participants were evenly distributed across grade levels.

Table 3.1

Characteristics of the Participants

Variables	f	$\%$
Gender		
Female	330	47
Male	372	53
Grade		
5th grade	137	20
6th grade	168	24
7th grade	163	23
8th grade	234	33

3.4. Data Collection Instruments

Three different instruments were used in the study. These were the Expectancy-Value Scale for Middle School (EVS-MS), Perceived Teacher Affective Support (PTAS) Scale, and Socio-Cognitive Mapping (SCM) Questionnaire. In addition, demographic information of participants and their prior GPA score were asked.

3.4.1. Expectancy-Value Scale for Middle School

Because the Situated Expectancy-Value Theory (SEVT) is comprehensive and considers social-cultural factors, it is accepted as the theoretical framework to be used to study academic motivation. Accordingly, a literature review was conducted on the scales that accepted the SEVT as a framework. Although there are various domain-specific expectancy-value scales, a general scale measuring the expectancy-related beliefs and

subjective task values for school has not been found. For this reason, the scale was developed within the scope of this thesis.

First of all, a large item pool with 42 items was created to develop a four-factor scale (expectancy-related beliefs, intrinsic value, utility value, and attainment value) compatible with SEVT. The cost structure was deliberately excluded from the scale construction process. The main reasons behind this decision were the ongoing debate on cost structure (See Flake et al., 2018; Eccles & Wigfield, 2020) and the lack of study on cost structure in Turkey. Also, in this scale, a five-point scale was decided to use because, according to Krosnick and Fabrigar (1997), the five-point scale provided reliable results rather than fewer point scales. While "1" in the scale refers to "Strongly Disagree," "5" refers to "Strongly Agree." Sample items from each factor include "I am good at school" (expectancy-related belief factor), "I like to learn a new subject in courses" (intrinsic value factor), "The courses at school are beneficial for my future" (utility value factor), and "Courses at school are important to me" (attainment value factor).

Initial examination in terms of the suitability of the items to the dimension to be measured and the language characteristics led to a first draft scale including 22 items. For content validation purposes, the opinions of three different field experts were taken. With the suggestions of the experts, some changes were made. For example, the item "I like being in school" was removed. In ability beliefs items, items that read "can do easily" were changed to "can do." The number of items was increased from 22 to 25.

Before starting the pilot study, the cognitive interview was conducted with two different students (one from 5th and one from 7th grade) to test the clarity of the items. In addition, a group interview was conducted with four 6th grade students. As a result of these interviews, it was thought that the scale items were clear, but some items might not measure the intended dimension to be measured. For example, in an interview with a student whose motivation and academic achievement are known to be high, the student stated that she did not agree with one of the intrinsic value items ("I like talking about the subjects from the lessons with my friends"). She explained that because she got tired in classes, she preferred to rest and talk about daily issues during breaks. Although no changes were made based on these interviews, notes were taken and were planned to be used to explain possible outcomes.

3.4.1.1. First Pilot Study of Expectancy-Value Scale for Middle School

EVS-MS was administered to 361 middle school students (157 female, 204 male) at a public school in Istanbul. The students participated in the pilot study were 102 students in 5th grade (28.3%), 88 students in 6th grade (24.4%), 71 students in 7th grade (19.7%), and 100 students in 8th grade (27.7%).Before applying an exploratory factor analysis (EFA), the assumptions of EFA were controlled. First of all, KMO and Bartlett's Tests were checked. KMO Measure of Sampling Adequacy was .92, and Bartlett's test was significant (BTS value= 3017.16, $p<0.001$). A factor analysis with eighteen items was performed. As a result of the factor analysis, three factors emerged with eigenvalues higher than one. The overall percentage of variance extracted (58.79%) promoted the

claim that these three factors were sufficiently and conceptually valid in terms of their relevance to the expectancy-value model. The resulting items and dimensions were as intended before the study; only two items were cross-loaded. These items contain an emphasis on "learning a new subject," which may have brought these items together in the intrinsic value factor. Factor loadings along with the eigenvalues are presented in Table 3.2.

Table 3.2

Items and Factor Loadings from Three-Factor Solution with Direct Oblimin Rotation: Eigenvalues and Percentage of Variance

Item Number	Factor Loadings		
	1	2	3
Item 3	**.69**	.02	.02
Item 21	**.59**	.03	.29
Item 15	**.57**	.02	.12
Item 20	**.57**	.06	.16
Item 23	**.52**	-.07	.21
Item 7	**.50**	-.17	-.13
Item 22	**.45**	-.38	.03
Item 11	-.11	**-.78**	.13
Item 1	-.01	**-.76**	.00
Item 16	.00	**-.75**	.01
Item 5	.06	**-.75**	.05
Item 10	.30	**-.52**	-.04
Item 18	.38	**-.43**	-.07
Item 24	.08	. 02	**.72**
Item 8	.13	.03	**.70**
Item 19	.04	-.16	**.64**
Item 13	-.07	-.04	**.58**
Item 4	.20	-.03	**.57**
Eigenvalues	7.24	2.23	1.12
% of Variance	40.20	12.38	6.21

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The reliability of each factor was estimated with Cronbach alpha value; also, item-total correlations were calculated. The reliability of the intrinsic value factor was found to be .82, and item-total correlations were between .45 and .68 (Table 3.3). The reliability of the expectancy-related beliefs factor was found to be .88, and item-total correlations were between .60 and .74 (Table 3.4). The reliability of the utility value factor was found to be .82, and item-total correlations were between .48 and .69 (Table 3.5).

Table 3.3

Item-Total Statistics of Intrinsic Value

Item Number	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
3	.62	.78
7	.45	.81
15	.59	.79
20	.56	.79
21	.68	.77
23	.63	.78

Table 3.4

Item-Total Statistics of Expectancy-Related Beliefs

Item Number	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1	.70	.86
5	.74	.85
10	.66	.86
11	.69	.86
16	.68	.87
18	.60	.87
22	.64	.87

Table 3.5

Total Statistics of Utility Value

Item Number	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
4	.65	.77
8	.69	.76
13	.48	.82
19	.62	.80
24	.68	.77

3.4.1.2. Second Pilot Study of Expectancy-Value Scale for Middle School

EVS-MS was administered to 342 (178 female, 164 male) middle school students. Eighty-six (25.1%) of the participants are fifth grade, 82 (24%) are sixth grade, 94 (27.5%) are seventh grade, and 80 (23.4) are eighth grade students. Confirmatory Factor Analysis (CFA) was conducted to test the model fit of EVS-MS with three dimensions via Mplus Software (Muthen & Muthen, 1998-2017). The results demonstrated a significant chi-square statistics $\chi2$ (130) =235.581, $p < .001$. Findings of the CFA of the scale revealed that the three-factor model showed a good fit according to Hu and Bentler (1999) (CFI = .94, NNFI = .92, RMSEA = .05). Standardized coefficients are presented in Table 3.6.

Table 3.6.

Factor Loadings of Items for EVS-MS

Dimension	Items	Standardized Estimates
Expectancy-Related Beliefs	Item1	.68
	Item4	.69
	Item7	.65
	Item8	.70
	Item11	.62
	Item12	.68
	Item16	.71
Intrinsic Value	Item2	.73
	Item5	.60
	Item10	.51
	Item14	.78
	Item15	.70
	Item17	.67
Utility Value	Item3	.58
	Item6	.76
	Item9	.69
	Item13	.84
	Item18	.52

Reliability estimates of factors are .86 for expectancy-related beliefs, .80 for intrinsic value, and .83 for utility value. Item-total correlations accompanied with "Cronbach's alpha if item deleted" for each dimension are presented in Table 3.7, Table 3.8, and Table 3.9.

Table 3.7.

Item-Total Statistics for Expectancy-Related Beliefs

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Item1	.60	.84
Item4	.64	.83
Item7	.59	.84
Item8	.65	.83
Item11	.65	.83
Item12	.64	.83
Item16	.59	.83

Table 3.8.

Item-Total Statistics for Intrinsic Value

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Item2	.60	.77
Item5	.50	.79
Item10	.53	.78
Item14	.52	.78
Item15	.64	.76
Item17	.61	.76

Table 3.9.

Item-Total Statistics for Utility Value

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Item3	.53	.62
Item6	.54	.64
Item9	.54	.64
Item13	.33	.79
Item18	.60	.60

As a result, Expectancy-Value Scale for Middle School consisting of 3 dimensions and 18 items emerged. The factors of the scale are expectancy-related beliefs, intrinsic value and utility value. High scores obtained from the factors indicate that the student has a high score in terms of that motivational variable.

3.4.2. Perceived Teacher Affective Support Scale

The Perceived Teacher Affective Support (PTAS) Scale was first developed as nine items within the scope of Sakız's (2007) doctoral dissertation. This scale, which was originally developed in English, was adapted to Turkish by Sakız (2011) and turned into a scale consisting of 12 items in line with theory and research. In this 5-point rating scale, students give a single answer ranging from 1 "not at all true" to 5 "completely true" to each item. The high score obtained from the scale indicates that the student's perceived teacher support is also high. This scale, which is used as teacher-specific, was used as a general perceived teacher affective support within this thesis' scope. For this reason, minor changes were made to the items. The sample items are as follows: "My teachers really care about me," My teachers respect my ideas." The reliability of the scale was found .88 (Sakız, 2011).

The pilot study was carried out with 342 (178 female, 164 male) middle school students. Eighty-six (25.1%) of the participants are fifth grade, 82 (24%) are sixth grade, 94 (27.5%) are seventh grade, and 80 (23.4) are eighth grade students. Participants of the pilot study were selected from two public school students at a medium socio-economic level in Istanbul, just like the students in the main study. For the validity of the scale, the single-

factor structure was tested by performing Confirmatory Factor Analysis (CFA). The results demonstrated a significant chi-square statistics $\chi2$ (53) =191.119, p < .001. Findings revealed that one-factor model showed a good fit according to Hu and Bentler (1999) (CFI = .96, NNFI = .96, RMSEA = .03). Standardized estimates are presented in Table 3.10.

Table 3.10.

Factor Loadings of Items for PTAS

Items	Standardized Estimates
Item1	.61
Item2	.70
Item3	.65
Item4	.80
Item5	.66
Item6	.68
Item7	.77
Item8	.50
Item9	.68
Item10	.56
Item11	.78
Item12	.65

Furthermore, the internal consistency estimated by Cronbach's alpha was .93. Item-total correlations are presented in Table 3.11.

Table 3. 11.

Item-Total Statistics of PTAS

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Item1	.58	.84
Item2	.66	.83
Item3	.59	.84
Item4	.39	.85
Item5	.60	.83
Item6	.38	.87
Item7	.72	.83
Item8	.44	.84
Item9	.63	.83
Item10	.51	.84
Item11	.71	.83
Item12	.58	.84

3.4.3. Socio-Cognitive Mapping Questionnaire

Socio-Cognitive Mapping (SCM) method is used to identify students' interaction partners and to form peer groups consisting of interaction partners.The SCM method could be applied by interview or questionnaire (Kindermann, 2016). In this study, SCM data were collected via questionnaire. Students are told to list the names of students who hang around frequently in their classrooms, but it is stated that they do not have to write everyone's names (Kindermann & Gest, 2009). If half of the students in the class participate, a valid class social cognitive map can be created (Gest et al., 2003). In the SCM questionnaire (Kindermann, 2007), students are asked, "who hangs around together?" For their answers, space is organized where they can write twelve groups,

consisting of twelve people each. An example is also included in the questionnaires to make it easier for students to understand how to fill it.

The individual social cognitive map taken from each student was brought together to create a composite social cognitive map of the classroom. If the frequency of how many times the students written in the same group in the created composite social cognitive map was statistically significant, those two students were determined as interaction partners.

Since the SCM questionnaire would be applied first time in Turkey, the pilot study was conducted with 53 students from two classes. During this application, the difficulties experienced by the students were identified. As a result of these identified challenges, instructions on these issues were added to the main study questionnaire.

3.4.3.1. Peer Group Identification

In order to identify peer groups NETJAWS 7.7 (Mehess & Kindermann, 2009) was used. The way NETJAWS works is as follows. First, co-nomination matrices are created that determine how many times the students in the class are written in the same group with each other. It is possible to analyze co-nomination matrices with different statistical methods (Kindermann, 2006). NETJAWS, on the other hand, determines the students whose results are significant by using binomial z test and Fisher's exact test as members of the same group. The NETJAWS outputs give users how many times two students were written in the same group, whether this number is significant according to the binomial z

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test and Fisher's exact test results separately, and finally, the students with significant results for both tests. An example composite social map is given in Figure 4.3.

As can be seen in the figure, some groups only consisted of students interacting with each other. For example, one of the groups consisted of Student R, Student S, and Student 1, or another group consisted of Student L, Student M, Student N, Student O, Student P, Student W, and Student X. There was no statistically significant interaction of these students except for the members of that group. However, some groups overlapping, or a student appeared to be a member of more than one group. For example, student V and student B were members of both the yellow and green groups. Also, some students were interaction partners with some members of a peer group and not others. For example, student 6 is an interaction partner with some students from both the yellow and green groups. For creating non-overlapping groups, if the student was a member of more than one group, it was accepted as the group member with which he/she interacts most (Gest et al., 2009).

