

**The Effect of Demographic, Family and School-Related Variables  
on Academic Performance and Educational Expectations  
of High School Students in Kazakhstan**

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## **Ethical Approval**

Dear Mariya,

The NUGSE Research Committee reviewed the project entitled "The Effect of Demographic, Family and School-related Variables on Academic Performance and Educational Expectations of High School Students in Kazakhstan" and decided:

To grant approval for this study subject to minor changes, to be discussed with supervisor.

Approval subject to minor changes: The study is approved subject to minor changes.

Reviewers' comments:

Population: You should inform the students of every detail of the study before you distribute the parental consent forms.

Instruments: Please change the contact information in the parental consent form. You should include the contact information of both you and your supervisor.

Before starting your data collection, you need to discuss these changes with your supervisor, revise your proposal accordingly, and then ask your supervisor to check the revised proposal.

Sincerely,

NUGSE Research Committee

November 16, 2016

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## Abstract

The purpose of this study is to examine the effect of demographic factors, family and school contexts on Kazakhstani high school students' academic achievement and their further expectations. The study is designed to address the following questions. The first question is aimed at finding out how gender, ethnicity, family background, parental involvement, school environment, and peer support influence Kazakhstani high school students' academic achievement. The second question is aimed at finding out how gender, ethnicity, family background, parental involvement, school environment, and peer support influence students' educational expectations. To conduct this study, a quantitative cross-sectional correlational research design is implemented. For the first research question there are the following findings. First, gender is a great predictor of academic achievement. Female students demonstrate better performance in comparison with male students. Second, ethnicity does not have an effect on academic achievement. Third, family SES has no effect on child's performance. Fourth, parental involvement does not have an effect on academic achievement. Fifth, among school-related factors only school environment is a significant predictor of academic achievement. For the second research question there are the following findings. First, students' expectations differ by gender. Females have the higher expectations in comparison with males. Second, ethnicity has an effect on expectations. Kazakh students and students from other ethnical groups demonstrate the higher expectations than Russian students do. Third, family income level has a negative effect on expectations. The lower the income level is, the higher expectations students have. Fourth, there is an influence of parental education on educational expectations. However, only father's education is the strongest predictor of students' expectations. Fifth, parental involvement positively relates to educational expectations. Sixth, among school-related factors only school environment is a significant predictor of students' expectations.

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## **Chapter 1: Introduction**

The role of education in a human's life is significant. It provides people with knowledge, skills, and competences needed for further success. For example, the consensus theory of employability declares that those who have required skills are more competitive on the labor market (Brown, Hesketh, & Williams, 2006). In this context, education is considered one of the routes to social mobility because it helps people to develop higher standards of living and, consequently, to lead them to better lives (Curtis, Murphy, & Shields, 2013; OECD, 2013). However, there are a lot of different factors, both personal and contextual, affecting educational process (Moreira, Dias, Machado Vaz, & Machado Vaz, 2013). The influence of these factors can be very significant and essential for the educational outcomes. It is proved by the following observation discussed among the researchers:

Through the vast amount of influences students receive throughout their academic education, it is no wonder that there are so many predictors affecting their school performance. Along with the internal motives and desires they have for themselves, there are many others from influential characters such as parents and teachers. The constant information provided to them about their academic characteristics from outside sources, along with their own beliefs and feelings suggest a multitude of internal and external predictors of success (Tavani & Losh, 2003, p. 143).

In this chapter, I will introduce my Master's thesis. This Master's thesis aims to examine the effect of demographic factors, family and school contexts on academic achievement and educational expectations of high school students in Kazakhstan. In the first section, statement of the research problem will be explained. In the second section, I will present the research purpose statement. In the third section, I will present the research questions. In the last section, the significance of the study will be described.

## **Statement of Problem**

In this section, I will explain the research problem of the study. The problem being addressed in this study is that different factors, such as students' demographic characteristics, family background, and school environment may negatively affect their academic achievement and expectations of further education. In the context of high importance of education, academic achievement and educational expectations become the most essential outcomes in educational settings nowadays. Indeed, high academic performance in school may provide the essential benefits for students in their future life, as it has demonstrated to be strongly related to further success.

First, students' academic achievement in school has an effect on their further educational expectations. According to Danziger (1983), high school grades affect the way in which students perceive their own abilities that, in its turn, shapes their future educational expectations. Moreover, Boxer, Goldstein, DeLorenzo, Savoy and Mercado (2011) found in their research among middle school students that low academic achievement influences students' self-fulfilling prophecy and self-efficacy, and may lead to lower educational expectations. Thus, academic success in school has an effect on students' future educational plans.

Second, academic achievement in school contributes to students' admission to university. Indeed, students with higher high school GPA and test scores are more likely to attend higher-quality colleges (Brewer, Eide, & Ehrenberg, 1999). Particularly, Hoekstra (2009) mentioned that students with the highest GPA are more likely to be admitted to the selective university even if their SAT scores meet or exceed the cutoff SAT score. In this context, high school grades help students to obtain better higher education.

Third, high school GPA is the strong predictor of students' undergraduate success and college retention. Based on meta-analysis of the predictive validities of American

College Testing (ACT), high school grades and SES of 189,612 students at 50 institutions, Westrick, Le, Robbins, Radunzel and Schmidt (2015) found that high school GPA is highly correlated with the first-year academic performance and further college retention. Moreover, high school grades predict four-year college outcomes for all academic disciplines (Geiser & Santelices, 2007). Thus, academic achievement in school contributes to students' performance in college.

Finally, academic achievement in college and university contributes to the late success in life. For example, Hoekstra (2009) found that students who attended the most selective universities have earnings that are approximately 20% higher. In addition, the meta-analysis conducted by Roth and Clarke (1998) showed strong positive correlation between grades and future earnings. The results indicated relationships between grades and starting, as well as current salary and salary growth. Moreover, good academic achievement in college predicts better job performance that is greatly appreciated by employers (Roth, BeVier, Switzer III, & Schippmann, 1996). Thus, academic achievement has a strong impact on students' further success.

As for students' future educational expectations, they are related to postsecondary attainment and attainment-related outcomes (Wood, Kaplan, & McLoyd, 2007). In fact, students with higher expectations for further education are more likely to complete high school (Ensminger & Slusarcick, 1992). Moreover, the high level of further educational expectations is associated with lower levels of delinquency among adolescents (Joseph, 1996). Furthermore, Hockaday, Crase, Shelley, and Stockdale (2000) found that female adolescents with high educational expectations were 50 percent less likely to become pregnant during adolescence than their low-expectation counterparts. In sum, the influence of high educational expectations on a student's life is significant.

However, there are multiple factors affecting students' academic achievement and further educational expectations in school. The most of the previous studies investigating the effect of different aspects on students' academic achievement and educational expectations were conducted in Western countries. Nevertheless, due to the historical background Kazakhstani society is characterized by ethnical, cultural, and economical diversity of population. According to the data of Committee on Statistics of Kazakhstan (2016), in 2016 population of Kazakhstan was about 17,7 million, 57% of which are urban citizens and 43% are rural. Moreover, its multiethnic population includes 125 different nations and ethnicities (Information-Analytic Center, 2014). Furthermore, gender representation in Kazakhstan is quite equal: 51.7% are females and 48.2% are males (OECD, 2017). Thus, taking into account population diversification, there is necessity to understand how different factors affect two of the most important educational outcomes: academic achievement and educational expectations in Kazakhstan.

### **Statement of Purpose**

The purpose of this quantitative study is to examine the effect of demographic, family, and school-related variables on Kazakhstani high school students' academic achievement and their further educational expectations. In that context, demographic variables include gender, ethnicity, and family socioeconomic status. Parental involvement in students' school learning will be considered as a family-related variable in this study. School-related variables will include the school environment and peer support.

### **Research Questions**

The study is designed to address the following research questions:

RQ1: How do gender, ethnicity, family socioeconomic status, parental involvement, school environment, and peer support influence Kazakhstani high school students' academic achievement?

RQ2: How do gender, ethnicity, family socioeconomic status, parental involvement, school environment, and peer support influence Kazakhstani high school students' further educational expectations?

### **Significance of the Study**

Participants and their families will not benefit from this study directly. However, indirect benefits will include deeper understanding of factors influencing Kazakhstani high school students' academic achievement and further educational expectations. The findings of the research may increase understanding among parents of the importance of family support and value of parental involvement in their child's academic success. Moreover, the study results may contribute to school administrators' awareness about the role of providing a positive school learning environment for students' achievement. Additionally, the implication of the research will be helpful for policy makers and education policy makers to frame further reforms taking into consideration gender and ethnicity differences, as well as to provide support to economically-deprived groups.

In Chapter 1: Introduction, I described the research problem, the purpose statement, the research questions, and the significance of the study. Following the Introduction is Chapter 2: Literature Review, in which I will present information from the literature concerning my research topic. Then, Chapter 3: Methodology will be presented, where I will thoroughly describe research design, research methods and other information relevant to methodology. After that, Chapter 4: Data Analysis and Findings will be presented, where I will indicate the research findings. Next, I will discuss findings in Chapter 5: Discussion. Finally, I will make conclusions and provide recommendations in Chapter 6: Conclusion.

## **Chapter 2: Literature Review**

In this chapter, I will present the literature review part of my thesis. I will introduce the reader to the nature of the study in order to promote understanding and will apply my knowledge and analysis of the key issues, debates, and concepts related to my research. The purpose of this study is to examine the effect of demographic factors, family and school contexts on Kazakhstani high school students' academic achievement and their further expectations in pursuing education. The study is designed to address the following research questions. The first question is aimed at finding out how gender, ethnicity, family background, parental involvement, school environment, and peer support influence Kazakhstani high school students' academic achievement. The second question is aimed at finding out how gender, ethnicity, family background, parental involvement, school environment, and peer support influence Kazakhstani high school students' further educational expectations.