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	1	2	3	4	5	6
A		1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1
B	1		1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	0	0
C	1	1		1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1
D	1	1	1		1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
E	1	1	1	1		1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1
F	1	1	1	1	1		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1
G	1	1	1	1	1	1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1
H	0	0	0	0	0	0	0		1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
I	0	0	0	0	0	0	0	1		0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
J	0	0	0	0	0	0	0	0	0		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
K	0	0	0	0	0	0	0	0	0	1		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
L	0	0	0	0	0	0	0	0	0	0	0		1	1	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
M	0	0	0	0	0	0	0	0	0	0	0	1		1	1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	1	1		1	1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
O	0	0	0	0	0	0	0	0	0	0	0	1	1	1		1	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
P	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1		0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0
Q	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
R	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		1	0	0	0	1	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		0	0	0	1	0	0	0	0	0	0	0	0	0
T	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		1	1	0	0	0	0	1	1	0	0	0	0
U	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		1	0	0	0	0	1	1	0	0	0	0
V	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1		0	0	0	0	1	1	0	1	0	1
W	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	1		0	0	0	0	0	0	0	0	0
X	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	1	0	0		0	0	0	0	0	0	0	0
Y	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0		0	0	0	0	0	0	0
Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0		0	0	0	0	0	0
1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0		1	0	0	0	0
2	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1		0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0		0	0	1
4	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0		0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
6	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	

Figure 4.3. Sample of Social Composite Map

3.4.3.2. Group Score Identification

The method used by Kindermann (1996; 2003) to determine the group's profile was also used in this study. Accordingly, the group score for each member of the group was determined separately. As can be seen in Figure 4.4, group scores were formed by taking the average of the scores of the rest of the group for each member of the group. Group

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score determination processes were repeated for each student in the sample, and group

motivation score was determined separately for each student.
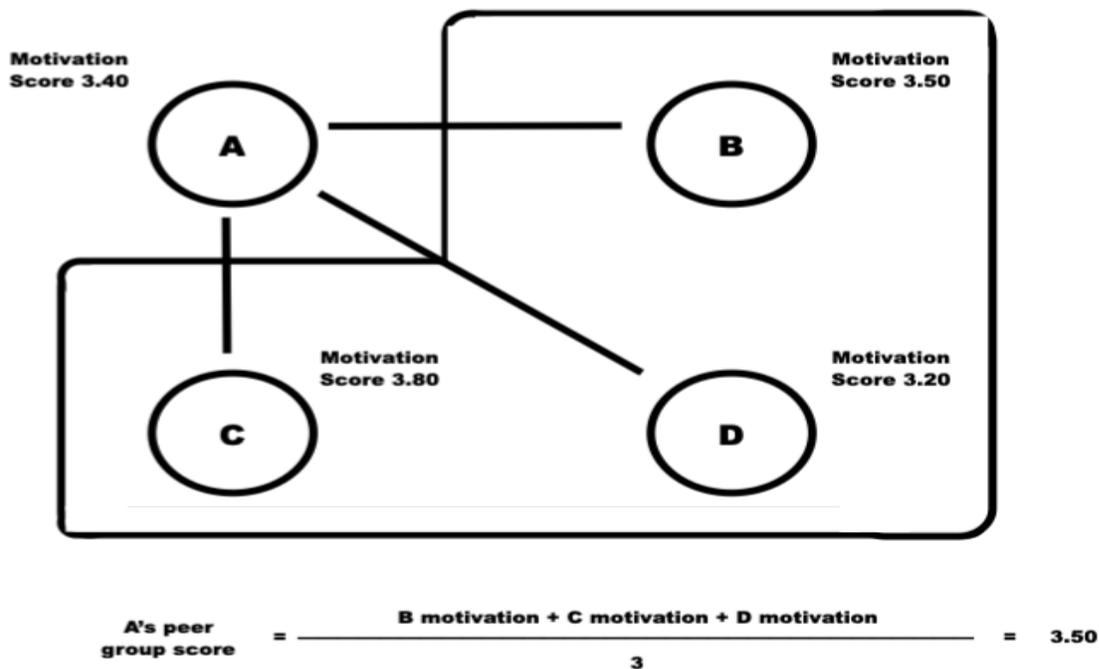
Figure 4.4. Peer group score identification strategy. Adapted from "Strategies for the study of individual development within naturally-existing peer groups", by Kindermann, 1996.. *Social Development, (5)2,* p.164. (https://doi.org/10.1111/j.1467-9507.1996.tb00078.x) Copyright 1996 by Blackwell Publishers

3.5. Data Collection Procedures

In order to carry out the current research, the necessary permissions were obtained for the study, firstly from METU Human Subjects Ethics Committee and then from the Ministry of National Education (MoNE). Before the application, pilot studies were carried out for

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all three data collection instruments. Before using the Expectancy-Value Scale in the main study, two separate pilot studies were conducted. Three hundred sixty students participated in the first pilot study, and EFA was performed with this data. Three hundred forty-two students participated in the second pilot study, and factors of the scale were tested with CFA. The pilot study of the PTAS scale was carried out with 342 students at the beginning of the second semester of the 2019-2020 academic year. Also, the pilot study of SCM questionnaire conducted with a group of 53 students.

The main study was carried out at the beginning of the second semester of the 2019-2020 academic year. In the classes where the main study will be applied, students were informed about the study, and parents' consent forms were distributed to the students. Two days later, the main study was applied with the students who brought the parent consent form. The main study took 30 minutes to be implemented in a classroom. After the necessary explanations were given to the students, it was put into practice. The application was carried out by the researcher and two psychological counselors.

3.6. Data Analysis

The analysis of the data was carried out with NETJAWS 7.7, SPSS 25, and MPLUS software. Missing data were analyzed before descriptive and inferential statistics. Although there is no missing data on EVS-MS, there are fifteen students do not have GPA information. Also, two students did not fill the PTAS scale. Therefore, these participants were excluded from the analysis.

Information from each student was entered into NETJAWS 7.7 for the identification of the peer groups. As a result of this analysis, the software gives out who has significant relationships in the classroom and the z-scores of these relationships.

Exploratory Factor Analysis of the EVS-MS scale was performed using SPSS 25. To test the compatibility of the factor structures of the scales with the theory and related research, Confirmatory Factor Analysis for PTAS scale and EVS-MS was done using MPLUS. Several goodness-of-fit indices were used: Root Mean Square of Approximation (RMSEA), Tucker-Lewis Index (TLI), and Comparative Fit Index (CFI). Cutoff values are used according to Hu and Bentler (1999); .95 for TLI and CFI, and according to Browne and Cudeck (1993) .08 for RMSEA.

Finally, in order to test homophily among peer group members, the correlation between the individual's score and the group score was tested using SPSS 25.

3.7. Limitations of the Study

This study has several limitations that must be taken into account. First of all, the EVS-MS and the PTAS scale were not designed as domain-specific. When the PTAS scale was developed by Sakız (2007; 2011), it aims to measure students' perceptions towards a specific teacher. However, in this study, a general perception of all students towards their teachers was measured. In addition, the EVS-MS is not domain-specific. However, it is known that the expectancy-related beliefs and subjective task values of the students differentiated according to the domain from an early age (Wigfield & Eccles, 2000).

Secondly, measuring students' achievement is a controversial issue. Since this study was studied with a large sample, especially the achievement test was not developed for the study. The school GPAs of the students were used as an achievement indicator. GPAs are the result of the scores of the students in the exams prepared by the teachers. For this reason, it can be considered as a limitation. Thirdly, since the studies are correlational and cross-sectional, there are no inferences about cause-effect relations for both research questions. Finally, the sample of the study was chosen from two public middle schools in Istanbul. For this reason, research findings cannot be generalized to students in private schools, other educational levels, and other provinces.

CHAPTER 4

RESULTS

This chapter aims to present the research findings in respect of the research questions. In the first section, information about the missing data in the research is presented. In the following section, validity and reliability studies of both scales are presented. In the third section, the findings of the SEM analysis are presented to answer the first research question. In the last section, the process of identification peer groups and the correlation analysis results to answer the second research question. Descriptives and the results of the analysis of the required assumptions are also given in these sections.

4.1. Missing Values

A total of 702 students participated in the main study. Although there was no missing value in the EVS-MS, there were 14 missing data in the GPA variable. Also, two students did not fill the PTAS scale. Thus, these 16 cases were eliminated as they constitute less than 5% of the data (Tabachnick & Fidell, 2019), and the SEM analysis was performed with the remaining 686 participants.

Cairns et al. (1985) recommended that at least 50% of the class participate in order to create a valid social-cognitive map of the class. Therefore, while examining homophily in a peer group for the second research question, the classes in which less than 50% of the class members attended the study were excluded from the research. In addition, while creating peer groups of these students, students who choose not to participate in the study and their groups were excluded from the study. Also, only dyadic relations were not accepted as a group. Therefore, the actual number of participants decreased to 389 middle school students.

4.2. Psychometric Characteristics of the Scales

Before applying inferential statistics in line with the research questions validity and reliability analyses for Perceived Teacher Affective Support Scale (PTAS) and Expectancy-Value Scale for Middle School (EVS-MS) were conducted and reported.

4.2.1. Validity and Reliability of Perceived Teacher Affective Support Scale

Confirmatory Factor Analysis (CFA) was conducted to test the unidimensional structure of the Perceived Teacher Affective Support Scale (PTAS) via Mplus Software (Muthen & Muthen, 1998-2017). CFA results demonstrated significant chi-square statistics χ^2 (53) =184.143, p < .001. Other fit indices were as following: Root Mean Square Error of Approximation (RMSEA) = .04, Comparative Fit Index (CFI) = .95, Non-Normed Fit Index (NNFI) = .95, and Standard Root Mean Square Residual (SRMR) = .043. The proposed model reflects a good model fit since NNFI and CFI values are .95 and above,

and the SRMR and RMSEA values are below .08 (Hu & Bentler, 1999). Furthermore, standardized estimates for each item with loads of .40 or above significantly contributed to the corresponding factor (Table 4.1). Furthermore, the internal consistency estimated by Cronbach's alpha was .91.

Table 4.1.

Factor Loadings of Items for PTAS

Items	Standardized Estimates
Item1	.64
Item2	.68
Item3	.67
Item4	.82
Item5	.69
Item6	.71
Item7	.81
Item8	.55
Item9	.69
Item10	.55
Item11	.76
Item12	.64

4.2.2. Validity and Reliability of Expectancy-Value Scale for Middle School

CFA was performed to test the three-dimensional structure of the Expectancy-Value Scale for Middle School (EVS-MS) via Mplus Software (Muthen & Muthen, 1998-2017). The results demonstrated a significant chi-square statistics $\chi2$ (130) =263.412, p < .001. Other fit indices were as following: Root Mean Square Error of Approximation (RMSEA) = .05, Comparative Fit Index (CFI) = .94, Non-Normed Fit Index (NNFI) = .93, and Standard Root Mean Square Residual (SRMR) = .05. Findings of the CFA of the scale revealed that

the three-factor model showed a good fit, according to Hu and Bentler (1999). Also, each item's contribution to the corresponding dimension was significant and had a loading ranged from .61 to .74 for expectancy-related beliefs, from .56 to .73 for intrinsic value, and from .60 to .78 for utility value (Table 4.2).

Table 4.2.

Factor Loadings of Items for EVS-MS

Dimension	Items	Standardized Estimates
Expectancy-Related Beliefs	Item1	.74
	Item4	.64
	Item7	.62
	Item8	.62
	Item11	.70
	Item12	.70
	Item16	.61
Intrinsic Value	Item2	.66
	Item5	.58
	Item10	.57
	Item14	.56
	Item15	.72
	Item17	.73
Utility Value	Item3	.60
	Item6	.72
	Item9	.67
	Item13	.78
	Item18	.64

Cronbach alpha estimates were computed for each sub-scale of the EVS-MS. Accordingly, α = .84 for expectancy-related beliefs (7 items), α = .81 for intrinsic value (6 items), and α = .83 for utility value dimensions (5 items). In general, Cronbach's alpha values reflected good reliability estimates for this scale.

4.3. Relationship among Number of Interaction Partners, Perceived Teacher Affective Support, Prior Achievement and Academic Motivation

In this section, descriptive statistics will be shared first. Afterwards, the analyzes performed for the assumptions of the Structural Equation Model will be demonstrated. Finally, the findings of the SEM analysis performed with the Mplus program will be presented for the first research question.

4.3.1. Descriptive Statistics

Descriptive statistics were generated to examine the general profiles of students in terms of motivational variables, perceived teacher affective support, number of interaction partners, and academic achievement. Mean scores and standard deviations are presented in Table 4.3. According to the descriptive statistics results, students have an average of 3.99 ($SD = 2.28$) interaction partners. The GPA averages of the students are 78.43 ($SD = 13.00$). When the motivational variables are examined, the utility value ($M = 4.27$, $SD = 0.83$) is higher compared to expectancy-related beliefs ($M = 4.14$, $SD = 0.75$) and intrinsic value ($M = 4.02$, $SD = 0.81$). The average PTAS scores of the students are 3.91 ($SD = 0.79$).

Table 4.3.

Descriptive Statistics of Variables

	N	M	SD
Number of Interaction Partners	702	3.99	2.28
Prior Achievement	688	78.43	13.00
Expectancy-Related Beliefs	702	4.14	.75
Intrinsic Value	702	4.02	.81
Utility Value	702	4.27	.83
Perceived Teacher Affective Support	700	3.91	.79

4.3.2. Assumptions of SEM

4.3.2.1. Sample Size

Sample size criteria were checked for the EVS and PTAS Scale. For the SEM analysis, there should be five observations per variable (Hair et al., 2019). In this study, the number of participants was more than twenty times the number of the items. Also, Kline (2016) suggested that the sample should include at least 200 cases in SEM studies in the field of education and psychology. Since there were 686 students in the study, the sample size also meets this criterion. Therefore, the sample size was sufficient for the recommendations of both Kline (2016) and Hair et al. (2019).

4.3.2.2. Normality

Univariate and multivariate normality assumptions were also checked for both scales to determine whether the population in which the samples were selected were normally

distributed or not. Univariate normality was checked through the graphical plots of histograms and Q-Q plots, Kolmogorov-Smirnov and Shapiro-Wilk tests, and the values of skewness and kurtosis. Skewness and kurtosis values were between -3 and +3 except for the fourth and sixth items of the PTAS scale. However, Kolmogorov-Smirnov and Shapiro-Wilk tests' results were significant, which indicated non-normality in the data. Finally, the histograms and Q-Q plots were examined. While histograms are mostly positively skewed, Q-Q plots did not show evidence enough for non-normality. Then Mardia's test was performed to test multivariate normality for both scales. Accordingly, Mardia's Test yielded significant for EVS-MS (b2p = 124.13, p < .001), and PTAS (b2p = 158.41, p < .001). These findings indicate the violation of the multivariate normality assumption. However, due to the fact that the sample size was sufficiently large, there was no serious concern about the results of multivariate normality.

4.3.2.3. Linearity and Homoscedasticity

Linearity and homoscedasticity assumptions were required for SEM (Kline, 2016). There must be a linear relationship between two or more combinations of variables (Tabachnick & Fidell, 2019). To test the linearity assumption, partial regression plots of independent and dependent variables were evaluated. The partial regression plots were not completely oval-shaped, which is an indication of the linearity assumption (Tabachnick & Fidell, 2019). Homoscedasticity, also known as homogeneity of variance, refers to the variance of the outcome variable that should be consistent at all levels of the predictor variable

(Field, 2005). To test the homoscedasticity assumption, the scatter plot of each dependent variable was examined. In the scatterplots, there was no apparent pattern.

4.3.2.4. Multicollinearity

In order to test the multicollinearity, the correlation between the variables was examined. Although the correlations are significant, none of them are above the critical value of .90, according to Fidel (2005). For this reason, the assumption of multicollinearity was not violated.

Table 4.4.

Bivariate Correlations among Variables

	Number of Interaction Partners	GPA	PTAS
Number of Interaction Partners	-		
GPA	.09	-	
PTAS	.03	.19	-

4.3.3. Results for Structural Equation Model

The aim of the study explores the associations among perceived teacher affective support, number of interaction partners, prior academic achievement, and motivational variables (utility value, intrinsic value, expectancy-related beliefs). Figure 4.1 depicts the

hypothesized relationships among variables. For the aim of clarity and ease of reading, only latent variables were depicted in the displayed figure.
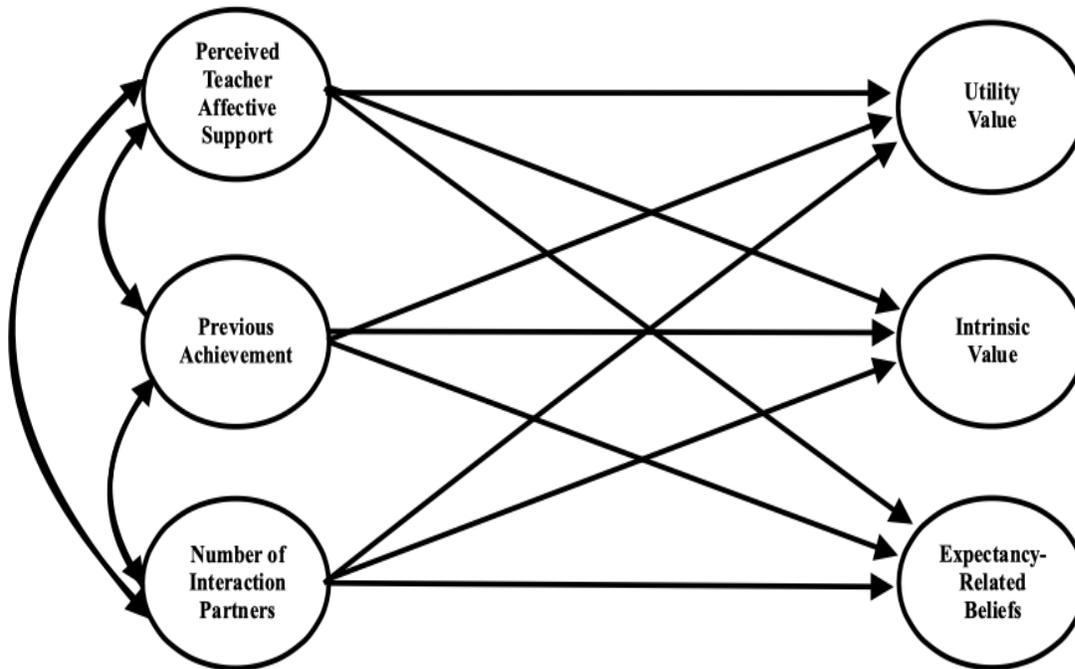
Figure 4.1. Hypothesized Structural Model

The test for the model with a 90% confidence interval demonstrated a significant chi-square value ($\chi2$=833.947, p=.00). The root mean square error of approximation (RMSEA) was found to be .04, and the SRMR value was .05. The comparative fit index (CFI) value was .94 while Tucker-Lewis Index (TLI) value was .93, which indicated a good fit (Hu & Bentler, 1999). Each indicator (item) in the proposed model significantly loaded on their corresponding latent variables with values ranging from .51 to .79 (Table 4.5).

Table 4.5

Standardized Regression Weights for the Structural Model

Dimensions		Parameter	Standardized Estimates
EV1	<---	Expectancy-Related Beliefs	.70
EV4	<---	Expectancy-Related Beliefs	.61
EV7	<---	Expectancy-Related Beliefs	.66
EV8	<---	Expectancy-Related Beliefs	.58
EV11	<---	Expectancy-Related Beliefs	.67
EV12	<---	Expectancy-Related Beliefs	.71
EV16	<---	Expectancy-Related Beliefs	.67
EV2	<---	Intrinsic Value	.67
EV5	<---	Intrinsic Value	.63
EV10	<---	Intrinsic Value	.59
EV14	<---	Intrinsic Value	.58
EV15	<---	Intrinsic Value	.71
EV17	<---	Intrinsic Value	.71
EV3	<---	Utility Value	.57
EV6	<---	Utility Value	.73
EV9	<---	Utility Value	.71
EV13	<---	Utility Value	.79
EV18	<---	Utility Value	.66
PTAS1	<---	Perceived Teacher Affective Support	.62
PTAS2	<---	Perceived Teacher Affective Support	.70
PTAS3	<---	Perceived Teacher Affective Support	.64
PTAS4	<---	Perceived Teacher Affective Support	.79
PTAS5	<---	Perceived Teacher Affective Support	.64
PTAS6	<---	Perceived Teacher Affective Support	.69
PTAS7	<---	Perceived Teacher Affective Support	.77
PTAS8	<---	Perceived Teacher Affective Support	.51
PTAS9	<---	Perceived Teacher Affective Support	.69
PTAS10	<---	Perceived Teacher Affective Support	.57
PTAS11	<---	Perceived Teacher Affective Support	.77
PTAS12	<---	Perceived Teacher Affective Support	.63

Figure 4.2 presents the significant and non-significant paths in the structural model. The standardized coefficients showing direct effects on the motivation variables and the coefficients indicating relationships among exogenous variables (i.e., perceived teacher affective support, prior achievement, and the number of interaction partners) are presented in Table 4.6 and Table 4.7, respectively.
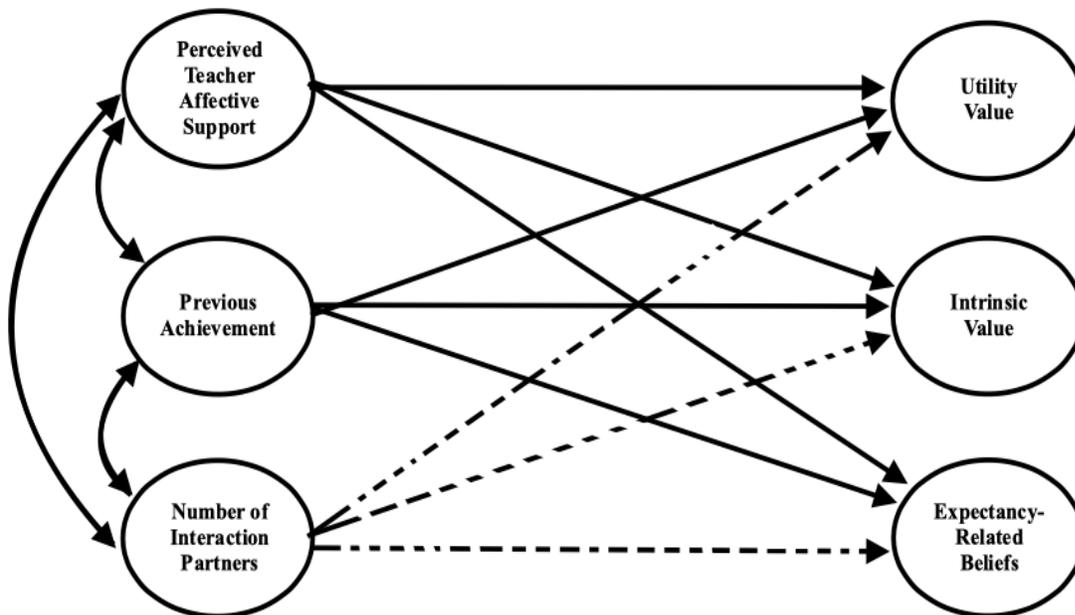

Figure 4.2. The model with significant and non-significant direct paths. Note. Significant paths are denoted by full lines, while non-significant paths are denoted with dashed lines. For the clarity of presentation, only latent variables were depicted in the displayed figure.

Table 4.6

Standardized Direct Coefficients for the Hypothesized Model

	Utility value	Intrinsic value	Expectancy-Related beliefs
Perceived teacher affective support	.58*	.55*	.36*
Prior achievement	.09*	.15*	.55*
Number of interaction partners	-.03	-.01	.04

Note. * $p < .05$

Table 4.7

Relationship among the Exogenous Variables in the Hypothesized Model

	Perceived teacher affective support	Prior achievement	Number of interaction partners
Perceived teacher affective support	1.00	.21*	.03
Prior achievement		1.00	.08
Number of interaction partners			1.00

Note. * $p < .05$

The results show that prior achievement ($\gamma = .55$, $p < .05$) and perceived teacher affective support ($\gamma = .36$, $p < .05$) significantly predicted the expectancy-related beliefs. In line with the expected direction, students with higher prior achievement tend to have higher expectancy-related beliefs. In addition, students who think that they are affectively supported by their teachers tend to have higher expectancy-related beliefs. Moreover, prior achievement ($\gamma = .15$, $p < .05$) and perceived teacher affective support ($\gamma = .55$, p < .05) significantly predicted the intrinsic value. Students who had higher prior achievement also tend to have higher intrinsic values. Furthermore, an increased level of perception of affective support by teachers is associated with higher intrinsic value. However, prior

achievement (γ = .09, p < .05) and perceived teacher affective support (γ = .58, p < .05) significantly predicted the utility value. Students who had a higher performance last semester tend to have higher utility values. While the students' perceived teacher affective support increases, the utility values of the students also increase. On the other hand, none of the motivational variables were found to be significantly related to the number of interaction partners: γ = .04, p > .05 (for the expectancy-related belief), γ = -.01, p > .05 (for the intrinsic value), and (γ = -.03, p > .05 (for the utility value).

Table 4.8. shows the squared multiple correlations (R^2) of the latent variables in the full structural model to explain the percent of the variance explained by the exogenous variables. Accordingly, 51% of the variance in the expectancy-related beliefs, 42% in the intrinsic value, and 33% in the utility value were accounted for by perceived teacher affective support, prior achievement, and the number of interaction partners.

Table 4.8.

Squared Multiple Correlations for the Structural Model

	R^2
Expectancy-related Beliefs	.51
Intrinsic Value	.42
Utility Value	.33

4.4. Homophily in Peer Group Members' Academic Motivation

In this section, the homophily in peer group members, which is the second research question of the study, was tested. First, how groups and group scores were determined is

explained, then descriptive statistics are given, and correlation analysis results are presented.

4.4.1. Descriptive Statistics

As a result of the identification of peer groups, a sample consisting of 389 (181 female, 208 male) students emerged. As a result of the interaction patterns of these students, 97 non-overlapping peer groups emerged. Forty-three of these groups (44.33%) were same-sex girl groups, 47 of them (48.35%) were same-sex boy groups, and 7 of them (7.22%) were mix-gender groups. The size of the peer groups ranged from 3 to 9 members (M=3.97). Boy groups had more members than girl groups. The average number of members of the boy groups was 4.30 (range 3-9), the average member of the girl groups was 3.65 (range 3-7), and the average member of mixed-gender groups was 3.71 (range 3-5).

4.4.2. Bivariate Correlations Among Individual Scores and Group Scores

Univariate normality was checked through the graphical plots of histograms and Q-Q plots, Kolmogorov-Smirnov and Shapiro-Wilk tests, and the values of skewness and kurtosis. Skewness and Kurtosis values are between -3 and +3, which indicates normality in the data. However, Kolmogorov-Smirnov and Shapiro-Wilk tests' results were significant, which indicated non-normality in the data. Finally, the histograms and Q-Q plots were examined. While histograms are mostly positively skewed, Q-Q plots did not show evidence enough for non-normality.

To test for the peer group homophily, the correlations were examined between individuals' motivation scores and peer group members' motivation scores. First of all, correlation was computed for all groups and a significant correlation was found for all motivational variables: expectancy-related beliefs ($r = .36$, $n = 389$, $p < .01$), intrinsic value ($r = .32$, $n = 389$, $p < .01$), utility value ($r = .21$, $n = 389$, $p < .01$) (Table 4.9). Except utility value showing weak-to-moderate relationship, all other variables indicated a strong positive relationship (Cohen, 1988).

Table 4.9.