Researchers investigated multiple factors, both internal and external, affecting students' academic performance and educational expectations. In my research, I have decided to concentrate on three groups of the key aspects having influence on achievement and expectations, such as students' demographic characteristics, family-related factors, and school-related factors. This selection is caused by some reasons. First, in the literature, more authors agreed that these factors are the most influential aspects for academic achievement and further educational expectations. Moreover, taking into account ethnically, culturally, and economically diverse population of Kazakhstan, these components seem to be very essential to investigate in the context of students' educational process.

In the first section of my literature review, I will describe demographic characteristics, such as gender, ethnicity, and family socioeconomic status, affecting



students' academic achievement and educational expectations. In the second part, I will explain the influence of family-related factor on a child's academic achievement and expectations. It will be followed by section including explanation of how school environment affects students' performance and future expectations.

### **Demographic Factors: Gender, Ethnicity, and Family SES**

In this section, I will discuss demographic characteristics, such as gender, ethnicity, and family socioeconomic status, in relation to students' academic achievement and educational expectations. The much attention has been drawn to the investigation of the influence of students' demographic characteristics on their educational outcomes and further expectations. Researchers studied gender differences in academic success and educational expectations. Moreover, the question of equal educational opportunities for students with different racial and ethnical background is vital among researchers in education. Therewith, the influence of students' family socioeconomic status on educational process is of a great concern nowadays. Researchers declared the importance of recognition of the fact that some groups of students can be deprived of equal educational opportunities.

**Gender.** The study of gender differences in academic performance has a long tradition in the literature and research in this arena has yielded mixed results. On one hand, some studies indicated that girls outperform boys in school. For example, girls' significant dominance in school marks was found in every subject, not only in stereotypically feminine areas, such as languages, art and social sciences, but in science and mathematics as well (Pomerantz, Altermatt, & Saxon, 2002). In addition, Farooq, Chaudhry, Shafiq, and Berhanu (2011), using a survey method by involving 300 male and 300 female students from the 10<sup>th</sup> grade, found that female students perform better than males in the subjects of mathematics and English as well as in overall achievement scores. Similarly, a meta-

analysis made by Voyer and Voyer (2014) indicated a stable female advantage in school marks, where the largest dominance is in language courses and smallest in mathematics. In its turn, Scheiber, Reynolds, Hajovsky, and Kaufman (2015) identified no gender differences in mathematics, but a small advantage for females in reading, and a significant gender gap in writing in favor of females. Thus, some researchers found that girls perform better in school than do their male counterparts.

On the other hand, researchers have demonstrated that boys outperform girls in mathematics and science courses. For instance, Hyde, Fennema, and Lamon (1990) and Pomerantz et al. (2002) identified that boys demonstrate a superiority in math courses in high school and in college. Moreover, Schreiber (2002) identified that boys perform significantly higher than do girls on the advanced mathematics test.

Other studies, however, have found no differences between the academic performance of boys and girls. For example, using meta-analyzed data from 242 studies published between 1990 and 2007, Lindberg, Hyde, Linn, and Petersen (2010) indicated no gender differences in mathematics performance among school students. In addition, Else-Quest, Hyde, and Linn (2010) meta-analyzed two international data sets, TIMSS and PISA, using 493,495 sampling, and found evidence of gender similarities in school performance. In sum, researchers have no single and simple answer to the question about gender differences in academic achievement.

Findings about gender influences on educational expectations have been similarly inconclusive. Some researchers found that there is no significant difference between male and female students in their intention to continue their education after school (Chenoweth & Galliher, 2004). However, according to several studies, gender seems to have an effect on students' further educational and vocational expectations. For instance, Krahn and Taylor (2005) and Mau and Bikos (2000) claimed that female adolescents express

significantly higher aspirations than their male counterparts. However, York (2008) found that high school female valedictorians from 2003, 2004, and 2005 graduating classes intend to attend less selective colleges and plan careers in lower paying occupations than boys do. Thus, the question of gender impact on students' further educational expectations needs deeper investigation.

**Ethnicity.** Much research investigated academic achievement and educational expectations of students from different racial and ethnical groups. There is an agreement in the literature that, in ethnically diverse environment, minority students perform worse than do their counterparts from the majority group. For example, Hao and Bonstaed-Bruns (1998) and Kao and Tienda (1995) found that foreign-born students in the USA get lower grades in school than do native or second generation immigrants due to their limited English skills. The other reason that might explain the lower performance of the minority youth is financial pressure of the immigrants' families when children have to work and even drop out of school (Kao & Tienda, 1998; Mau, 1995). Moreover, some authors have argued that living in close small communities with lack of support and weak access to educational resources decreases opportunities for the minority youth and, consequently, leads to their low academic achievement (Glick & White, 2004; Krahn & Taylor, 2005). Thus, students from the minority ethnic groups are been considered in the disadvantaged position.

However, several studies proposed that students, for whom the language of instruction is not native, can demonstrate good academic results. For example, Kao and Thompson (2003) found that Asian American students in the USA perform better than their Hispanic and White counterparts do. Moreover, Hao and Bonstaed-Bruns (1998) identified that Asian American students have the highest scores in mathematics in comparison with students with Mexican origins, white, and black students. Researchers

explain this advantage of Asian students by the cultural and behavioral differences in family background (Hao & Bonstaed-Bruns, 1998; Kao, 1995; Schneider & Lee, 1990). According to Hao and Bonstaed-Bruns (1998), ethnic background has a positive effect on schooling for immigrant Chinese students, because Asian culture, ethnic solidarity, contexts of reception, modes of incorporation, and parent-child interactions in learning activities facilitate children's higher academic achievement (p.192). In sum, ethnic background may have different effects on students' educational outcomes. It is generally agreed in the literature that students from minor ethnic groups demonstrate lower achievement in school. However, the influence of the ethnical background, experiencing solidarity, support, and high expectations, might have positive effect on adolescents' academic success.

In this context, ethnic origin influencing academic achievement has also an impact on students' further educational expectations. Researchers found differences in educational expectations among race and ethnic groups of adolescents. For example, Hao and Bonstaed-Bruns (1998) and Mau and Bikos (2000) found differences in educational aspirations between Asian, Hispanic American, and white native students. Asian students have the highest educational expectations, while Hispanic students have the lowest one (Hao & Bonstaed-Bruns, 1998; Mao & Bikos, 2000). Moreover, Mau's (1995) study has shown that Hispanic and native American students have lower level of educational aspirations than do students of other ethnic groups. In this context, Hao and Bonstaed-Bruns (1998) and Mau (1995) identified language proficiency as one of the reasons for such tendency. The greater the English skills of a student whose mother tongue is not English, the higher his or her expectations (Hao & Bonstaed-Bruns, 1998, p.187). In addition, cultural background and interaction within families, particularly, agreement between parents and children on further educational plans, influence children's educational

expectations (Hao & Bonstaed-Bruns, 1998). Asian American parents and children have higher level of agreement than their counterparts from other ethnic groups do (Hao & Bonstaed-Bruns, 1998). Thus, it could be concluded that students from different ethnic origins have different educational expectations. The existing literature stated that differences in ethnical culture may cause the differences in students' aspirations. Adolescents from ethnical groups experiencing close and supporting parents-children relationships likely demonstrate high educational expectations.

**Family SES.** A great number of researchers suggest that family SES has a significant effect on children's academic achievement and educational expectations (Battle & Lewis, 2002; Bradley & Corwyn, 2002; Orr, 2003; Sirin, 2005). For example, Battle and Lewis (2002) examined the longitudinal effects of socioeconomic status on 12th grade educational achievement and achievement two years after high school. They identified that socioeconomic status is three times more important than students' demographic characteristics (p.21). Therewith, some authors have agreed on the definition of the family SES that includes three indicators, such as family income level, parental education, and parental occupation (Bradley & Corwyn, 2002; Sirin, 2005). Indeed, as family SES is associated with privilege and power, it is important to understand the role of each of SES components in relation to students' academic achievement and further expectations.

First, multiple studies showed that family income level significantly affects children's academic achievement and their further expectations (Bradley & Corwyn, 2002; Sirin, 2005; Teachman, 1987). The relationship between family income and students' success is associated with access to different material and social resources by both the children themselves and their parents (Bradley & Corwyn, 2002). Families with a high income level can spend more money for educational resources, such as books, newspapers, computers, and private tutoring, which, therefore, can facilitate a child's academic

performance (Duke, 2000). For instance, Teachman (1987) found positive relations between educational resources in the home, such as a specific place to study, reference books, a daily newspaper, a dictionary/encyclopedia and the educational attainment of children. Moreover, family financial and social resources determine the kind of school which students can attend (Sirin, 2005). Indeed, families with high level of income can afford to choose schools with better conditions for their children that, in its turn, may contribute to higher performance. For example, Parcel and Dufur (2001) studied 12,686 youths between ages of 14 and 21 and found that attending a private school leads to increase in math scores.

Moreover, family income level affects students further educational expectations. Family resources allow children to get more education, consequently, it increases their further expectations (Boxer et al., 2011). At the same time, McLoyd (1989) stated that children in families experiencing economic hardship may have emotional problems and deviant behavior, that, in its turn, causes decline of educational end occupational expectations (p.300). Thus, level of family income contributes to students' academic achievement through home and school resources, that in its turn affects further educational expectations.