Correlations between Individual and Group Variables for Peer Groups

	Group Members' Scores		
Variable	Expectancy-related Beliefs	Intrinsic Value	Utility Value
Expectancy-related Beliefs	.36**		
Intrinsic Value		.32**	
Utility Value			.21**

Note. * $p < .05$; ** $p < .01$

Afterwards, correlations were computed separately for girls' groups and boys' groups. Since the number of mixed-gender groups ($n = 7$) are limited, no analysis has been made for them. In the analysis conducted for girls' groups ($n = 162$), a significant correlation was found for each variable: expectancy-related beliefs ($r = .38$, $p < .01$), intrinsic value ($r = .37$, $p < .01$), utility value ($r = .22$, $p < .01$) (Table 4.10). In the correlation of boys' groups ($n = 198$) (Table 4.11), there was a lower correlation was found for expectancy-

related beliefs ($r = .31$, $p < .01$), and intrinsic value ($r = .16$, $p < .05$) compared to female groups. As a result of the analysis made for the utility value, there was no significant correlation between the boys' utility value score and the boys' group members' score ($r = .13$, n.s.).

Table 4.10.

Correlations between Individual and Group Variables for Female Groups

Variable	Expectancy Beliefs	Intrinsic Value	Utility Value
Expectancy-Related Beliefs	.38**		
Intrinsic Value		.37**	
Utility Value			.22**

Note. * $p < .05$; ** $p < .01$

Table 4.11

Correlations between Individual and Group Variables for Male Groups

Variable	Expectancy Beliefs	Intrinsic Value	Utility Value
Expectancy-Related Beliefs	.31**		
Intrinsic Value		.16*	
Utility Value			.13

Note. * $p < .05$; ** $p < .01$

Analysis of all peer groups shows that peer groups were homogeneous in terms of motivational variables. However, when analyzed according to gender, differences emerged. Girl groups were more homogeneous than boy groups in terms of subjective task values. In addition, while expectancy-related beliefs and intrinsic value were homogeneous in boy groups, homophily was not found for the utility value. On the other hand, in girl groups, there was homophily in terms of all variables.

4.5. Summary of Results

The current study mainly concentrated on the factors that influencing achievement motivation. For this purpose, the relationship of motivational variables with the number of interaction partners, prior achievement, and perceived teacher affective support was examined. In addition, it was examined whether there was homophily in the peer groups in terms of motivational variables.

For the first research question, findings of structural equation modeling analysis revealed that students' prior achievement positively predicted expectancy-related beliefs, intrinsic value, and utility value. Also, perceived teacher affective support positively predicted expectancy-related beliefs, intrinsic value, and utility value. However, there was no significant relationship between the number of interaction partners and motivational variables.

For the second research question, firstly, peer groups were determined. Accordingly, a total of 97 groups emerged. Of these, 43 are girl groups, 47 are boy groups, and 7 are mix-

gender groups. Afterward, homophily among group members was analyzed for all groups. It was found that all groups were homogeneous in terms of expectancy-related beliefs, utility value, and intrinsic value. When this analysis was repeated for boys and girls separately, homophily was found in terms of all motivational variables in female groups. In contrast, homophily was not found in male groups in terms of utility value. Moreover, the female groups were more homogeneous than the male groups in terms of motivational variables.

CHAPTER 5

DISCUSSION

This study aimed to answer two main research questions. The first one examines the relationship between the prior achievement, social factors (perceived teacher affective support, number of interaction partners), and academic motivation (expectancy-related beliefs, intrinsic value, and utility value). The second is to examine the homophily among peer group members in terms of motivational variables. The last chapter aims to evaluate the present study's findings compared with the prior findings in the literature. Firstly, the extent to which the study's findings are compatible with the findings in previous studies will be discussed. Secondly, the reflections of the findings of this research on educational practices will be discussed. Finally, considering the contributions of this research, suggestions for further research will be presented.

5.1. Discussion of the Findings

This study aims to shed light on the sources of middle school students' expectancies for success and their subjective task values. For this purpose, variables hypothesized to explain the students' expectancies for success and the subjective task values were tested in a model. Secondly, it examined whether peer groups were homogeneous in terms of motivational variables. In this way, this study would be expending knowledge about the

variables associated with the achievement motivation of middle school students and test whether the current findings are also valid in Turkey context.

First of all, the Expectancy-Value Scale-Middle School, which used the situated expectancy-value theory as a theoretical framework, was developed in order to measure middle school students' motivation. The final scale emerged from the pilot studies using the results of EFA and CFA and further validation evidence. This scale consists of three factors with 18 items: expectancies for success, utility value, and intrinsic value.

Concerning the association between prior achievement and motivational variables, the present study found significant relationships. These findings are consistent with the SEVT model (Wigfield & Eccles, 2020). The past experience reinforces students to re-evaluate and refine their expectancies for success and subjective task values. Students' experiences of mastery and failure in a task influence their competence beliefs and expectancies for success (Wigfield & Cambria, 2010). In terms of subjective task values, students tend to attribute more value to the tasks they are good at (Wigfield et al., 2009). As Harter (2006) suggests, if a person is competent in activities that he/she finds important, his / her self-esteem will be affected positively; otherwise, self-esteem will suffer from this.

In terms of perceived teacher affective support, it was observed that teacher affective support is a significant predictor of achievement motivation. Students who experience higher teacher affective support stated that the lessons at school were more useful for them, and they enjoyed the lessons at school more. Students who experienced more teacher affective support, even though they had a weaker relationship compared to

subjective task values, also had higher expectancies for success. As a result, there are significant relationships between teacher affective support and motivational variables. These findings are consistent with the results of Sakız et al. (2012). They also found a significant relationship between perceived teacher support and academic enjoyment and academic self-efficacy. The findings of this study are also consistent with the research findings in the literature that measure teacher support with different variables and examine its relationship with motivational variables (Rimm-Kaufman et al., 2015; Ryan et al., 1994; Wentzel, 1997; Wentzel et al., 2010).

The students' number of interaction partners was not a significant predictor of students' achievement motivation. While students' lack of friends at school negatively affects their motivation, students who have friends have higher motivation (Buhs & Ladd, 2001; Kindermann & Skinner, 2012; Ladd, 1990). Based on this, it can be deduced that having friends with whom students interact at school is a prerequisite for academic functioning. However, the increase in the number of peers does not predict motivation. Research studies demonstrate that peer relatedness and acceptance positively correlate with students' motivation (Flook et al., 2005; Robnett & Leaper, 2013).Therefore, the quality of the existing relationships seems to be more influential on student motivation than the number of friends or interaction partners.

For the second research question, how homogeneous the groups are in terms of motivational variables and whether there is a difference between genders was examined. Homophily was found among peer group members in terms of academic motivation.

Findings revealed that middle school students' peer group members are similar to each other in terms of expectancy-related beliefs, intrinsic value, and utility values. These findings are consistent with research conducted in other cultures (Chen et al., 2003; Hamm et al., 2013; Kindermann, 1993; 2007). In addition, this finding is consistent with Ryan's (2001) study. She also found that peer groups are homogenous in terms of expectancy-related beliefs, utility value and intrinsic value with American middle school students. However, when she examined the peer group's influences, she found that only the intrinsic value changed with the group. She explained that adults such as teachers and parents can be more effective than their peers in the formation of utility value.

Most of the peer group studies did not analyze homophily according to the gender of the group. However, some researchers claim that male and female groups are two separate worlds (Thorne, 1986) or cultures (Maltz & Borker, 1982). While these approaches are criticized for creating stereotypes, the peer relationships of girls and boys differ in both content and structure (Rose & Smith, 2009). However, in this study, separate analyses were made according to the genders of the groups, and different results were found for male and female groups. The present study suggested that in terms of motivational variables, girls' groups were found to be more homogeneous than boys' groups. There are considerable differences in terms of subjective task values (utility, intrinsic) compared to expectancy-related beliefs. Finally, there was no correlation between the utility values of male students and the utility values of their groups. Although there are studies on homophily among peer group members, especially in Western cultures, these studies mostly did not examine gender differences at the group level. However, Yli-Piipari et al.

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(2011) examined the subjective task values of students in physical education in Finland, and analyzes were repeated according to the gender of the group. They found that while the girl groups were homogeneous in terms of intrinsic value and utility value, boy groups showed lower homogeneity in terms of intrinsic values. In addition, boy groups do not show homogeneity in terms of utility value. In other words, their findings are completely consistent with the findings of this research, even though they have investigated subjective task values for physical education.

A possible reason for this gender difference might be the differentiation of relationships between boys and girls with their peers. While male students in middle childhood mainly participate in competitive activities and sports (Zarbatany et al., 2000), female students mostly spend their time talking to each other (Blatchford et al., 2003). Also, girls in middle childhood and adolescence spend more time talking in person and by telephone (Rafaelli & Duckett, 1989). In addition, when the gender difference is examined in terms of self-disclosure, the findings are generally in favor of girls (Rose & Smith, 2009). When all this is taken into account, the girls' subjective task values may be more similar due to socialization.

5.2. Implications for the Practice

Students' academic motivation is essential as it directly predicts their academic performance and choices. However, with the transition to middle school, a downward trend in the motivation of middle school students begins and this decline continues throughout years (Wigfield et al., 2009). In order to reduce or stop this decline, it is

necessary to know how students' motivation develops and what they are affected by. The findings of this study provided information that can be used to increase students' motivation.

The mastery experiences of the students have a great influence on their saying "I can do this" in the following tasks they encounter (Bandura, 1997). For this reason, teachers should give the necessary support and feedback in order for the students to perform the tasks successfully, and the instruction should be designed to increase the mastery experience of the students (Shaughnessy, 2004). Since teacher affective support has a significant relationship with all the students' motivational variables in this study, it is necessary to organize classrooms and schools where teachers support students. For students' motivation, teachers should increase the quality of their relationships with their students. For quality student-teacher relations, student-teacher closeness is necessary. Also, it is necessary to create relationships in which students can freely express themselves and share their ideas, thoughts, and feelings. Teachers should listen, accept and not judge students. Teachers must treat students in the classroom fairly and have high expectations from each student. As teacher expectations are related to students' academic motivation and achievement, especially the expectations of unfair teachers from students are more influential on student motivation (Brattesani et al., 1984). The feedback provided by the teachers to the students is very influential in the development of the students' subjective task values and expectancies for success (Wigfield et al., 2009). Teachers should not be overly critical, and constructive feedback should be given to support students'

development. In order for teachers to exhibit these behaviors, their awareness of the consequences of their behaviors should be increased through in-service training.

Findings show that peer groups are homogeneous in terms of academic motivation. This shows that peer groups are a unique socialization context in terms of students' academic development. Peer groups are a vital developmental resource for students' academic functioning (Wentzel, 2005). In order to improve peer relations in schools, student-centered and collaborative instruction methods should be used in classroom practices. Peer relationships ensure that students' expectancies for success and subjective task values are socialized and spread to all group members. Sometimes this can be positive or, on the contrary, negative. In this direction, the school administration, teachers, and school counselors should follow and support students' peer relations. Particularly, considering the socialization of subjective task values, students' subjective task values can be increased with the intervention programs to be applied at school, which may trigger an increase in the school-wide.

5.3. Recommendations for the Future Research

This study was carried out at two public middle schools in Istanbul. For this reason, it is impossible to generalize the findings of the study. Further studies are needed to understand whether these findings are valid in other contexts. In particular, there is a need to replicate the study in private middle schools or public schools of different socio-economic levels in other provinces. Apart from this, the study can be replicated with the students at different levels, such as elementary school, high school, or college. It can be further

examined whether the findings differ at different grade levels. In the present study, not enough data were collected to make grade-level comparisons. Future studies can examine academic motivation by grade level.

The variables in this study are not measured as domain-specific. Students' general academic motivations, general academic achievements, and perceived affective support from teachers, in general, were examined. Repeating the study by reconstructing these variables as domain-specific can provide many insights. Also, it can be tested whether there are differences between the domains, and even if there are differences, the reasons can be examined.

In this study, cross-sectional data was used, but further information can be obtained with a longitudinal research design. Longitudinal design can provide more helpful information for both research questions. When we examine the relationship between variables with longitudinal data, the effects of social factors on motivation, in the long run, can be examined. Longitudinal data will also enable us to understand the reasons for homophily in peer groups. Homophily may have arisen because students chose to spend more time with similar students (selection) or because students who spend time with each other resemble each other (socialization). Understanding the origin of homophily will also allow us to understand the difference between different gender groups. Therefore, longitudinal studies are needed starting from the transition to middle school.

In this study, academic motivation was predicted by only three variables, but new models that include more different social and/or academic factors can be tested. Especially since

there is no significant relationship between the interaction partner and motivation, it can be tested by adding variables about the quality of peer relationships to the model. Accordingly variables such as peer acceptance and peer relatedness can be used. In addition, families are as influential socializing agents as peers and teachers in the development of motivation. The relationship between family-specific variables and motivation can also be examined.

Finally, besides quantitative research methods, the relationship between teacher affective support and academic motivation can be examined using qualitative research methods. Especially observations and the interviews conducted with students will help researchers to understand how these interactions influence students' academic motivation. In this way, answers can be found regarding which teacher behaviors affect students' motivation and performance. Also, interviews can be used to understand the relationships of peer group members which can provide an information about formation processes of peer groups and socialization in peer groups.

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APPENDICES

A. APPROVAL LETTER FROM MIDDLE EAST TECHNICAL UNIVERSITY

HUMAN SUBJECTS ETHICS COMMITTEE

ORTA DOĞU TEKNİK ÜNİVERSİTESİ
MIDDLE EAST TECHNICAL UNIVERSITY

Sayı: 28620816 / 29

21 Ocak 2020

Konu: Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Dr.Nur AKKUŞ ÇAKIR

Danışmanlığını yaptığınız **İzzet Utku ÇAYBAŞ**'ın "**Akran Grubunun Ortaokul Öğrencilerinin Akademik Motivasyonunun Gelişimindeki Rolü**" başlıklı araştırması İnsan Araştırmaları Etik Kurulu tarafından uygun görülmüş ve **029-ODTU-2020** protokol numarası ile onaylanmıştır.

Saygılarımızla bilgilerinize sunarız.

Prof.Dr. Mine MISIRLISOY
Başkan

Prof. Dr. Tolga CAN
Üye

Doç.Dr. Pınar KAYGAN
Üye

Dr. Öğr. Üyesi Ali Emre TURGUT
Üye

Dr. Öğr. Üyesi Şerife SEVİNÇ
Üye

Dr. Öğr. Üyesi Müge GÜNDÜZ
Üye

Dr. Öğr. Üyesi Süreyya Özcan KABASAKAL
Üye

B. PERMISSION DOCUMENT FROM ISTANBUL CITY DIRECTORATE

OF NATIONAL EDUCATION

T.C.
İSTANBUL VALİLİĞİ
İl Millî Eğitim Müdürlüğü

Sayı : 59090411-20-E.4429778   28/02/2020
Konu : Anket ve Araştırma İzin Talebi.

VALİLİK MAKAMINA

İlgi: a) Orta Doğu Teknik Üniversitesinin 13.02.2020 tarihli ve 180 sayılı yazısı.
        b) Bakanlığımızın 21.01.2020 tarih ve 1563890/ 2020/2 No'lu genelgesi
        c) Milli Eğitim Müdürlüğü Araştırma ve Anket Komisyonunun 27.02.2020 tarihli
           tutanağı.

Orta Doğu Teknik Üniversitesi Eğitim Bilimleri Enstitüsü yüksek lisans öğrencisi İzzet Utku ÇAYBAŞ'ın **"Akran Grubunun Ortaokul Öğrencilerinin Akademik Motivasyonunun Gelişimindeki Rolü"** konulu tezi kapsamında, ilimiz genelinde bulunan ortaokullarda öğrenim gören öğrencilere; anket uygulama istemi hakkındaki ilgi (a) yazı ve ekleri Müdürlüğümüzce incelenmiştir.

Araştırmacının söz konusu talebi; bilimsel amaç dışında kullanılmaması, uygulama sırasında bir örneği müdürlüğümüzde muhafaza edilen mühürlü ve imzalı veri toplama araçlarının kurumlarımıza araştırmacı tarafından ulaştırılarak uygulanılması, katılımcıların gönüllülük esasına göre seçilmesi, araştırma sonuç raporunun müdürlüğümüzden izin alınmadan kamuoyuyla paylaşılmaması koşuluyla, okul idarelerinin denetim, gözetim ve sorumluluğunda, eğitim-öğretimi aksatmayacak şekilde ilgi (b) Bakanlık emri esasları dâhilinde uygulanması, sonuçtan Müdürlüğümüze rapor halinde (CD formatında) bilgi verilmesi kaydıyla Müdürlüğümüzce uygun görülmektedir.

Makamlarınızca da uygun görülmesi halinde olurlarınıza arz ederim.

Levent YAZICI
İl Milli Eğitim Müdürü

Ek:
1- Genelge.
2- Komisyon Tutanağı.

OLUR
28/02/2020

Dr. Hasan Hüseyin CAN
Vali a.
Vali Yardımcısı

Milli Eğitim Müdürlüğü Binbirdirek M. İmran Öktem Cad.   Bilgi İçin Aydın BALTA VHKİ
No:1 Eski Adliye Binası Sultanahmet Fatih/İstanbul   Tel: (0 212)384 34 00-3628
E-Posta: sgb34@meb.gov.tr

Bu evrak güvenli elektronik imza ile imzalanmıştır. https://evraksorgu.meb.gov.tr adresinden fd94-b50a-3257-9f85-2984 kodu ile teyit edilebilir.

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T.C.
İSTANBUL VALİLİĞİ
İl Milli Eğitim Müdürlüğü

Sayı : 59090411-44-E.4638977   03.03.2020
Konu : Anket Araştırma İzni

ORTA DOĞU TEKNİK ÜNİVERSİTESİ REKTÖRLÜĞÜ'NE

İlgi: a) 13.02.2020 tarihli ve 180 sayılı yazınız.
       b) Valilik Makamının 28.02.2020 tarihli ve 4429778 sayılı oluru.

Üniversiteniz Eğitim Bilimleri Enstitüsü yüksek lisans öğrencisi İzzet Utku ÇAYBAŞ'ın **"Akran Grubunun Ortaokul Öğrencilerinin Akademik Motivasyonunun Gelişimindeki Rolü"** konulu araştırma çalışması hakkındaki ilgi (a) yazınız ilgi (b) valilik onayı ile uygun görülmüştür.

Bilgilerinizi ve araştırmacının söz konusu talebi: bilimsel amaç dışında kullanmaması, **uygulama sırasında bir örneği müdürlüğümüzde muhafaza edilen mühürlü ve imzalı veri toplama araçlarının kurumlarımıza araştırmacı tarafından ulaştırılarak uygulanılması**, katılımcıların gönüllülük esasına göre seçilmesi, araştırma sonuç raporunun müdürlüğümüzden izin alınmadan kamuoyuyla paylaşılmaması koşuluyla, gerekli duyurunun araştırmacı tarafından yapılması, okul idarecilerinin denetim, gözetim ve sorumluluğunda, eğitim-öğretimi aksatmayacak şekilde ilgi (b) Valilik Onayı doğrultusunda uygulanması ve işlem bittikten sonra 30 gün içinde sonuçtan Müdürlüğümüz Strateji Geliştirme Bölümüne rapor halinde bilgi verilmesini arz ederim.

Timur TUĞRAL
İl Milli Eğitim Müdürü a.
Şube Müdürü

EK:
1- Valilik Onayı
2- Ölçekler

C. PARENTAL CONSENT FORM

Veli Onay Formu

Sevgili Anne/Baba,

Bu çalışma Orta Doğu Teknik Üniversitesi yüksek lisans öğrencisi İzzet Utku Çaybaş tarafından Dr. Nur Akkuş Çakır'ın danışmanlığında yürütülmektedir.

Çalışmanın amacı: Çalışmanın amacı, ortaokulda arkadaş gruplarının, öğrencilerin motivasyonlarına olan etkisini incelemektir.

Çocuğunuzun katılımcı olarak ne yapmasını istiyoruz?: Bu amaç doğrultusunda, çocuğunuzdan ders esnasında kendisine verilen anket formundaki soruları cevaplamasını isteyeceğiz ve cevaplarını yazılı biçimde toplayacağız. Sizden çocuğunuzun katılımcı olmasıyla ilgili izin istediğimiz gibi, çalışmaya başlamadan çocuğunuzdan da sözlü olarak katılımıyla ilgili rızası mutlaka alınacaktır.

Çocuğunuzdan alınan bilgiler ne amaçla ve nasıl kullanılacak?: Çocuğunuzdan alacağımız cevaplar tamamen gizli tutulacak ve sadece araştırmacılar tarafından değerlendirilecektir. Elde edilecek bilgiler sadece bilimsel amaçla kullanılacak, çocuğunuzun ya da sizin ismi ve kimlik bilgileriniz, hiçbir şekilde kimseyle paylaşılmayacaktır.

Çocuğunuz ya da siz çalışmayı yarıda kesmek isterseniz ne yapmalısınız?: Katılım sırasında sorulan sorulardan ya da herhangi bir uygulama ile ilgili başka bir nedenden ötürü çocuğunuz kendisini rahatsız hissettiğini belirtirse, ya da kendi belirtmese de araştırmacı çocuğun rahatsız olduğunu öngörürse, çalışmaya sorular tamamlanmadan ve derhal son verilecektir.

Bu çalışmayla ilgili daha fazla bilgi almak isterseniz: Çalışmaya katılımınızın sonrasında, bu çalışmayla ilgili sorularınız yazılı biçimde cevaplandırılacaktır. Çalışma hakkında daha fazla bilgi almak için, Eğitim Programları ve Öğretim Bölümü yüksek lisans öğrencisi İzzet Utku Çaybaş ile (utku.caybas@metu.edu.tr) ya da Eğitim Bilimleri Bölümü öğretim elemanlarından Dr. Nur Akkuş Çakır ile (e-posta: nakkus@metu.edu.tr) iletişim kurabilirsiniz. Bu çalışmaya katılımınız için şimdiden teşekkür ederiz.

Yukarıdaki bilgileri okudum ve çocuğumun bu çalışmada yer almasını onaylıyorum (Lütfen alttaki iki seçenekten birini işaretleyiniz.

Evet onaylıyorum___   *Hayır, onaylamıyorum___*

Annenin adı-soyadı: _____   Bugünün Tarihi:_____

Çocuğun adı soyadı ve doğum tarihi:_____

(Formu doldurup imzaladıktan sonra araştırmacıya ulaştırınız).

D. DATA COLLECTION INSTRUMENT

Değerli öğrenci,

Bu çalışma, ortaokul öğrencilerinin okula ve okuldaki derslere yönelik düşüncelerini belirlemek amacıyla yapılmaktadır. Ankette yer alan sorulara verdiğiniz yanıtlar, kesinlikle **size not vermek** ya da **sizi eleştirmek** amacıyla **kullanılmayacaktır**. Bu soruların herkes için geçerli **doğru yanıtları bulunmamaktadır**. Sonuçlar yalnızca bilimsel araştırma amaçlı kullanılacaktır. Soruları boş bırakmamaya ve sadece tek bir seçenek işaretlemeye özen gösteriniz. Katıldığınız için teşekkür ederiz.

İzzet Utku Çaybaş

ODTÜ Eğitim Bilimleri Bölümü

İletişim: utku.caybas@metu.edu.tr

BÖLÜM I – KİŞİSEL BİLGİLER

Yönerge. *Lütfen size uygun cevabı (X) ile işaretleyiniz.*

1. **Adınız Soyadınız:**

2. **Cinsiyetiniz:**   ( ) Kız
                              ( ) Erkek

3. **Sınıfınız:**

4. **Not Ortalamanız:**

BÖLÜM II – OKUL

Yönerge. *Lütfen her birini dikkatli bir şekilde okuyup sizin durumunuzu yansıtan seçeneği (X) ile işaretleyerek belirtiniz. Lütfen soruların tümünü cevaplayınız.*

	Hiç	Biraz katılmıyorum	Ne katılıyorum,	Biraz katılıyorum	Tamamen katılıyorum
1. Okuldaki derslerimde iyiyimdir.	( )	( )	( )	( )	( )
5. Derslere aktif katılmaktan hoşlanırım.	( )	( )	( )	( )	( )
8. Bu dönem sonunda okulda başarılı olacağımı düşünüyorum.	( )	( )	( )	( )	( )
12. Derslerde anlatılanları kavrayabilirim.	( )	( )	( )	( )	( )
14. Derslerde anlatılan konulardan fazlasını öğrenmek isterim.	( )	( )	( )	( )	( )
15. Derste yeni bir konu öğrenmek benim için önemlidir.	( )	( )	( )	( )	( )
18. Okulda öğrendiklerim gerçek hayatta da işime yarar.	( )	( )	( )	( )	( )

BÖLÜM III - ÖĞRETMEN

	Hiç Doğru Değil	Doğru Değil	Biraz Doğru	Doğru	Tamamen Doğru
2. Öğretmenlerim düşünce ve fikirlerime değer verir.	1	2	3	4	5
3. Öğretmenlerim söyleyecek bir şeyim olduğunda beni dinler.	1	2	3	4	5
5. Öğretmenlerim hiçbir ayrıcalık göstermeksizin diğer öğrencilerine olduğu gibi bana da adaletli ve dürüst davranır.	1	2	3	4	5
11. Öğretmenlerim bana karşı sevgi doludur.	1	2	3	4	5

BÖLÜM IV – SINIF ARKADAŞ HARİTASI

Her sınıfta birbirleriyle daha sık vakit geçiren öğrenciler bulunur ve bu öğrenciler arkadaş grubu olarak adlandırılır. Bu çalışmanın amacı da sınıfınızdaki arkadaş gruplarını belirlemektir. Buradan elde edilecek kişisel bilgiler araştırmacı dışında kimse tarafından bilinmeyecektir ve sonuçlar sadece bilimsel amaçla kullanılacaktır.

Uygulamanın bu bölümünde sizden beklenilenler sınıfınızda **hangi öğrencilerin birbirleriyle daha fazla vakit geçirdiğini düşünerek arkadaş grubu listelerini oluşturmanız** ve o grubun üyelerinin isimlerini yazmanızdır.

Aklınıza takılan bir şey olursa danışmaktan çekinmeyiniz.

KATKILARINIZ İÇİN TEŞEKKÜR EDERİZ.

☺

- **Bir grup sadece iki kişiden bile oluşabilir.**
- **Bulunduğunuz sınıfın öğrencisi olmayan kişileri yazmayınız.**
- **Yazacağınız kişilerin soyadlarını da yazınız.**
- **Kendinizi yazmayı unutmayınız.**
- **Hatırlayabildiğiniz kadar kişi yazınız.**
- **Sınıftaki herkesi yazmak zorunda değilsiniz.**

ÖRNEK	GRUP 1	GRUP 2	GRUP 3
Harry Potter			
Ron Weasley			
Hermione Granger			

GRUP 4	GRUP 5	GRUP 6	GRUP 7

E. TURKISH SUMMARY / TÜRKÇE ÖZET

ORTAOKUL ÖĞRENCİLERİNİN AKADEMİK MOTİVASYONU: ALGILANAN ÖĞRETMEN DUYGUSAL DESTEĞİ, ETKİLEŞİM PARTNERİ SAYISI, ÖNCEKİ BAŞARI VE HOMOFİLİ

Giriş

Araştırmanın Amacı ve Önemi

Bu araştırma iki temel amaca sahiptir. İlk olarak ortaokul öğrencilerinin başarı motivasyonlarının algılanan öğretmen duyuşsal desteği, etkileşim içinde bulundukları akran sayısı ve geçmiş akademik performansları ile olan ilişkisini incelemeyi amaçlamıştır. İkinci amacı ise ortaokul öğrencilerinin akran gruplarının başarı motivasyonu açısından homojen olup olmadığını incelemeyi hedeflemiştir.