Second, researchers generally agree that the level of parents' education plays a significant role in children's academic achievement and educational expectations (Davis-Kean, 2005; De Serf, 2002; Hill et al. 2004; Tavani & Losh, 2003). For instance, Davis-Kean (2005) doing the correlational analysis found that parents' education has a great influence on students' academic achievement through the high parental educational expectations and supportive behaviors in the home. Furthermore, De Serf (2002) specified that the mother's educational level is directly related to the educational attainment of her children because children's actions reflect their mother's actions and attitudes. Moreover, a

mother with a high level of education values education to a higher degree than those with less levels of education (De Serf, 2002). In general, educated parents tend to encourage their children to get more education, that, as a result, leads to rise of child's educational expectations (Hill et al., 2004). In sum, parental education has a great influence on students' academic success and further educational expectations. Parents with higher level of education value education to a higher degree and expect their children to get more education.

Third, studies demonstrated mixed results about the relationships between students' academic achievement and expectations and their parents' occupational status. On the one hand, parental occupation and social status have an impact on students' academic achievement (Sirin, 2005). Particularly, Saunders (2012) stated, that "bright people who succeed in life are quite likely to produce bright children who do likewise, so even in the most perfectly meritocratic and open society we should expect to find some sort of 'gap' in the occupational achievements of children from different class backgrounds" (p.16). On the other hand, Farooq et al. (2011) found that parental occupation has no significant effect on children's academic achievement. Speaking about parental occupation and students' educational expectations, Leppel, Williams, and Waldauer (2001) suggested that parental occupation has a large effect on students' choice of college major. The authors found that male students from families with high socioeconomic status prefer to major in business that is associated with being very well off financially (p.373). Thus, the influence of parental occupation on students' achievement and expectations is not clear and needs more investigation. Some research stated the great influence of parental occupational status on their children's academic success and expectations, while others found no relation between these two dimensions.

In this section, I have discussed demographic characteristics, such as gender, ethnicity, and family socioeconomic status, in relation to students' academic achievement and educational expectations. Researchers have no single and simple answer to the question about gender differences in academic achievement and educational expectations. Some study claimed that girls outperform boys in school, while others stated boys' dominance in academic achievement. In addition, there is contradiction among studies concerning the further educational expectations between female and male students. Moreover, the major cohort of scientists agreed that the youth from ethnic minority groups is in a disadvantaged position in terms of academic performance and further educational expectations. However, the influence of the cultural background, experiencing solidarity, support, and close parents-children relationship, may contribute to adolescents' academic success and high educational expectations. Therewith, family SES, including family income level, parental education and occupation, is considered by many researchers as the main demographic predictor of students' academic success and high educational expectations. The higher the level of family status is, the better academic performance students demonstrate and, consequently, the higher expectations for future education they have.

### **Family-related Factor**

There are several family-related variables affecting academic achievement and educational expectations in the literature. However, I will concentrate on parental involvement in children's schooling which has shown a bigger effect.

**Parental involvement.** A great cohort of researchers has analyzed the influence of parental involvement on students' academic achievement and further educational expectations. Scientists mostly agreed that parental involvement in school learning positively influences their children's academic performance (Fan & Chen, 2001;



Fehrmann, Keith, & Reimers, 1987; Keith et al., 1998). For example, Fehrmann et al. (1987) stated that parental involvement has a great positive effect on children's grades. They found that such involvement contributes to the increase in time spent on homework, that leads to good academic performance. Moreover, Fan and Chen (2001) and Keith et al. (1998) found that parent involvement has a large and significant effect on students' GPA. For instance, the higher the amount of communication between parents and their children about school and school activities, the higher GPA results students demonstrate (Keith et al., 1998).

In particular, different types of parental involvement should be considered, because certain types could contribute more to academic achievement, while other types of parental involvement might not have any effect or might have negative effect. Specifically, Cabrera and La Nasa (2000) stated that parental involvement is experienced in two dimensions. The first is through motivation and high educational expectations for their children. The second is by the way of active parental involvement in school matters. In addition, Fan and Chen (2001), synthesized in a meta-analysis the quantitative literature about the relationship between parental involvement and students' academic achievement, found that parental expectations for children's education achievement have the strongest relationships, while parental home supervision has the weakest relationship with academic performance. This point of view was also maintained by Wilder (2014), who synthesized the results of nine meta-analyses and agreed that the relationship between parental involvement and students' performance is stronger if parental involvement is considered as expectations for their children academic achievement rather than as homework assistance.

Furthermore, parental involvement affects students' expectations. For example, Hill et al. (2004) found that parental academic involvement, through communication with teachers and awareness of their child's school progress, positively relates to high school

students' expectations. Indeed, Astone and McLanahan (1991) found parental practices including parents' aspirations about their children's future, mother's and father's monitoring of school progress, general supervision, and talks with children, are related not only to students' school grades, attendance, and retention, but also to future educational expectations and degree completion. Moreover, child's final decision about college choice depends on parental involvement in school learning (Cabrera & La Nasa, 2000).

In this section, I have discussed parental involvement in relation to students' academic achievement and educational expectations. Parental involvement has a positive influence on children's academic success. The literature stated that the more frequently parents communicate with their children about schooling, the better performance and the higher future expectations students demonstrate. Moreover, it is found that parental expectations influence students' academic achievement and plans for the future education rather than supervision and assistance in doing homework.

### **School-related Factors**

Children spend a lot of time in school settings communicating with teachers, students, and other people. Therefore, it seems reasonable to assume that school environment and student peer support could also influence academic achievement and educational expectations of student. In this section, I will analyze the research studies in the literature that have attempted to investigate the relationships between school environment and students' academic achievement and educational expectations.

**School environment.** Literature consistently suggests that school environment has a great influence on students' academic performance and educational expectations. Researchers declared that a good school environment can positively shape the educational outcomes for youth despite community poverty (Eamon, 2005; Irvin, Meece, Byun, Farmer, & Hutchins, 2011; Marks, Cresswell, and Ainley, 2006). Moreover, regarding the

school environment, it should be taken into account that teachers are the main actors interacting with students in school. Indeed, teachers' behavior and relationships with students have a high impact on academic performance. For example, doing regression analysis, Brewster and Bowen (2004) found that social support from teachers has a great influence on students' school engagement. Moreover, teacher support seems to be more influential than parental support (Brewster & Bowen, 2004). In addition, Machell, Blalock, Kashdan, and Yuen (2016), finding a correlation between the classroom social environment and academic achievement, stated that teacher support along with promoting interaction and supporting respect in class ensures students' greater academic achievement. Perceived caring from teacher predicted students' motivation and performance (Wentzel, 1997). Students characterized teachers who care as demonstrating democratic interaction styles, developing expectations for student behavior in light of individual differences, modeling a "caring" attitude toward their own work, and providing constructive feedback (Wentzel, 1997, p.416).

To consider influence of school environment on students' future expectations, it should be said that school again has great influence on students' plans. For example, Goodenow and Grady (1993) stated that students' subjective sense of school belonging was significantly associated with expectancy of future success. In particular, teachers' educational expectations for their student are positively related to the educational expectations of youth (Irvin et al., 2011).

**Peer support.** The other factor of school context affecting students' academic achievement and educational expectations identified in the review of the literature is relationships with peers. On one hand, peer support and friendly relationships could positively affect students' academic performance. For example, results of Wentzel and Caldwell's (1997) longitudinal study showed that reciprocal friendship, as well as peer

acceptance and group membership, significantly relate to students' academic achievement. In addition, Flook, Repetti, and Ullman (2005), conducting a quantitative study with a sample of 248 children, found that peer acceptance in the classroom in secondary school predicted better academic performance in high school.

On the other hand, peers might have a negative effect on students' academic success. For instance, the lack of reciprocal friendship predicts the dropping out of high school more effectively than such factors as academic motivation and parent and teacher psychological support (Ricard & Pelletier, 2016). Moreover, peer victimization and bullying negatively correlate to students' academic achievement (Nakamoto & Schwartz, 2010). Furthermore, Chenoweth and Galliher (2004) considered that peer context, as well as family, is the more salient predictor of further educational expectations for students, as the closest friends' plans to attend college affect the student's plans.

In this section, I have discussed influence of school-related factors on students' academic achievement and further educational expectations. School environment, particularly, teacher and peer support, have a great influence on students' performance and educational expectations. It was agreed in the literature that school educators have significant influence on shaping students' further expectations. In addition, good relationships with peers are considered even more effective than family and teacher support in students academic success.

## **Conclusion**

The purpose of this chapter was to present the literature review part of my thesis and to offer the reader an understanding of the nature of the study, the key issues, debates, concepts, and theories related to my research. The chapter began with the description of demographic characteristics influencing students' academic performance and educational expectations. As many research studies describe, differences among gender, race, ethnicity,

and family background influence students' achievement and expectations. Then, I discussed how parental involvement affects children's success. It is obvious, that family social capital, considered as quality of relationships within the family, affects children's academic success and their further expectations. Then, I analyzed the school context. According to research studies, school environment also influences students' performance and expectations. Moreover, peer support significantly affects students' performance and further expectations. All the findings provide a rationale for conducting this research study, because it is important to discover if the situation with Kazakhstani high school students is different or not. The topics discussed above formed the basis of the methodological instruments I used, which will be described in detail in the next chapter, Methodology.

### Chapter 3: Methodology

In the previous chapter, I presented literature review. In this chapter, I will introduce methodology of my research. The purpose of this study is to examine the effect of demographic, family and school factors on the Kazakhstani high school students' academic achievement and their further expectations in pursuing education. The study is designed to address the following research questions. The first question aimed at finding out how gender, ethnicity, family background, parental involvement, school environment, and peer support influence Kazakhstani high school students' academic achievement. The second question aimed to find out how gender, ethnicity, family background, parental involvement, school environment, and peer support influence Kazakhstani high school students' further educational expectations. In the discussion below, I will describe and justify the choices I have made in developing a quantitative, survey-based study that will help me answer the research questions described above.