Pintrich'e (2003) göre motivasyon dört temel eğitsel çıktıyla doğrudan ilişkilidir. İlk olarak, öğrencinin hangi tür aktiviteleri yapmayı seçtiği öğrencilerin motivasyonuyla ilişkilidir. İkinci olarak, öğrencinin motivasyonu seçtiği aktiviteye ne kadar katılım sağladığı ile ilişkilidir. Üçüncü olarak, öğrencinin o görevi gerçekleştirme esnasında karşılaştığı zorluklara karşı gösterdiği direnç ve ısrarıyla ilişkilidir. Son olarak da motivasyon, öğrencinin akademik performansıyla; bir başka ifadeyle, akademik başarısıyla ilişkilidir.

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Akademik bağlamda motivasyon "öğrencinin bir göreve harcadığı enerji, hangi görevleri yapacağını belirleyen inanç, hedef ve değerler, bu görevleri başarmadaki ısrarları ve görevin hangi koşullarda başarıyla tamamlanmış olacağını belirten standartlar" olarak tanımlanabilir (Wentzel ve Wigfield, 2006, s.1). Bu geniş tanımdan da anlaşılacağı üzere motivasyon, kompleks yapılardan oluşmaktadır ve bu nedenle motivasyonu farklı perspektiflerden açıklayan çok çeşitli teoriler vardır. Eccles vd. (1998), motivasyon teorilerini üç temel motivasyonel soru altında kategorize etmiştir. Bu sorular; "Bu görevi yapabilir miyim?", "Bu görevi yapmak istiyor muyum ve neden?", "Bu görevde başarılı olmak için neler yapmalıyım?". Bu ilk iki soru doğrudan motivasyonel süreçlerle ilişkiliyken, üçüncü soru ise daha çok özdüzenleme süreçleriyle ilişkilidir.

Bu araştırmada Durumlu Beklenti ve Değer Teorisi'nden (Eccles ve Wigfield, 2020), iki temel motivasyonel soruyu da inceleyen kapsamlı bir teorik çerçeve sunduğu için yararlanılmıştır (Wigfield ve Eccles, 2002). Beklenti ve Değer Teorisi, öğrencilerin kariyer seçimlerindeki cinsiyet farklılıklarını incelemek için geliştirilmiştir (Eccles vd., 1983). Teori, motivasyonu iki temel değişken üzerinden incelemektedir; bunlar başarıya dair beklentiler ve öznel görev değerleridir (Eccles vd., 1983). Başarıya dair beklentiler "çocukların karşılaştıkları görevi ne kadar iyi yapacaklarına dair inançlarıdır" (Wigfield, 1994, s.52). Değerlerin literatürde farklı tanımları olsa da başarı motivasyonu literatüründe değerler "bir görevin kişinin farklı ihtiyaçlarını nasıl karşıladığı" olarak tanımlanır. Eccles vd. (1983) öznel görev değerlerini dört ayrı yapı altında incelemiştir. Bunlar; kazanma değeri, içsel değer, fayda değeri ve bedeldir. Kazanma değeri bir görevi iyi yapmaya verilen önem olarak tanımlanır. İçsel değer, bireyin yaptığı işi yapmaktan ne

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kadar hoşlandığı veya görevin ilgili olduğu alanı ne kadar sevdiğidir. Fayda değeri, görevin bireyin gelecekteki hedefleriyle nasıl ilişkili olduğudur. Son olarak maliyet ise, bir kişinin bir görevi yerine getirmek için nelerden vazgeçtiği veya bu görevi gerçekleştirmek için sarf etmesi gereken çaba olarak tanımlanmaktadır (Wigfield ve Eccles, 1992).

Önceki araştırmalar, modeldeki her iki yapının da farklı eğitsel çıktıları tahmin etmede etkili olduğuna işaret etmektedir. Öğrencilerin başarı beklentileri, akademik performanslarının en güçlü yordayıcısı iken (Wigfield vd., 2009; Bong vd., 2002), öğrencilerin öznel görev değerleri, akademik seçimlerinin en güçlü yordayıcısıdır (Rosenzweig vd., 2019).

Wigfield vd. (2006), başarma motivasyonunun gelişimi üzerindeki bağlamsal faktörleri motivasyonun sosyalleşmesi başlığı altında incelemiş ve öğrencilerin motivasyonlarının gelişiminin aileleri, akranları ve öğretmenlerinden etkilendiğini bildirmiştir. Ebeveyn faktörleri, ailenin demografik özellikleri, genel çocuk yetiştirme iklimi ve ebeveynlerin genel inançları, ebeveynlerin çocuğa özgü inançları olarak tanımlanmaktadır (Wigfield vd., 2015). Ayrıca, öğrencilerin motivasyonları, akran kabulü, arkadaş edinme ve akran gruplarına üyelik yoluyla akran ilişkileri ile ilişkilidir (Wentzel ve Muenks, 2016). Son olarak, öğrencilerin akademik motivasyonu, öğretmenlerin genel inançlarından ve öğretmenleriyle olan ilişkilerinden etkilenir (Wigfield vd., 2006). Bunun birlikte öğrencilerin geçmiş performansları da öğrencilerin motivasyonlarıyla ilişkildir.

Öğrenciler başarılı oldukları alanlarda, sonrasında başarılı olacaklarını düşünmekle beraber, daha fazla değer atfetme eğilimindedir (Wigfield vd., 2009).

Durumlu Beklenti ve Değer modeli (Eccles & Wigfield, 2020), yapısı itibariyle motivasyon gelişimini anlamak için kapsamlı bir çerçeve sağlamaktadır. Ancak bireylerin gelişimine ilişkin araştırma bulguları genellikle Batı kültüründe gerçekleştirilmekte, ve tüm dünyaya genellenmektedir. Bu nedenle farklı kültürlerde yürütülen araştırmalara ihtiyaç duyulmaktadır (Arnett, 2008). Bundan dolayı bu araştırma, Durumlu Beklenti-Değer Teorisini Türkiye kültüründe test etmekle birlikte, iki temel araştırma sorusunu incelemeyi hedeflemektedir. İlk olarak, bu çalışma, etkileşim partnerlerinin sayısı, algılanan duyuşsal öğretmen desteği, önceki akademik başarı ve motivasyonel değişkenler (beklenti ile ilgili inançlar, fayda değeri ve içsel değer) arasındaki ilişkiyi incelemeyi amaçlamaktadır. İkinci olarak ise, akran grubu üyelerinin akademik motivasyonları arasındaki homofiliyi incelemektir.

Araştırma Soruları

1. Etkileşim partnerlerinin sayısı, algılanan öğretmen duyuşsal desteği, önceki akademik başarı ve akademik motivasyon arasındaki ilişkiler nelerdir?

   a. Önceki akademik başarı, motivasyonel değişkenleri (beklenti ile ilgili inançlar, fayda değeri ve içsel değer) yordamakta mıdır?

   b. Algılanan öğretmen duyuşsal desteği, motivasyonel değişkenleri (beklenti ile ilgili inançlar, fayda değeri ve içsel değer) yordamakta mıdır?

c. Etkileşim partnerlerinin sayısı, motivasyonel değişkenleri (beklenti ile ilgili inançlar, fayda değeri ve içsel değer) yordamakta mıdır?

2. Akran grubu üyeleri arasında akademik motivasyon açısından homofili (homophily) var mıdır?

a. Erkek akran gruplarının üyeleri arasında akademik motivasyon açısından homofili var mıdır?

b. Kız akran gruplarının üyeleri arasında akademik motivasyon açısından homofili var mıdır?

Literatür Taraması

Başarı performansını ve tercihleri açıklayan Beklenti-Değer Teorisi, Eccles ve arkadaşları (1983) tarafından ortaya atılmakla birlikte aslında bu teori, Atkinson (1957) tarafından geliştirilen beklenti-değer modelini genişletmiştir. Eccles ve Wigfield (2020), modelde yer alan yapıları daha detaylı bir şekilde tanımlamış ve bu yapıların belirleyicilerini belirlemiş ve teoriyi okullar gibi gerçek dünya başarı durumlarında test etmiştir (Wigfield vd., 2009). Ecless vd. (1983) başlangıçta bu teoriyi, erken ergenlerin ve ergenlerin matematikteki seçimleri ve başarılarındaki cinsiyet farklılıklarını incelemek için geliştirmiştir. Beklentilerin, değerlerin ve bunların belirleyicilerinin öğrencilerin akademik seçimlerini, akademik görevleri başarmada ısrarı ve akademik başarıyı nasıl etkilediğini incelemişlerdir. Daha sonra bu teori, başta spor ve fiziksel aktiviteler olmak üzere diğer başarı alanlarında da kullanılmıştır (Wigfield vd, 2009). Beklenti Değer

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Teorisi, öğrencilerin kendilerini nasıl gördüklerini, insanların onları nasıl değerlendirdiğini ve eğitim ortamlarının eğitim isteklerini, seçimlerini ve nihayetinde başarılarını nasıl etkilediğini anlamak için bir çerçeve sağlamaktadır (Rosenzweig, Wigfield ve Eccles, 2019).

Modelin en önemli iki yapısı beklenti ile ilgili inançlar ve öznel görev değerleridir. Beklenti ile ilgili inançlar, başarı beklentileri ve yeterlik inançları ya da akademik benlik kavramları olmak üzere iki ana kavramın birleştirilmesiyle oluşmuştur. Başarı beklentileri ve yetkinlik inançları literatürde teorik olarak ayrı ayrı tanımlanır, ancak ampirik olarak farklılık göstermezler (Eccles vd., 1993). Öznel görev değerleri ise kazanma değeri, içsel değer, fayda değeri ve bedel olmak üzere dört alt alandan oluşmaktadır (Eccles vd., 1983).

Öznel görev değerlerinin ve de beklenti ile ilgili inançların ölçümünde literatürde pek çok ölçek bulunmaktadır (Eccles vd., 1983; Eccles vd., 1993; Wigfield ve Eccles, 2000; Wigfield vd., 1997). Beklenti ile ilgili inançlar noktasında ise, literatürde farklı teorik çerçevelerden, farklı ölçeklerin de zaman zaman kullanıldığı görülmektedir (Muenks vd., 2018). Örneğin Bandura'nın (2006) çerçeve sunduğu özyeterlik ölçekleri, Harter'ın Benlik Algısı Ölçeği (1982;1988), Marsh'ın Akademik Benlik Algısı öçekleri (Marsh vd., 1984) de yaygın olarak kullanılmaktadır. Aralarında kavramsal ve teorik ayrımlar bulunmakla birlikte başarı beklentileri, akademik benlik algısı, özyeterlik inancı ampirik çalışmalarda birbiriyle çakışan sonuçlar vermektedir (Eccles ve Wigfield, 2020). Türkiye'de de çeşitli alan spesifik ölçekler adapte edilmiş ya da geliştirilmiştir (Koksal ve Yaman, 2013; Akın vd., 2016). Ancak bu ölçekler spesifik akademik alanlara yönelik

olduğu ve bazı ölçeklerin de Beklenti ve Değer teorisi ile uyumlu faktör yapıları olmadığı (Sarıtepeci, 2016; 2019) için bu çalışmada kullanılmamıştır.

Durumlu Beklenti-Değer Modeli'ne göre öznel görev değerleri ve beklenti ile ilgili inançlar kişilerin seçimlerini ve performanslarını belirlemektedir (Eccles ve Wigfield, 2020). Ancak bu iki değişken eğitsel çıktıları aynı şekilde yordamamaktadır; beklenti ile ilgili inançlar performansın daha güçlü yordayıcısı iken, öznel görev değerleri ise seçimler üstünde daha etkilidir. Ancak iki değişken de birbirlerini etkilemeleri suretiyle eğitsel çıktıların hepsine doğrudan ve dolaylı olarak etki etmektedir (Wigfield vd., 2017). Modele göre öğrencilerin geçmiş performanslarına dair değerlendirmeleri beklenti ile ilgili inançlarını ve öznel görev değerlerini etkilemektedir (Eccles ve Wigfield, 2020). Öğrenciler bir alanda başarı deneyimlediyse o alanda karşılaşacakları sonraki görevlerinde de başarılı olacaklarını düşünme eğilimindedirler ve öğrenciler bir alanda başarılı olduklarında oraya daha fazla değer atfetmektedirler (Wigfield vd., 2009).

Durumlu Beklenti-Değer Modeli'ne göre öğrencilerin sosyalleştiği kişilerin inanç ve davranışları öğrencilerin beklenti ile ilgili inançlarını etkilemektedir. Özellikle öğretmenler, öğrencilerin beklenti ile ilgili inançlarını öğretim uygulamaları ve öğrencilerden beklentileri etkilemektedir (Muenks vd., 2018). Öğretmenlerin beklentilerinin beklenti ile ilgili inançlarla olan ilişkisini, yapılan araştırmalar da (Madon vd., 2001; Ding ve Rubie-Davies, 2019; Pesu vd., 2016) göstermektedir. Ayrıca öğretmen davranışları, örneğin öğrenciye verilen geri bildirimler (Chen vd., 2011) ve öğretmen

duyuşsal desteği (Jensen vd., 2018) öğrencilerin beklenti ile ilgili inançlarıyla ilişkili bulunmuştur.