In the first section, I will discuss research design I used for conducting study. In the second section, I will present procedures of my research. In the fourth section, I will justify research methods used to collect data for the study. In the third section, I will describe the sample and sampling procedures of my research. In the fifth section, I will present data analysis approach. In the final section, I will present the ethical considerations of this study.

#### Research Design

In this section, I will present and justify the approach that I used to conduct my study. After that, I will describe research design strategies that I used, then I will explain the research process of the study.

**Research approach.** Researcher can conduct research in education under two different paradigms. One of them is described as 'realist' or 'positivist' view, while the other

one is considered as 'subjectivist' paradigm (Muijs, 2011). On one hand, the 'positivist' approach is characterized by the idea that all the phenomena in the world experience cause and effect relationships that can be observed and objectively measured through research (Muijs, 2011). As Curtis et al. (2013) noticed, for the positivist approach, researcher experiences neutrality, objectivity and minimum impact on the object. On the other hand, 'subjectivists' claim that there is no reality that can be objectively measured (Muijs, 2011). They stick to the opinion that the world is relative, and it can never be definitive because process of observing changes and transforms it (Muijs, 2011). Therefore, the extreme 'positivist' view is as ambiguous as the extreme 'subjectivists' approach.

In this context, I decided to follow the notions of the post-positivist paradigm. According to Muijs (2011), the post-positivist approach considers that researchers who observe the reality cannot be totally objective. Scientists should take into account that they are the part of this reality, and their own subjectivity can influence the research. However, they should try to approximate it as best they can (Muijs, 2011). Therefore, a quantitative research approach withing a post-positivist paradigm was selected to answer the questions posed for this research. According to the Aliaga and Gunderson (as cited in Muijs, 2011), "Quantitative research is explaining phenomena by collecting numerical data that are analysed using mathematically based methods". Actually, quantitative approach allowed me to identify overarching patterns and trends in understanding factors influencing high school students' academic performance and further educational expectations from statistical results (Curtis, et al., 2013).

**Research design.** In order to answer the research questions of my study, I used a non-experimental correlational research design. Compared to experimental research, in a non-experimental correlational design, the researcher does not control or manipulate the variables (Creswell, 2012). Instead, as Creswell (2012), described, correlational design

allows to predict scores and explain the relationship among two or more variables, which is particularly appropriated for the purposes of the study I proposed here.

More specifically, I used an explanatory research design as one of the types of correlational research. An explanatory research design is a “correlational design in which the researcher is interested in the extent in which two variables (or more) co-vary, that is, where changes in one variable are reflected in changes in the other” (Creswell, 2012, p.340). This differs from exploratory research designs, where researcher finds a simple association between two or more variables (Creswell, 2012). The explanatory research approach was considered more convenient to my study because the purpose of my research was to examine the effect of demographic characteristics, family and school factors on the students' academic achievement and their further expectations in pursuing education.

### **Participants**

In this section, I will discuss the sampling process of my research. Convenience sampling procedures were used to recruit the participants for the study. This type of sampling helped to “select participants because they are willing and available to be studied” (Creswell, 2012, p.145). According to Creswell (2012), this sampling did not guarantee that the participants were representative of population, however, it could provide useful information to answer the research questions. The choice of this sampling approach was caused by the reason that school administrators hardly communicate and agree to conduct such kind of studies in their schools. That is why I recruited students from two urban, mainstream secondary schools located in Astana, where I had personal contacts within school administration. The first school was founded in 2008. Its total number of students is 3010, while its teaching staff includes 178 people. The second school, which was established in 1992, covers 2091 students with 120 teaching staff in total. Students from the 9th, 10th and 11th grades were identified as potential participants in my study



because high school students have ideas about their further education. As well as, in the 9th grade, students decide to continue their education in the 10th grade or to leave school and enter technical and vocational educational institutions.

Based on these sampling procedures, a total of 240 participants were selected for this study. The gender representation of the participants was almost equal (112 boys, 128 girls). The overwhelming majority of the participants were Kazakhs (72.1%), the next big group were Russian students (14.2%), and the third group included the students from other minor ethnical groups (13.7%). Among all the participants, 13% were students from the 9th grade, 45% from the 10th grade, and 42% from the 11th grade. The most of the participants were 16 years old (41.3%) and the mean of the students' age was 16.13 with (SD = .83) (see Table 1).

Table. 1

*Students Related Characteristics*

	n	%
Gender		
Male	112	46.7
Female	128	53.3
Ethnicity		
Kazakh	173	72.1
Russian	34	14.2
Other	33	13.8
Grade		
9th	31	13
10th	108	45
11th	101	42
Age		
14	7	2.9
15	46	19.2
16	99	41.3
17	86	35.8
18	2	.8
Total	240	100%

Table 2 includes numbers of answers and percentage of students' family income level, parental education and occupation. The overwhelming part of the participants were

from high income families (65%), while 33.8% of respondents were from middle income families and 1.3% from low income families. If to consider father's education, the most part of the participants answered that their father had Bachelor degree (67.1%), then 10.7% mentioned vocational and technical education, and only 1.7% of students pointed that their father had less than high school education. Regarding mother's education, overwhelming part of the respondents again pointed Bachelor degree (72.3%), then Master degree (9.0%), and the least number of students answered that their mother had less than high school education (.8%). An analysis of the father's occupation showed that the major part of the respondents' fathers worked in service (77.1%), then in industry (18.2%), agriculture (2.2%) sectors, while 1.7% of answers were that students' father was unemployed and .9% retired. If consider mother's occupation, 78.1% answered that their mother worked in service, 4.6% in industry, and .8% in agriculture. Notably, that the big part of the respondents mentioned that their mother was unemployed (15.6%), and only .8% pointed that their mother was retired.

Table. 2

*Family Socioeconomic Status Related Characteristics*

	n	%
Family income		
Low income family	3	1.3
Middle income family	80	33.8
High income family	154	65.0
Father's education		
Less than high school	4	1.7
High school only	10	4.3
VET	25	10.7
Two years of college	4	1.7
Bachelor degree	157	67.1
Master degree	21	9.0
Ph.D	13	5.6
Mother's education		
Less than high school	2	.8
High school only	8	3.4
VET	17	7.1
Two years of college	5	2.1

Bachelor degree	172	72.3
Master degree	22	9.2
Ph.D	12	5.0
Father's occupation		
Service	178	77.1
Industry	42	18.2
Agriculture	5	2.2
Retired	2	.9
Unemployed	4	1.7
Mother's occupation		
Service	185	78.1
Industry	11	4.6
Agriculture	2	.8
Retired	2	.8
Unemployed	37	15.6

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## Research Methods

In my study, I used a questionnaire as an instrument for data collection. It was developed adapting other questionnaires available in the literature. The questionnaire used in my research was divided into three sections. The first section included a set of demographic questions to collect information about students' gender, ethnicity, grade, age, and family SES. The second section consisted of a number of questions measuring parental involvement, school environment, and peer support. In the third section, the students reported their academic achievement and further educational expectations. A sample of the questionnaire items is attached (Appendix A).

**Demographics.** The participants answered several demographic questions about their age, gender, ethnicity, and family socioeconomic status. In order to identify family SES, the questionnaire included questions assessing family income level, parents' educational level, and parents' occupational position. Family income level was measured by the students' selections between three options, which corresponded to the high, middle, and low income level. To measure parents' educational level, the students assessed their father's and mother's education selecting from seven options, where "Less than high school graduation" was the lowest educational level, and "Ph.D., MD or other advanced

professional degree” was the highest level. In order to identify parents’ field of occupation, the participants selected their father’s and mother’s occupation from five options included main fields such as industry, service, and agriculture, as well as such options as “Retired” and “Unemployed”.

**Family and school environment.** The second section of the questionnaire included a set of 17 items to measure parental involvement, school environment, and peer support. First, in order to measure parental involvement in school learning, the participants responded to six items on a 5-point Likert-type scale questions (1 = strongly disagree; 5 = strongly agree). Items measuring parents' involvement in schooling included such components as parents' participating in child’s study activities, parents' understanding and valuing of school educational activities, support and encouraging child’s education (e.g. «Family members often ask me how I'm doing at school». «I have a quiet place at home in which to do homework»). A cumulative sum of participants' responses to these items was calculated to represent parental involvement in this study. Second, in order to measure school environment, students assessed their school belonging, school trust, and relationships with teachers using the 5-point Likert-type scale questions (1 = strongly disagree; 5 = strongly agree). Items number for this section is 6. Sample items include: «Teachers in my school are kind and reliable». «Teachers show an interest in me». Third, students measured their peer support by the 5-point Likert-type scale questions (1 = strongly disagree; 5 = strongly agree) assessing relationships with peers, trust, and support among classmates (e.g. «Students in my school help each other». «Students in my school can be trusted»). This section includes 5 items.

**Academic achievement and educational expectations.** Students reported the grades they usually get, and that they were getting last semester on a 7-point scale ranging from “mostly 5s” to “mostly 2s”. Moreover, students' educational expectations were

measured in two ways. First, participants indicated how far they planned to go in their education. They selected from ranked options ranged from “Less than high school graduation” to “College program - Ph.D. or equivalent”. Second, students identified their further plans answering the 5-point Likert-type scale questions (1 = strongly disagree; 5 = strongly agree). This set of questions included information about students' interest in attending more school, their willing to work hard to get more education, and to put effort into school.