Öğretmen davranışları, beklenti ile ilgili inançlarda olduğu gibi, öznel görev değerleriyle de ilişkilidir. Öğretmenlerin olumsuz geri bildirimleri, öğrencilerin derslere olan ilgisiyle negatif ilişkiye sahipken, öğretmen motivasyonu, öğrencilerin ilgileriyle pozitif ilişkiye sahiptir (Wentzel, 2002). Frenzel vd. (2010) öğrencilerin matematik ilgilerinde ilerleyen yaşla birlikte düşüş olduğunu, ancak bu düşüşün öğretmen etkisiyle açıklanamadığını ama öğretmen hevesiyle öğrencilerin matematik ilgileri arasında pozitif bir ilişki olduğunu bulmuştur. Fayda değeri açısından yapılan araştırmalar ise, öğretmenlerin fen bilimleri içeriklerini günlük hayatla bağdaştıran ifadelerinin, öğrencilerin fen bilimleri dersine yönelik fayda değerini arttırdığını (Schmidt, 2019), öğretmen desteğinin de öğrencilerin fayda değeri ile pozitif ilişkiye sahip olduğunu (Tas vd., 2019) göstermektedir. Algılanan öğretmen duyuşsal desteği ölçeğinin çeşitli motivasyonel değişkenlerle ilişkileri incelenmiştir (Sakız vd., 2012; Sakız, 2012; 2015; 2017), ancak Durumlu Beklenti-Değer Teorisi çerçevesindeki değişkenlerle olan ilişkisi incelenmemiştir.

Çocukların yaşadıkları deneyimler onların gelişiminde önemli bir role sahiptir (Rogoff, Dahl ve Callanan, 2018). Akran ilişkileri ve motivasyon literatürüne bakıldığında araştırmacıların, akranların, çocukların başarı motivasyonunun gelişimi için güçlü bir sosyalleşme aracıları olduğu görülmektedir (Kindermann, 1993; 2007; Ladd, Herald-Brown ve Kochel, 2009; Ryan, 2001). Öğrencilerin arkadaşlarının olması onların yüksek sınav sonuçları (Berndt ve Keefe, 1995) ve motivasyonlarıyla (Berndt ve Keefe, 1995;

Wentzel vd., 2004) ilişkili bulunmuştur. Çocuklar okullarda akranlarıyla etkileşim içerisindedir ancak her etkileşim kurduğu kişi o öğrencinin arkadaşı değildir, çünkü arkadaşlık karşılıklı duygular da gerektirmektedir (Kindermann, 2016). Öğrencilerin etkileşim partnerleri kavramı Sosyal Bilişsel Haritalama yöntemi ile literatüre girmiştir (Cairns vd., 1985). Bu yöntemle öğrencilerin okulda etkileşimde oldukları kişiler belirlenmeklte ve bu doğrultuda aktif etkileşim halinde olan öğrencilerden akran grupları oluşturulmaktadır. Bu yöntemle akran grupları ve de izole yani hiç etkileşimi olmayan çocuklara dair motivasyonel araştırmalar bulunmaktadır (Kindermann, 1996; 2007; Norwalk, 2013). Ancak etkileşimde oldukları akran sayıları ile motivasyonlarının ilişkileri incelenmemiştir.

Sosyal Bilişsel Haritalama yaklaşımına göre akran grupları gruptaki her öğrenciye "okulda hangi öğrenciler bir arada vakit geçirmektedir" sorusu sorularak öğrencilerin olabildiğince çok grup listelemeleri istenir ve gelen cevaplar doğrultusunda da sınıfın ya da okulun akran grubu haritası oluşturulur (Kindermann ve Gest, 2009). Yapılan araştırmalarda akran gruplarının aktif katılımlarının öğrencilerin aktif katılımlarını pozitif olarak yordadığı bulunmuştur (Kindermann, 1993; 2007). Akran gruplarını belirlemede arkadaş gruplarını kullanan bir diğer araştırmada ise Ryan (2001), öğrencilerin içsel değerlerinin akran gruplarının içsel değerleri tarafından yordandığını bulmuştur. Bunlarla birlikte akran grubu araştırmalarında homofili de sık incelenmiştir. Homofili akran gruplarının üyelerinin belirli özellikler açısından birbirlerine ne kadar benzediğini, yani grupların ne kadar homojen olduğunu işaret etmektedir. Motivasyonel ve akademik performans değişkenleri açısından gruplarda homofili olup olmadığını inceleyen

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çalışmalarda akran grupları aktif katılım (Kindermann, 1993; 2007), akademik performans (Chen vd., 2003), akademik yeterlik (Estell vd., 2002) ve öznel görev değerleri (Ryan, 2001) açısından homojen bulunmuştur. Ancak Türkiye'de ne akran gruplarında homofiliyi inceleyen ne de Sosyal Bilişsel Haritalama yöntemini kullanan araştırmalar gerçekleştirilmiştir.

Yöntem

Desen

Bu araştırma korelasyonal desen olarak planlanmıştır. Veriler İstanbul'da bulunan iki devlet okulunda öğrenim gören beşinci, altıncı, yedinci ve sekizinci sınıf öğrencilerinden toplanmıştır.

Örneklem

Bu araştırmanın hedef evreni, İstanbul'daki devlet okullarında öğrenim gören ortaokul öğrencileridir. Bu doğrultuda İstanbul'da iki devlet ortaokulundan toplamda 702 ortaokul öğrencisi bu çalışmada yer almıştır. Katılımcıların 330'u kız öğrencilerden (%47), 372'si ise erkek öğrencilerden (%53) oluşmaktadır. Bunun yanı sıra, katılımcıların 137'si beşinci sınıf öğrencisi (%20), 168'i altıncı sınıf öğrencisi (%.24), 163'ü yedinci sınıf öğrencisi (%23) ve 234'ü sekizinci sınıf öğrencisidir (%33) .

Veri Toplama Araçları

Veriler, 4 bölümlü bir form kullanılarak öğrencilerden toplanmıştır. İlk bölüm, öğrencilerin kişisel bilgilerinden oluşmaktadır. İkinci bölümde, bu tez kapsamında geliştirilen Beklenti-Değer Ölçeği, üçüncü bölümde Algılanan Öğretmen Duyuşsal Desteği, son bölümde ise akran gruplarını belirlemek için Sosyal Bilişsel Haritalama Anket formu kullanılmıştır.

Kişisel bilgiler bölümü öğrencilerin adı soyadı, sınıfı, okulu, cinsiyeti ve bir önceki dönem karne ortalaması sorularından oluşmaktadır. Beklenti Değer Ölçeği ise bu tez kapsamında Durumlu Beklenti-Değer Teorisi çerçevesinde geliştirilmiştir ve dört yapıdan oluşması hedeflenmiştir. Bu yapılar; beklenti ile ilgili inançlar, kazanım değeri, fayda değeri ve içsel değerden oluşmaktadır. Ancak kazanım değeri maddeleri ayrı bir faktör yapısı oluşturmamış ve içsel değer ile fayda değeri yapılarına yüklenmiştir. Batıda yapılan araştırmalar gelişimsel açıdan önce içsel değerin ortaya çıktığını sonrasında da diğer yapıların onu takip ettiğini göstermektedir (Wigfield, vd. 2009). Bu faktör yapısı ayrışmadığı için de ölçekten kazanım değeri maddeleri çıkarılmıştır. Ardından ikinci pilot çalışma gerçekleştirilmiştir. Bu çalışma sonucu doğrulayıcı faktör analizi yapıldığında, üç faktörlü yapı doğrulanmıştır. Ölçek için bulunan Cronbach Alpha güvenirlik katsayısı ise beklenti ile ilgili inançlar için .88, fayda değeri için .82 içsel değer için ise .88 olarak bulunmuştur.

Algılanan Duyuşsal Öğretmen Desteği için yapılan pilot çalışmada da tek faktörlü ölçek yapısını test etmek için doğrulayıcı faktör analizi yapılmıştır. Analiz sonuçları tek faktörlü

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yapıyı doğrularken, ölçeğin Cronbach Alpha güvenirlik katsayısı ise .93 olarak bulunmuştur. Sosyal Bilişsel Haritalama Anket Formu da Kindermann'ın (2007) yaptığı araştırmasındaki haliyle Türkçe'ye çevrilmiştir. 50 öğrencinin katılımıyla pilot çalışma gerçekleştirilmiştir ve uygulama esnasında karşılaşılan zorluklar doğrultusunda anket formu yeniden düzenlenmiştir.

Veri Toplama Süreci

Araştırma öncesinde ODTÜ İnsan Araştırmaları Etik Kurulu'ndan ve Milli Eğitim Bakanlığı'ndan gerekli izinler alınmıştır. Ardından pilot çalışmalar Beklenti-Değer Ölçeği için 360 öğrenci ile Algılnan Duyuşsal Öğretmen Desteği Ölçeği için 342 öğrenciyle, Sosyal Bilişsel Haritalama Anket Formu için de 53 öğrenciyle pilot çalışma gerçekleştirilmiştir. Ana çalışmanın verisi verisi ise 2019-2020 eğitim öğretim yılının bahar döneminin başında sınıflarındaki öğrencilerden elde edilmiştir. Uygulama öncesinde öğrencilerin ebeveynlerine onam formu iletilmiş ve araştırmaya sadece veli onayı alınan öğrenciler katılmıştır. Uygulama esnasında araştırmacıya okul psikolojik danışmanı da eşlik etmiştir. Burada da öğrencilere çalışmaya katılımın gönüllülük esasına dayandığı ve istemedikleri takdirde bırakabilecekleri ya da anketleri hiç doldurmayabilecekleri bilgisi verilmiştir. Her bir sınıfta ölçeklerin doldurulması toplam 30 dakika sürmüştür.

Veri Analizi

Veri analizi için ihtiyaç doğrultusunda üç farklı yazılım kullanılmıştır. Bunlar; IBM SPSS 25, NETJAWS 7.7 ve Mplus'tır. Öncelikli olarak kayıp veriler incelenmiştir. 15 öğrenci geçtiğimiz dönem karne notlarını paylaşmadığı ve iki öğrenci de PTAS anket formunu doldurmadığı için çalışmadan çıkarılmıştır. Ölçek geliştirme aşamasında SPSS aracılığıyla açımlayıcı faktör analizi ve de güvenirlik katsayıları hesaplanmıştır. Mplus ile de Doğrulayıcı Faktör Analizi ve de Yapısal Eşitlik Modeli analizi gerçekleştirilmiştir. Akran gruplarını belirlemek için NETJAWS 7.7 kullanılırken, akran grubu üyeleri arasındaki homofiliyi incelemek için de SPSS ile korelasyon analizi yapılmıştır.

Araştırmanın Sınırlılıkları

Araştırmanın çeşitli sınırlılıkları bulunmaktadır. Bunlardan birincisi, araştırma kapsamında kullanılan ölçeklerin hiç birisi belli bir alana özgü ölçekler değildir. Öğrencilerin genel okul motivasyonu ve algıladıkları genel öğretmen duyuşsal desteği verisi toplanmıştır. İkinci olarak, öğrencilerin geçmiş performansları için öğrencilere geçtiğimiz dönem aldıkları karne notu sorulmuştur. Öğrencilerin karne notları, okullarındaki öğretmenleri tarafından verildiği için bu araştırmanın bir diğer sınırlılığıdır. Üçüncüsü, araştırma kesitsel ve korelasyonel bir araştırma olduğu için sonuçlar herhangi bir neden-sonuç ilişkisini göstermemektedir. Son olarak da araştırmanın katılımcıları, iki orta seviye devlet okulundan seçilmiştir ve bu nedenle araştırmanın bulguları başka okullara, düzeylere ve şehirlere genellenemez.

Bulgular

Bu çalışma temel olarak başarı motivasyonunu etkileyen faktörlere odaklanmıştır. Bu amaçla, motivasyonel değişkenlerin etkileşim partneri sayısı, önceki başarı ve algılanan öğretmen duyuşsal desteği ile ilişkisi incelenmiştir. Ayrıca motivasyonel değişkenler açısından akran gruplarında homofili olup olmadığı incelenmiştir.

İlk olarak Beklenti-Değer Ölçeği için doğrulayıcı faktör analizi yapılmış ve 3 faktörlü yapı doğrulanmıştır. Her bir bileşen için Cronbach alpha katsayıları, .81 ile .83 arasında değişmekte olup, oldukça yüksek olduklarını göstermektedir. Daha sonra Algılanan Duyuşsal Öğretmen Desteği Ölçeği (PTAS) için doğrulayıcı faktör analizi yapılmıştır. PTAS'ın tek boyutlu yapısı doğrulanmıştır. Ayrıca, Cronbach alpha ile tahmin edilen iç tutarlılık .91'dir.

İlk araştırma sorusu için önerilen yapısal eşitlik modeli ile değişkenler arası ilişkiler incelenmiştir. Öğrencilerin önceki başarıları, beklentiyle ilgili inançları, içsel değerleri ve fayda değerlerini olumlu bir şekilde yordamıştır. Ayrıca algılanan öğretmen duyuşsal desteği, beklentiyle ilgili inançları, içsel değeri ve fayda değerini olumlu bir şekilde öngörmüştür. Ancak, etkileşim partnerlerinin sayısı ile motivasyonel değişkenler arasında anlamlı bir ilişki bulunamamıştır.

İkinci araştırma sorusu için öncelikle akran grupları belirlenmiştir. Buna göre toplam 97 grup ortaya çıkarken bunlardan 43'ü kadın, 47'si erkek ve 7'si karma cinsiyet gruplarıdır. Daha sonra grup üyeleri arasındaki homofili tüm gruplar için analiz edildiğinde beklenti

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ile ilgili inançlar, fayda değeri ve içsel değer açısından tüm grupların homojen olduğu bulunmuştur. Bu analiz cinsiyet için tekrarlandığında, kadın gruplarında tüm motivasyonel değişkenler açısından homofili bulunurken, erkek gruplarında fayda değeri açısından homofili bulunmamıştır. Ayrıca motivasyonel değişkenler açısından kadın grupları, erkek gruplara göre daha homojendir.

Sonuç ve Öneriler

Bu çalışma, ortaokul öğrencilerinin başarı beklentilerinin kaynaklarına ve öznel görev değerlerine ışık tutmayı amaçlamaktadır. Bu amaçla öğrencilerin beklenti ile ilgili inançlar ve öznel görev değerlerini açıklaması öngörülen değişkenler bir modelde test edilmiştir. İkinci olarak, motivasyonel değişkenler açısından akran gruplarının homojen olup olmadığı incelenmiştir. Bu şekilde, bu çalışma ortaokul öğrencilerinin başarı motivasyonu ile ilişkili değişkenler hakkında literatürde var olan bilgi birikimine sağlamış ve mevcut bulguların Türkiye bağlamında da geçerli olup olmadığını test etmiştir.

Önceki başarı ve motivasyonel değişkenler arasındaki ilişki göz önüne alındığında, bu çalışma önemli ilişkiler olduğunu ortaya çıkarmıştır. Bu bulgular, Beklenti-Değer modeli (2020) ile uyumludur. Geçmiş deneyimler, öğrencilerin beklenti ile ilgili inançlarını ve öznel görev değerlerini yeniden değerlendirmeye ve düzenlemeye yönlendirir. Öğrencilerin bir görevdeki başarı ve başarısızlık deneyimleri, akademik yeterlik inançlarını ve başarı beklentilerini etkiler (Wigfield ve Cambria, 2010). Öznel görev değerleri açısından, öğrenciler başarılı oldukları görevlere daha fazla değer atfetme eğilimindedir (Wigfield ve diğerleri, 2009). Harter'ın (2006) öne sürdüğü gibi, bir kişi

önemli bulduğu faaliyetlerde yetkin ise, benlik saygısı olumlu yönde etkilenecektir; aksi takdirde, benlik saygısı bundan zarar görecektir.

Algılanan öğretmen duyuşsal desteğinin de başarı motivasyonunun anlamlı bir yordayıcısı olduğu görülmüştür. Öğretmen duyuşsal desteği yüksek olan öğrenciler, okuldaki derslerin kendileri için daha faydalı olduğunu ve okuldaki derslerden daha çok keyif aldıklarını belirtmişlerdir. Daha fazla öğretmen duyuşsal desteği algılayan öğrencilerin ayrıca beklenti ile ilgili inançları daha yüksektir. Bu çalışmanın bulguları da literatürdeki öğretmen desteğini farklı değişkenlerle ölçen ve motivasyonel değişkenlerle ilişkisini inceleyen araştırma bulgularıyla uyumludur (Rimm-Kaufman vd., 2015; Ryan vd., 1994; Wentzel, 1997; Wentzel vd., 2010).

Modele göre öğrencilerin etkileşim partnerlerinin sayısı, öğrencilerin başarı motivasyonunun önemli yordayıcılarından biri değildir. Öğrencilerin okulda arkadaş eksikliği motivasyonlarını olumsuz etkilerken, arkadaşları olan öğrencilerin motivasyonları daha yüksektir (Buhs ve Ladd, 2001; Kindermann ve Skinner, 2012; Ladd, 1990). Ancak, etkileşimde oldukları akran sayısındaki artış, motivasyonu yordamamaktadır. Araştırmalar, akran ilişkisi ve akran kabulünün öğrencilerin motivasyonu ile pozitif yönde ilişkili olduğunu göstermektedir (Flook ve diğerleri, 2005; Robnett ve Leaper, 2013). Buradan hareketle, öğrenci motivasyonu üzerinde etkileşim partnerinin sayısından çok, mevcut ilişkilerin niteliğinin etkili olduğu söylenebilir.

İkinci araştırma sorusu için gruplarda motivasyonel değişkenler açısından homofili olup olmadığı ve cinsiyetler arasında farklılık olup olmadığı incelenmiştir. Akademik

motivasyon açısından akran grubu üyeleri arasında homofili bulunmuştur. Bulgular, ortaokul öğrencilerinin akran grubu üyelerinin beklentiyle ilgili inançlar, içsel değer ve fayda değerleri açısından birbirine benzediğini ortaya koymuştur. Ancak, akran grubu araştırmalarının çoğu homofiliyi grubun cinsiyetine göre analiz etmemiştir. Ancak bazı araştırmacılar, erkek ve kadın gruplarının iki ayrı dünya (Thorne, 1986) veya kültürler (Maltz ve Borker, 1982) olduğunu iddia etmektedir. Bu yaklaşımlar, kalıp yargılar oluşturmakla eleştirilse de kız ve erkek çocukların akran ilişkileri hem içerik hem de yapı olarak farklılık göstermektedir (Rose ve Smith, 2009). Bu nedenle, bu çalışmada, grupların cinsiyetlerine göre analizler ayrı yapılmış, erkek ve kız öğrenci grupları için farklı sonuçlar bulunmuştur. Bu çalışmanın sonuçları, motivasyonel değişkenler açısından kız gruplarının erkek gruplarına göre daha homojen olduğunu göstermiştir. Beklenti ile ilgili inançlara kıyasla öznel görev değerleri (fayda, içsel) açısından önemli farklılıklar vardır. Son olarak, erkek öğrencilerin fayda değerleri ile kendi gruplarının fayda değerleri arasında bir ilişki bulunamamıştır.

Bu cinsiyet farklılığının olası bir nedeni, kız ve erkek çocukların akranlarıyla olan ilişkilerinin farklılaşması olabilir. Orta çocukluk dönemindeki erkek öğrenciler daha çok rekabete dayalı etkinliklere ve sporlara katılırken (Zarbatany vd., 2000), orta çocukluk dönemindeki kız öğrenciler zamanlarını daha çok birbirleriyle konuşarak geçirirler (Blatchford vd., 2003). Ayrıca, orta çocukluk ve ergenlik çağındaki kızlar, yüz yüze ve telefonla konuşmaya daha fazla zaman harcamaktadırlar (Rafaelli ve Duckett, 1989). Kendini açma açısından cinsiyet farklılığına bakıldığında ise bulgular genellikle kızların lehinedir (Rose ve Smith, 2009). Bütün bunlar dikkate alındığında, sosyalleşmenin

etkisiyle, kız öğrencilerin öznel görev değerleri, grup üyeleri arasında birbirlerine daha benzemiş olabilir.

Öğrencilerin daha sonraki görevlerde "bunu yapabilirim" demeleri önceki deneyimleriyle ilişkilidir. Bu nedenle, öğrencilerin karşılaştıkları görevlerde başarılı olabilmeleri için öğretmenler tarafından gerekli destek ve dönütler verilmeli; öğretim, öğrencilerin başarı deneyimlerini artıracak şekilde tasarlanmalıdır. Bu çalışmada öğretmen duyuşsal desteğinin tüm öğrencilerin motivasyonel değişkenleri ile anlamlı bir ilişkisi olduğu bulunmuştur bu bağlamda öğretmenlerin öğrencileri desteklediği sınıf ve okulların önemi ortaya konmuştur. Öğrencilerin motivasyonu için öğretmenler öğrencileriyle olan ilişkilerinin kalitesini artırması önemlidir. Kaliteli öğrenci-öğretmen ilişkileri için öğrenci-öğretmen yakınlığı gereklidir; ayrıca, öğrencilerin kendilerini özgürce ifade edebilecekleri, düşünce ve duygularını paylaşabilecekleri ilişkileri oluşturmak gerekir. Öğretmenler, öğrencileri dinlemeli, kabul etmeli ve yargılamamalıdır. Öğretmenler sınıfta öğrencilere adil davranmalı ve her öğrenciden yüksek beklentilere sahip olmalıdır. Öğretmen beklentileri öğrencilerin akademik motivasyonu ve başarısı ile ilişkili olduğundan, özellikle adaletsiz öğretmenlerin öğrencilerden beklentileri öğrenci motivasyonu üzerinde daha etkilidir (Brattesani vd., 1984). Öğretmenlerin öğrencilere verdiği dönütler, öğrencilerin öznel görev değerlerinin ve başarı beklentilerinin gelişmesinde oldukça etkilidir (Wigfield vd., 2009). Öğretmenler aşırı eleştirel olmamalı ve öğrencilerin gelişimini desteklemek için yapıcı geri bildirimler vermelidir.

Öğretmenlerin bu davranışları sergileyebilmeleri için öncelikle davranışlarının sonuçlarına ilişkin farkındalıklarının artırılması gerekmektedir. Bu alandaki farkındalığın artmasıyla birlikte öğretmenlere, öğrencilere nasıl destek olabilecekleri konusunda davranışsal becerilerin kazandırılması gerekmektedir. Bu doğrultuda yapılacak en etkili müdahale, üniversitelerdeki eğitim fakültelerinin öğretmen yetiştirme süreçlerinin yeniden yapılandırılmasıdır. Halen öğretmenlik mesleğini icra edenler için, hizmet içi eğitim yoluyla davranışlarının sonuçlarına ilişkin farkındalık artırılabilir. Ayrıca, öğretmenlere uygulanacak müdahale programları ile, öğretmenlerin sınıf içindeki destekleyici rolleri artırılabilir.

Bulgular, akran gruplarının akademik motivasyon açısından homojen olduğunu göstermektedir. Bu sonuç, akran gruplarının öğrencilerin akademik gelişimi açısından benzersiz bir sosyalleşme bağlamı olduğunu göstermektedir. Akran grupları, öğrencilerin akademik işleyişi için çok önemli bir gelişimsel kaynaktır (Wentzel, 2005). Okullarda akran ilişkilerini geliştirmek için sınıf içi uygulamalarda öğrenci merkezli ve işbirlikli öğretim yöntemleri kullanılmalıdır. Akran ilişkileri, öğrencilerin başarı beklentilerinin ve öznel görev değerlerinin sosyalleşmesini ve grubun tüm üyelerine yayılmasını sağlar. Bazen bu olumlu veya tam tersine olumsuz olabilir. Bu doğrultuda okul yönetimi, öğretmenler ve okul psikolojik danışmanları, öğrencilerin akran ilişkilerini takip etmeli ve desteklemelidir. Özellikle öznel görev değerlerinin sosyalleştirilmesi düşünüldüğünde, okulda uygulanacak müdahale programları ile öğrencilerin öznel görev değerleri artırılabilir ve bu durum, okul genelinde bir artışı tetikleyebilir.

Yukarıda belirtilen öneriler dışında ileride yapılacak araştırmalar için de çeşitli öneriler sunmak mümkündür:

1- Bu çalışma, İstanbul'da iki devlet ortaokulunda gerçekleştirilmiştir. Bu nedenle araştırmanın bulgularını genellemek mümkün değildir. Bu bulguların diğer bağlamlarda geçerli olup olmadığını anlamak için daha fazla araştırmaya ihtiyaç vardır. Özellikle özel ortaokullarda veya diğer illerde, farklı sosyo-ekonomik düzeydeki devlet okullarında yapılan çalışmaların tekrarlanmasına ihtiyaç vardır. Bunlara ek olarak bu çalışma ilkokul, lise, üniversite gibi farklı düzeylerdeki öğrencilerle tekrarlanabilir ve bulguların farklı düzeylerde değişiklik gösterip göstermediği incelenebilir.

2- Bu çalışmadaki değişkenler belli bir alana özgü değildir. Öğrencilerin genel akademik motivasyonları ve genel olarak öğretmenlerinden algıladıkları duyuşsal destek incelenmiştir. Bu değişkenleri alana özgü olarak yeniden yapılandırarak çalışmayı tekrarlamak faydalı olabilir. Bu sayede değişkenler arasındaki ilişkilerde bir farklılaşma olup olmadığı incelenebilir.

3- Bu çalışmada kesitsel veriler kullanılmıştır, ancak boylamsal bir araştırma tasarımı ile iki ana araştırma sorusu için de daha detaylı bilgiler elde edilebilir. Boylamsal verilerle değişkenler arasındaki ilişki incelendiğinde, sosyal faktörlerin uzun vadede motivasyon üzerindeki etkileri belirlenebilir. Boylamsal veriler, aynı zamanda, akran gruplarındaki homofili nedenlerini de anlamamızı sağlayacaktır. Homofili, öğrencilerin benzer öğrencilerle daha fazla zaman geçirmeyi seçmeleri (seçim) veya zamanla birbirleriyle zaman geçiren öğrencilerin birbirine benzemesi (sosyalleşme) nedeniyle ortaya çıkmış

olabilir. Homofilinin kökenini anlamak, farklı cinsiyet grupları arasındaki farkı anlamamıza da olanak sağlayacaktır. Bu nedenle, ortaokula geçişten itibaren boylamsal çalışmalara ihtiyaç duyulmaktadır.

4- Nicel araştırma yöntemlerinin yanı sıra, akademik motivasyonu etkileyen faktörler, nitel araştırma yöntemleri kullanılarak incelenebilir. Bu sayede hangi öğretmen davranışlarının öğrencilerin motivasyonunu ve performansını etkilediğine dair cevaplar bulunabilir. Ayrıca, akran grubu üyelerinin ilişkilerinin gözlem ya da mülakat yoluyla incelenmesi, akran gruplarının oluşum süreçlerinin ve akran gruplarında sosyalleşmenin anlaşılmasını da sağlayabilir.

5- Bu çalışmada akademik motivasyon sadece üç değişken tarafından yordanmıştır. Ancak, daha farklı sosyal veya akademik faktörleri içeren yeni modeller test edilebilir. Özellikle, etkileşim partneri ile motivasyon arasında anlamlı bir ilişki olmadığı için, modele akran ilişkilerinin kalitesiyle ilgili değişkenler örneğin akran kabulü eklenerek test edilebilir. Ayrıca, motivasyon gelişiminde akranlar ve öğretmenler kadar aileler de etkili sosyalleşme araçlarıdır. Aileye özgü değişkenler ile motivasyon arasındaki ilişki de incelenebilir.

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