### **Procedures**

When ethical approval to conduct this study was granted by the GSE Research Committee, I approached the gatekeepers from two mainstream schools in Astana to invite them to participate in my study. After the gatekeepers' agreement, I visited the schools and spent four days in each of two schools. First day, I met with the school's principal and discussed the research purpose and procedures in detail. Also, I presented my questionnaire to the principal. After the principal's agreement was obtained, students from the grades 9-11 were informed about the study and explained its purpose and procedures in detail. Then, those students who volunteered to participate in the study were given a parental consent form. They were asked to take this form home and give it to their parents. When the parental agreement was taken, I visited the classes during the lessons and invited the students to participate in the study. They were informed about the purpose of the study in detail and explained that no information would be communicated to other individuals. Then, I answered the questions about the study that arose. After that, the students, who decided to participate in the study, were given an informed consent form to sign. After signing the consent forms, I asked them to fill the questionnaire. Then, the questionnaires were collected by me personally.

## **Data Analysis Approach**

In the section above, I described the methods I used to collect data. In this section, I will present data analysis approach I applied in my study research. The filled questionnaires were collected from the participants. After that, all the data were prepared for analysis. SPSS statistical program was used as “an affordable, professional analysis program for students” (Creswell, 2012, p. 179).

Firstly, I coded the data for the computer program. Then, data was inputted to SPSS. After that, reliability analysis and descriptive analysis were conducted. Descriptive statistics were calculated for the demographic information for all participants. It also allowed to observe mean, maximum, and minimum for scores of academic achievement, educational expectations, and family SES according to gender and ethnicity.

In the next step, I applied inferential analysis. First, I used independent samples t-test for group comparison analysis to compare the mean score on some continuous variable for two different groups of participants. More specifically, I used this analysis to compare how academic achievement and educational expectations separately vary according to students' gender.

Second, I used one-way between groups ANOVAs to compare more than two groups. More specifically, I used ANOVAs to identify how students' academic achievement and further educational expectations separately vary according to ethnicity, family income level, parental education and occupation.

Then, I applied correlational analysis and interpret Pearson product-moment correlation coefficients to understand the relationship between parental involvement, school environment, peer support, and students' academic achievement and educational expectations separately.

Finally, I applied multiple linear regression is used to predict the effect of gender,

ethnicity, family SES, parental involvement, school environment, and peer support on students' academic achievement and educational expectations accordingly.

### **Ethical Considerations**

In this section, I will present the way on how I worked through the ethical approval process. First, I used my research proposal to prepare the information for NUGSE ethical approval process. I filled the form and provided information on my research including the purpose, research questions, description of research design and methods, anonymity and confidentiality procedures, risks and benefits of my research. After I submitted the form, the research was approved by the Committee with the minor changes. I was allowed to begin my data collection process. Then, I gained the official access to the schools and get principal's permission to conduct my study.

Important to this ethics review process was my Consent Form, on which I described risks and benefits of the research participation, as well as participants' rights. According to Creswell (2012), obtaining permission before starting to collect data is not only a part of the informed consent process but is also an ethical practice. First, as the participants of my study were under the age of 18, I got the written parental informed consent from all parents in advance (Appendix B). Then, those students who got signed parental consent were informed about the research purpose and procedures in detail, and asked to read the consent form and sign it if they agreed with it (Appendix C). Participation was based on volunteer basis. Anonymity was guaranteed. Participants did not mention their names in the questionnaire. All the questionnaires were collected by me personally. They were kept in a secure cupboard at home. All the data were stored in a password-protected computer (I am the only user) and not shared with other participants or individuals outside of the study, apart from my supervisor. Moreover, I destroyed survey instruments and the data after the conclusion of the study.

The purpose of this chapter was to present methodology of my research study. As it was described above, I applied quantitative correlational design study with convenience sampling for recruiting the high school students. Research design, methods, and data analysis approach described above formed the ground for the discussion in the next chapter.



## Chapter 4: Data Analysis and Findings

In this chapter, I will present the findings of the study. More in-depth interpretation of these findings will be presented in the «Discussion» chapter. The purpose of this study was to examine the effect of demographic, family and school factors on the Kazakhstani high school students' academic achievement and their further expectations in pursuing education. To conduct this study, a quantitative cross-sectional correlational research design was used. Before conducting this analysis, I started from preparing data for analyses by coding the data and inputting it to the SPSS program. After that, I cleaned the database for errors and computed total scores for the items concerning students' academic achievement, their relationships with parents, teachers, and peers.

In the first section of this chapter, I will present descriptive and inferential analysis related to students' academic achievement. In the second section, descriptive and inferential analysis related to the students' educational expectations will be presented. In the third section, the results of correlational analysis for parental involvement, school environment and peer support and academic achievement and educational expectations accordingly will be given to compare the relationship between these variables. Then, it will be followed by regression analysis. After that, findings based on the results of the analysis will be presented.

### Academic Achievement

In this section, I will present descriptive analysis of the data concerning students' academic achievement overall. Moreover, the descriptive analysis of academic achievement will be broken by gender, ethnicity, grade, and family SES.

**Descriptive analysis.** In this section, I will present descriptive analysis of students' academic achievement. Table 3 includes the numbers of participants, percentages, means and standard deviations on the students' reported grades. Results showed that, overall, the

participants demonstrated good academic performance. The overwhelming part of the participants usually got half 4s and 5s (35.3%). However, last semester, the majority of the students got mostly 4s (35.3%). To be noted, the overall academic achievement last semester was higher in comparison with the usual grades. I computed the cumulative academic performance, which consists of grades students used to get usually and grades they got in the last semester. This cumulative score ( $M = 11.11$ ,  $SD = 1.96$ ) will be used in all subsequent analysis as a measure of students' academic achievement.

Table 3.

*Descriptive Statistics for Academic Achievement*

	n	%	<i>M</i>	<i>SD</i>
Grades students usually get	238		5.53	1.02
Mostly 3s	5	2.1		
Half 3s and 4s	35	14.7		
Mostly 4s	71	29.8		
Half 4s and 5s	84	35.3		
Mostly 5s	43	18.1		
Grades in the last semester	238		5.58	1.03
Mostly 3s	4	1.7		
Half 3s and 4s	30	12.6		
Mostly 4s	84	35.3		
Half 4s and 5s	65	27.3		
Mostly 5s	55	23.1		
Cumulative academic achievement	238		11.11	1.96

Table 4 presents the means and standard deviations on the academic achievement broken by gender and ethnicity. Results indicated that female students ( $M = 11.79$ ,  $SD = 1.70$ ) reported higher academic achievement than their male counterparts ( $M = 10.32$ ,  $SD = 1.96$ ). Moreover, Kazakh students ( $M = 11.17$ ,  $SD = 1.99$ ) and students from other minor ethnical groups ( $M = 11.25$ ,  $SD = 2.33$ ) reported higher scores on academic achievement compared to Russian students ( $M = 10.59$ ,  $SD = 1.35$ ).

Table 4.  
*Descriptive Statistics for Academic Achievement by Gender and Ethnicity*

	n	M	SD
Gender			
Male	111	10.32	1.96
Female	127	11.79	1.70
Ethnicity			
Kazakh	172	11.17	1.99
Russian	34	10.59	1.35
Other	32	11.25	2.33

Table 5 includes the means and standard deviations on the students' academic achievement broken down by family related factors, such as level of family income, parental education, and parental occupation. The analysis of the level of family income demonstrated that students from the middle-income families ( $M = 11.29$ ,  $SD = 1.99$ ) and from the families with high income level ( $M = 11.04$ ,  $SD = 1.96$ ) reported similar scores on academic achievement, while students from the low-income families reported lower scores on academic achievement ( $M = 9.50$ ,  $SD = 2.12$ ). If to consider father's education, it was evident that students whose father had vocational and technical education ( $M = 11.24$ ,  $SD = 1.96$ ), or obtained Bachelor ( $M = 11.19$ ,  $SD = 1.87$ ), or Master degree ( $M = 11.40$ ,  $SD = 2.41$ ) performed better than students whose father had less than high school education ( $M = 9.75$ ,  $SD = 1.50$ ), high school only ( $M = 10.40$ ,  $SD = 2.67$ ), two years of college ( $M = 10.50$ ,  $SD = 1.00$ ), or Ph.D. ( $M = 10.69$ ,  $SD = 2.21$ ). Regarding mother's education, it was indicated that students whose mother had two years of college ( $M = 11.20$ ,  $SD = 1.64$ ), obtained Bachelor degree ( $M = 11.20$ ,  $SD = 1.90$ ), Master degree ( $M = 11.48$ ,  $SD = 2.06$ ), or Ph.D. ( $M = 11.08$ ,  $SD = 2.19$ ) demonstrated better performance than those students whose mother had less than high school education ( $M = 10.00$ ,  $SD = .01$ ), high school only ( $M = 10.88$ ,  $SD = 3.36$ ), or vocational and technical education ( $M = 10.18$ ,  $SD = 1.55$ ).

An analysis of the father's occupation showed that students performed better if their father worked in industry ( $M = 14.46$ ,  $SD = 1.86$ ) or was unemployed ( $M = 13.50$ ,  $SD$

= 1.00) compared to students whose father worked in service ( $M = 11.01$ ,  $SD = 1.95$ ), agriculture ( $M = 10.50$ ,  $SD = 2.25$ ), or if he was retired ( $M = 10.50$ ,  $SD = 2.53$ ).

Considering mother's occupation, it was evident that students whose mother worked in industry ( $M = 12.09$ ,  $SD = 1.81$ ) or agriculture ( $M = 12.00$ ,  $SD = .01$ ) got better scores on academic achievement than students whose mother worked in service ( $M = 11.07$ ,  $SD = 1.89$ ), was retired ( $M = 11.00$ ,  $SD = 1.41$ ), or unemployed ( $M = 10.91$ ,  $SD = 2.38$ ).

Table 5.

<i>Academic Achievement by Family SES</i>			
	<i>n</i>	<i>M</i>	<i>SD</i>
Family income			
Low income family	2	9.50	2.12
Middle income family	80	11.29	1.99
High income family	153	11.04	1.96
Father's education			
Less than high school	4	9.75	1.50
High school only	10	10.40	2.67
VET	25	11.24	1.96
Two years of college	4	10.50	1.00
Bachelor degree	156	11.19	1.87
Master degree	20	11.40	2.41
Ph.D	13	10.69	2.21
Mother's education			
Less than high school	2	10.00	.01
High school only	8	10.88	3.36
VET	17	10.18	1.55
Two years of college	5	11.20	1.64
Bachelor degree	171	11.20	1.90
Master degree	21	11.48	2.06
Ph.D	12	11.08	2.19
Father's occupation			
Service	178	11.01	1.95
Industry	41	14.46	1.86
Agriculture	4	10.50	2.51
Retired	2	10.50	2.53
Unemployed	4	13.50	1.00
Mother's occupation			
Service	185	11.07	1.89
Industry	11	12.09	1.81
Agriculture	2	12.00	.01
Retired	2	11.00	1.41
Unemployed	36	10.91	2.38

In this chapter, I have presented descriptive analysis of students' academic achievement. Overall, the participants demonstrated good academic performance. Moreover, female students reported higher academic achievement than their male counterparts do. Furthermore, Kazakh students and students from minority ethnical groups demonstrated higher scores on academic achievement compared to Russian students. Academic achievement varies according to the family income level. In particular, students from high and middle income families reported higher academic scores than students from low income families. Moreover, students' academic performance also differs according to the parental education level and field of occupation.

**Inferential analysis.** In the previous section, I presented descriptive information on the students' academic achievement. In this section, I will present the results of the inferential analysis for academic achievement. Independent-sample t-tests and one-way between-groups ANOVAs were applied for inferential analysis. First, inferential analysis of effect student gender has on academic achievement will be provided. Second, inferential analysis of effect of ethnicity on students' academic achievement will be presented. Finally, inferential analysis of effect family SES factors, such as family income level, parental education and occupation, have on students' achievement will be provided.

***Effect of gender on academic achievement.*** An independent samples t-test was conducted with the purpose to compare students' academic achievement scores for boys and girls. This test was found to be statistically significant,  $t(236)=-6.21, p < .001, d=.80$  (moderate effect). These results indicated that female students ( $M = 11.79, SD=1.70$ ) reported significantly higher scores for academic achievement than did male students ( $M = 10.32, SD = 1.96$ ). In other words, academic achievement differs significantly according to gender, and girls demonstrate higher academic achievement than boys do.

***Effect of ethnicity on academic achievement.*** A one-way between groups ANOVA

was conducted to compare the effect of students' ethnicity on their academic achievement. Students were divided into three groups according to their ethnicity (Group 1: Kazakh students; Group 2: Russian students; Group 3: Students of other minor ethnical groups). There was not a statistically significant difference at the  $p < .05$  level of the three groups:  $F(237)=1,38, p=.26$ . The effect size, calculated using eta square was .012. Taking together, these results suggested that ethnicity does not have an effect on students' academic achievement.

***Effect of family income level on academic achievement.*** A one-way between groups ANOVA was conducted to compare the effect of students' family income on their academic achievement. Students were divided into three groups according to their family income level (Group 1: students from the low income family; Group 2: students from the family with middle income; Group 3: students from the high income family). There was not a statistically significant difference at the  $p < .05$  level of the three groups:  $F(234)=1.09, p = .34$ . The effect size, calculated using eta square, was .009. These results suggested that the level of family income does not have an effect on students' academic achievement.

***Effect of father's education on academic achievement.*** A one-way between groups ANOVA was conducted to compare the effect of father's education on students' academic achievement. Students were divided into seven groups according to their father's education (Group 1: Less than high school; Group 2: High school only; Group 3: VET; Group 4: Two years of college; 5 Group: Bachelor degree; 6 Group: Master degree; 7 Group; Ph.D.). There was not a statistically significant difference at the  $p < .05$  level of the seven groups:  $F(231)=.82, p=.55$ . The effect size, calculated using eta square, was .02. These results suggested that the level of father's education does not have an effect on students' academic achievement.

***Effect of mother's education on academic achievement.*** A one-way between groups ANOVA was conducted to compare the effect of mother's education on students' academic achievement. Students were divided into seven groups according to their mother's education (Group 1: Less than high school; Group 2: High school only; Group 3: VET; Group 4: Two years of college; 5 Group: Bachelor degree; 6 Group: Master degree; 7 Group; Ph.D.). There was not a statistically significant difference at the  $p < .05$  level of the seven groups:  $F(235)=.94, p=.47$ . The effect size, calculated using eta square, was .02. These results suggested that the level of mother's education does not have an effect on students' academic achievement.

***Effect of father's occupation on academic achievement.*** A one-way between groups ANOVA was conducted to compare the effect of father's occupation on students' academic achievement. Students were divided into five groups according to their father's field of occupation (Group 1: Service; Group 2: Industry; Group 3: Agriculture; Group 4: Retired; Group 5: Unemployed). There was not a statistically significant difference at the  $p < .05$  level of the five groups:  $F(228)=2.10, p=.08$ . Taking together, these results suggested that the field of father's occupation does not have an effect on students' academic achievement.

***Effect of mother's occupation on academic achievement.*** A one-way between groups ANOVA was conducted to compare the effect of mother's occupation on students' academic achievement. Students were divided into five groups according to their mother's field of occupation (Group 1: Service; Group 2: Industry; Group 3: Agriculture; Group 4: Retired; Group 5: Unemployed). There was not a statistically significant difference at the  $p < .05$  level of the seven groups:  $F(235)=.89, p=.47$ . The effect size, calculated using eta square, was .02. Taking together, these results suggested that the field of mother's occupation does not have an effect on students' academic achievement.

In this section, I have provided inferential analysis of effect students' gender, ethnicity, and family SES have on academic achievement. The results showed the differences in academic achievement among girls and boys. Female students demonstrated better performance in school than boys do. Moreover, ethnicity has no influence on students' academic achievement. In particular, students from different ethnic groups have similar academic scores. Furthermore, family SES, including family income level, parental education level and field of occupation, has no influence on students' academic achievement.

### **Educational Expectations**

In the previous section, I have given descriptive and inferential analysis of academic achievement. In this section, I will present descriptive analysis of the data concerning students' educational expectations. First, the results of students' educational expectations, then results of the highest level of education they hope to achieve will be presented. Moreover, the descriptive analysis of educational expectations and the highest level of education students hope to achieve will be broken by gender, ethnicity, grade, and family SES.

**Descriptive analysis.** In this section, I will present overall descriptive analysis of students' educational expectations. Table 6 includes the number and percentage of the answers indicating the highest level of education students hope to achieve, and the numbers of answers, means and standard deviations on the students' educational expectations. Results showed the overwhelming part of the participants reported that they hope to achieve at least Master degree (43.6%). Moreover, most of the students agreed to put effort into education if it lead them to have better job positions ( $M = 4.49$ ,  $SD = .65$ ). Overall, the participants demonstrated high level of educational expectations ( $M = 16.60$ ,  $SD = 2.93$ , minimum=8.00, maximum=20.00).



Table 6.

*Descriptive Statistics for Educational Expectations*

	n	%	<i>M</i>	<i>SD</i>
The highest level of education students hope to achieve	220		5.80	.84
High school	3	1.4		
VET	5	2.3		
Bachelor degree	71	32.3		
Master degree	96	43.6		
Ph.D	45	20.5		
Educational expectations	238		16.60	2.93
I'm interested in attending more education			4.16	.74
I'm willing to work hard to get more education			4.10	.73
My goal is get more education			3.85	.93
I would put effort into education if it leads me to better job			4.49	.65

**Educational expectations.** Table 7 presents the means and standard deviations on the educational expectations broken by gender and ethnicity. Results indicated that female students ( $M = 17.10$ ,  $SD = 2.50$ ) reported higher educational expectations than their male counterparts ( $M = 16.02$ ,  $SD = 2.62$ ). If to consider the students' ethnical origin, Kazakh students ( $M = 16.80$ ,  $SD = 2.32$ ) and students from other minor ethnical groups ( $M = 16.31$ ,  $SD = 2.89$ ) had the highest scores on educational expectations respectively, while Russian students had the lowest points ( $M = 15.79$ ,  $SD = 2.09$ ).

Table 7.

*Descriptive Statistics for Educational Expectations by Gender and Ethnicity*

	n	<i>M</i>	<i>SD</i>
Gender			
Male	111	16.02	2.62
Female	127	17.10	2.05
Ethnicity			
Kazakh	172	16.80	2.32
Russian	34	15.79	2.09
Other	32	16.31	2.89

Table 8 includes the means and standard deviations on the students' educational expectations broken down by family related factors, such as level of family income, parental education, and parental occupation. The analysis of the level of family income demonstrated that students from the low-income family ( $M = 17.00$ ,  $SD = 4.24$ ) had higher educational expectations than students from the families with high income level ( $M=16.44$ ,  $SD = 2.46$ ) and middle-income family ( $M = 16.70$ ,  $SD = 2.24$ ). If to consider father's education, it was evident that students whose father had Ph.D. ( $M = 17.23$ ,  $SD = 2.55$ ), Master degree ( $M = 16.80$ ,  $SD = 1.44$ ), or Bachelor degree ( $M = 16.73$ ,  $SD = 2.27$ ) reported the higher level of educational expectations in comparison with students whose father had two years of college ( $M = 14.00$ ,  $SD = 3.16$ ), high school only ( $M = 15.60$ ,  $SD = 3.69$ ), less than high school education ( $M = 16.00$ ,  $SD = .01$ ), or vocational and technical education ( $M = 16.12$ ,  $SD = 2.92$ ). Regarding mother's education, it was indicated that students whose mother had two years of college ( $M = 18.00$ ,  $SD = 2.35$ ), Master degree ( $M = 17.14$ ,  $SD = 1.68$ ), Ph.D. ( $M = 17.50$ ,  $SD = 2.15$ ), or vocational and technical education ( $M=16.59$ ,  $SD = 2.55$ ) demonstrated higher educational expectations than students whose mother had less than high school education ( $M = 15.00$ ,  $SD = 1.41$ ), high school only ( $M = 15.88$ ,  $SD=3.94$ ), or Bachelor degree ( $M = 16.50$ ,  $SD = 2.39$ ). An analysis of the father's occupation showed that students had higher educational expectations if their father were unemployed ( $M = 17.25$ ,  $SD = 1.89$ ) rather than he worked in industry ( $M = 16.88$ ,  $SD=1.92$ ), in service ( $M = 16.60$ ,  $SD = 2.49$ ), agriculture ( $M = 15.50$ ,  $SD = 3.10$ ), or if he was retired ( $M = 15.50$ ,  $SD = 2.53$ ). If consider mother's occupation, it was evident that students whose mother worked in agriculture ( $M = 19.00$ ,  $SD = .01$ ) demonstrated higher level of educational expectations than students whose mother worked industry ( $M = 15.73$ ,  $SD = 3.47$ ), in service ( $M = 16.57$ ,  $SD = 2.24$ ), or was retired ( $M = 16.00$ ,  $SD = .01$ ), or unemployed ( $M = 16.94$ ,  $SD = 2.86$ ).

Table 8.

*Descriptive Statistics for Educational Expectations by Family SES*

	n	M	SD
Family income			
Low income family	2	17.00	4.24
Middle income family	80	16.70	2.24
High income family	153	16.44	2.46
Father's education			
Less than high school	4	16.00	.01
High school only	10	15.60	3.69
VET	25	16.12	2.92
Two years of college	4	14.00	3.16
Bachelor degree	156	16.73	2.27
Master degree	20	16.80	1.44
Ph.D	13	17.23	2.55
Mother's education			
Less than high school	2	15.00	1.41
High school only	8	15.88	3.94
VET	17	16.59	2.55
Two years of college	5	18.00	2.35
Bachelor degree	171	16.50	2.39
Master degree	21	17.14	1.68
Ph.D	12	17.50	2.15
Father's occupation			
Service	178	16.60	2.49
Industry	41	16.88	1.92
Agriculture	4	15.50	3.10
Retired	2	15.50	.70
Unemployed	4	17.25	1.89
Mother's occupation			
Service	185	16.57	2.24
Industry	11	15.73	3.47
Agriculture	2	19.00	.01
Retired	2	16.00	.01
Unemployed	36	16.94	2.86

***The highest level of education.*** Table 9 presents the means and standard deviations on the highest level of education students hope to achieve broken by gender and ethnicity. Results indicated that female students ( $M = 6.02$ ,  $SD = .76$ ) hoped to achieve the higher level of education than did their male counterparts ( $M = 5.53$ ,  $SD = .86$ ). If to consider the students' ethnical origin, Kazakh ( $M = 5.85$ ,  $SD = .84$ ), Russian ( $M = 5.34$ ,  $SD = .83$ ) and

students from other minor ethnical groups ( $M = 5.97$ ,  $SD = .67$ ) hoped to achieve similar levels of education.

Table 9.

*Descriptive Statistics for The Highest Level of Education by Gender and Ethnicity*

	n	M	SD
Gender			
Male	101	5.53	.86
Female	119	6.02	.76
Ethnicity			
Kazakh	158	5.85	.84
Russian	32	5.34	.83
Other	30	5.97	.67

Table 10 includes the means and standard deviations on the highest level of education students hoped to achieve broken down by family related factors, such as level of family income, parental education, and parental occupation. The analysis of the level of family income demonstrated that students from the low-income family ( $M = 6.00$ ,  $SD=1.41$ ) hoped to achieve the higher level of education than did students from the families with high income level ( $M = 5.87$ ,  $SD = .80$ ) and middle-income family ( $M=5.69$ ,  $SD = .83$ ). If to consider father's education, it was evident that students whose father had Ph.D ( $M = 6.50$ ,  $SD = .52$ ), Master degree ( $M = 5.95$ ,  $SD = 1.05$ ), or Bachelor degree ( $M=5.78$ ,  $SD = .79$ ) reported the higher level of education planning to achieve in comparison with students whose father had vocational and technical education ( $M = 5.52$ ,  $SD = .93$ ), two years of college ( $M = 5.33$ ,  $SD = .58$ ), high school only ( $M = 5.38$ ,  $SD=.74$ ), or less than high school education ( $M = 5.25$ ,  $SD = .96$ ). Regarding mother's education, it was indicated that students whose mother had Ph.D. ( $M = 6.64$ ,  $SD = .67$ ), Master degree ( $M = 6.00$ ,  $SD = .63$ ), or high school only ( $M = 6.00$ ,  $SD = .01$ ) reported higher level of education planning to achieve in comparison with students whose mother had vocational and technical education ( $M = 5.14$ ,  $SD = .66$ ), two years of college ( $M = 5.40$ ,  $SD = .84$ ), less than high school education ( $M = 5.50$ ,  $SD = .70$ ), or Bachelor degree ( $M = 5.77$ ,  $SD=.85$ ). An analysis of the father's occupation showed that students planned to achieve

higher level of education if their father were retired ( $M = 6.50$ ,  $SD = .70$ ) rather than he was unemployed ( $M = 6.00$ ,  $SD = 1.41$ ), or he worked in industry ( $M = 5.78$ ,  $SD = .77$ ), in service ( $M = 5.76$ ,  $SD = .84$ ), or agriculture ( $M = 5.00$ ,  $SD = 1.41$ ). If to consider mother's occupation, it was evident that students whose mother was unemployed ( $M = 5.94$ ,  $SD = .83$ ) reported higher level of education planning to achieve than students whose mother worked in industry ( $M = 5.80$ ,  $SD = 1.03$ ), in service ( $M = 5.77$ ,  $SD = .83$ ), who was retired ( $M = 5.50$ ,  $SD = .71$ ), or worked in agriculture ( $M = 5.00$ ,  $SD = .01$ ).

Table 10.  
*Descriptive Statistics for The Highest Level by Family SES*

	n	M	SD
Family income			
Low income family	2	6.00	1.41
Middle income family	70	5.69	.83
High income family	146	5.87	.80
Father's education			
Less than high school	4	5.25	.96
High school only	8	5.38	.74
VET	21	5.52	.93
Two years of college	3	5.33	.58
Bachelor degree	147	5.78	.79
Master degree	20	5.95	1.05
Ph.D	12	6.50	.52
Mother's education			
Less than high school	2	5.50	.70
High school only	7	6.00	.01
VET	14	5.14	.66
Two years of college	5	5.40	.84
Bachelor degree	159	5.77	.85
Master degree	21	6.00	.63
Ph.D	11	6.64	.67
Father's occupation			
Service	166	5.76	.84
Industry	39	5.87	.77
Agriculture	2	5.00	1.41
Retired	2	6.50	.70
Unemployed	4	6.00	1.41
Mother's occupation			
Service	172	5.77	.83
Industry	10	5.80	1.03
Agriculture	2	5.00	.01
Retired	2	5.50	.71
Unemployed	33	5.94	.83

In this section, I have presented present descriptive analysis of students' educational expectations. Overall, the participants demonstrated high level of educational expectations, as they hope to obtain at least Bachelor or Master degree. Female students indicated the higher level of expectations in regard to their future education. Moreover, Kazakh students and students from minority ethnic groups have the higher expectations than Russian students do. Considering family SES, students from families with low income level have the higher expectations than students from families with high and middle income level. Furthermore, students whose parents obtained more education hope to achieve higher level of education by themselves.

**Inferential analysis.** In the previous section, I presented descriptive information on the students' educational expectations and the highest level of education they hope to achieve. In this section, I will present the findings derived from inferential analysis for educational expectations and the highest level of education.

**Educational expectations.** In this section, I will demonstrate inferential analysis for students' educational expectations. The independent-sample t-test and one-way between-groups ANOVA were applied for inferential analysis. First, inferential analysis of effect student gender has on educational expectations will be provided. Second, inferential analysis of effect of ethnicity on students' educational expectations will be presented. Finally, inferential analysis of effect family SES factors, such as family income level, parental education and occupation, have on students' expectations will be provided.

*Effect of gender on educational expectations.* In order to compare the means of two groups on continuous variables the independent-sample t-test was used. An independent-samples t-test was conducted to compare educational expectations scores for male and female students. There was a significant difference in these scores for males ( $M=16.02$ ,  $SD = 2.62$ ) and females ( $M = 17.10$ ,  $SD = 2.05$ );  $t(236)=-3.57$ ,  $p < .001$ ,  $d=.46$  (modest effect).

These results suggest that students' educational expectations differ significantly according to gender, or female students have higher educational expectations than their male peers.

*Effect of ethnicity on educational expectations.* A one-way between groups ANOVA was conducted to compare the effect of students' ethnicity on their educational expectations. Students were divided into three groups according to their ethnicity (Group 1: Kazakh students; Group 2: Russian students; Group 3: Students of other minor ethnical groups). There was marginally significant difference at the  $p < .05$  level of the three groups:  $F(237) = 2.85, p = .06$ . The effect size, calculated using eta square, was .24. Post-hoc comparison using the Scheffe test indicated that the mean scores for Kazakh ( $M = 16.86, SD = 2.32$ ) and students from other ethnical groups ( $M = 16.31, SD = 2.89$ ) marginally differ from the scores of Russian students ( $M = 15.79, SD = 2.09$ ). Overall, these results suggested that ethnicity has an effect on students' educational expectations. Students from Kazakh and minor ethnical groups demonstrated higher educational expectations than did Russian students.

*Effect of family income level on educational expectations.* A one-way between groups ANOVA was conducted to compare the effect of students' family income on their educational expectations. Students were divided into three groups according to their families' income level (Group 1: students from the low income families; Group 2: students from the families with middle income level; Group 3: students from the high income families). There was not a statistically significant difference at the  $p < .05$  level of the three groups:  $F(234) = 1.20, p = .30$ . The effect size, calculated using eta square, was .01. Taking together, these results suggested that the level of family income does not have an effect on students' academic achievement.

*Effect of father's education on educational expectations.* A one-way between groups ANOVA was conducted to compare the effect of father's education on students'

educational expectations. Students were divided into seven groups according to their father's education (Group 1: Less than high school; Group 2: High school only; Group 3: VET; Group 4: Two years of college; 5 Group: Bachelor degree; 6 Group: Master degree; 7 Group; Ph.D.). There was not a statistically significant difference at the  $p < .05$  level of the seven groups:  $F(231)=1.51, p = .16$ . The effect size, calculated using eta square, was .04. These results suggested that the level of father's education does not have an effect on students' educational expectations.

*Effect of mother's education on educational expectations.* A one-way between groups ANOVA was conducted to compare the effect of mother's education on students' educational expectations. Students were divided into seven groups according to their father's education (Group 1: Less than high school; Group 2: High school only; Group 3: VET; Group 4: Two years of college; 5 Group: Bachelor degree; 6 Group: Master degree; 7 Group; Ph.D.). There was not a statistically significant difference at the  $p < .05$  level of the seven groups:  $F(235) = 1.07, p = .38$ . The effect size, calculated using eta square, was .03. These results suggested that the level of mother's education does not have an effect on students' educational expectations.

*Effect of father's occupation on educational expectations.* A one-way between groups ANOVA was conducted to compare the effect of father's occupation on students' educational expectations. Students were divided into five groups according to their father's field of occupation (Group 1: Service; Group 2: Industry; Group 3: Agriculture; Group 4: Retired; Group 5: Unemployed). There was not a statistically significant difference at the  $p < .05$  level of the seven groups:  $F(228) = .52, p = .72$ . The effect size, calculated using eta square, was .009. These results suggested that the field of father's occupation does not have an effect on students' educational expectations.

*Effect of mother's occupation on educational expectations.* A one-way between



groups ANOVA was conducted to compare the effect of mother's occupation on students' educational expectations. Students were divided into five groups according to their father's field of occupation (Group 1: Service; Group 2: Industry; Group 3: Agriculture; Group 4: Retired; Group 5: Unemployed). There was not a statistically significant difference at the  $p < .05$  level of the seven groups:  $F(235) = 1.09, p = .36$ . The effect size, calculated using eta square, was .02. These results suggested that the field of mother's occupation does not have an effect on students' educational expectations.

***The highest level of education.*** In this section, I will demonstrate inferential analysis for the highest level of education students hope to achieve. The Chi-square test and one-way between-groups ANOVA were applied for inferential analysis. First, inferential analysis of effect student gender has on the highest level of education students hope to achieve will be provided. Second, inferential analysis of effect of ethnicity on the highest level of education students hope to achieve will be presented. It will be followed by the inferential analysis of effect of grade on the highest level of education students hope to achieve. Finally, inferential analysis of effect family SES factors, such as family income level, parental education and occupation, have on the highest level of education students hope to achieve will be provided.

***Effect of gender on the highest level of education.*** A Chi-square test was used to compare what is the highest level of education that male and female students hope to achieve accordingly. There was a significant difference in these scores for males ( $M=5.53, SD = .86$ ) and females ( $M = 6.02, SD = .76$ );  $\chi^2=21.29, p < .001$ . These results suggest that students' educational expectations about the highest level of education they hope to achieve differ significantly according to gender. Female students hope to achieve higher level of education than do their male counterparts.

***Effect of ethnicity on the highest level of education.*** A one-way between groups

ANOVA was conducted to compare the effect of students' ethnicity on the highest level of education they hope to achieve. Students were divided into three groups according to their ethnicity (Group 1: Kazakh students; Group 2: Russian students; Group 3: Students of other minor ethnic groups). There was a difference at the  $p < .05$  level of the three groups:  $F(219) = 5.92, p = .003$ . The effect size, calculated using eta square, was .05. Post-hoc comparison using the Scheffe test indicated that the mean scores for Kazakh students ( $M = 5.85, SD = .84$ ), students from other ethnic groups ( $M = 5.97, SD = .67$ ), and Russian students ( $M = 5.35, SD = .83$ ) were different. Taking together, these results suggested that ethnicity has an effect on the level of education students hope to achieve. Kazakh students and students from other minor ethnic groups hope to achieve higher level of education than do Russian students.

*Effect of family income level on the highest level of education.* A one-way between groups ANOVA was conducted to compare the effect of students' family income on the highest level of education students hope to achieve. Students were divided into three groups according to their families' income level (Group 1: students from the low income families; Group 2: students from the families with middle income level; Group 3: students from the high income families). There was not a statistically significant difference at the  $p < .05$  level of the three groups:  $F(217) = 1.25, p = .30$ . The effect size, calculated using eta square, was .01. These results suggested that the level of family income does not have an effect on the level of education students hope to achieve.

*Effect of father's education on the highest level of education.* A one-way between groups ANOVA was conducted to compare the effect of father's education on the highest level of education students hope to achieve. Students were divided into seven groups according to their father's education (Group 1: Less than high school; Group 2: High school only; Group 3: VET; Group 4: Two years of college; 5 Group: Bachelor degree; 6

Group: Master degree; 7 Group; Ph.D.). There was a statistically significant difference at the  $p < .01$  level of the seven groups:  $F(214)=2.79, p=.01$ . The effect size, calculated using eta square, was .07. Post-hoc comparison using the Scheffe test indicated that the mean scores for the students whose father has less than high school ( $M = 5.25, SD = .96$ ), high school only ( $M = 5.38, SD = .74$ ), VET ( $M = 5.25, SD = .93$ ), two years of college ( $M=5.33, SD = .58$ ), Bachelor degree ( $M = 5.78, SD = .79$ ), Master degree ( $M = 5.95, SD=1.05$ ), and Ph.D. ( $M = 6.50, SD = .52$ ) were different. Taking together, these results suggested that the level of father's education has an effect the highest level of education students hope to achieve. Students whose father had Bachelor, Master, or Ph.D. degree hope to achieve the higher level of education than students whose father had less than high school, high school only, vocational education, or two years of college.

*Effect of mother's education on the highest level of education.* A one-way between groups ANOVA was conducted to compare the effect of mother's education on the highest level of education students hope to achieve. Students were divided into seven groups according to their father's education (Group 1: Less than high school; Group 2: High school only; Group 3: VET; Group 4: Two years of college; 5 Group: Bachelor degree; 6 Group: Master degree; 7 Group; Ph.D.). There was a statistically significant difference at the  $p < .001$  level of the seven groups:  $F(218)=4.14, p=.001$ . The effect size, calculated using eta square, was .11. Post-hoc comparison using the Scheffe test indicated that the mean scores for the students whose mother has less than high school ( $M = 5.50, SD = .70$ ), high school only ( $M = 6.00, SD = .001$ ), VET ( $M = 5.14, SD = .66$ ), Two years of college ( $M = 5.40, SD = .84$ ), Bachelor degree ( $M = 5.77, SD = .85$ ), Master degree ( $M = 6.00, SD= .63$ ), and Ph.D. ( $M = 6.64, SD = .67$ ) were different. These results suggested that the level of mother's education has an effect on the highest level of education students hope to achieve. Students whose mother had high school education, Bachelor, Master, or Ph.D.

degree hope to achieve the higher level of education than students whose mother had less than high school, vocational education, or two years of college.

*Effect of father's occupation on the highest level of education.* A one-way between groups ANOVA was conducted to compare the effect of father's occupation on the highest level of education students hope to achieve. Students were divided into five groups according to their father's field of occupation (Group 1: Service; Group 2: Industry; Group 3: Agriculture; Group 4: Retired; Group 5: Unemployed). There was not a statistically significant difference at the  $p < .05$  level of the five groups:  $F(212)=1.01, p=.40$ . The effect size, calculated using eta square, was .02. These results suggested that the field of father's occupation does not have an effect on the highest level of education students hope to achieve.

*Effect of mother's occupation on the highest level of education.* A one-way between groups ANOVA was conducted to compare the effect of mother's occupation on the highest level of education students hope to achieve. Students were divided into five groups according to their father's field of occupation (Group 1: Service; Group 2: Industry; Group 3: Agriculture; Group 4: Retired; Group 5: Unemployed). There was not a statistically significant difference at the  $p < .05$  level of the five groups:  $F(218)=.79, p=.54$ . The effect size, calculated using eta square, was .01. The results suggested that the field of mother's occupation does not have an effect on the highest level of education students hope to achieve.

In this section, I presented the results of inferential analysis of effect of students' gender, ethnicity, and family SES factors have on educational expectations. According to the results, educational expectations differ by. Female students have higher expectations for their future than males do. Moreover, educational expectations vary by students' ethnicity. In particular, Kazakh students and students from minority ethnic groups

demonstrated higher expectations than Russian students do. Furthermore, students' educational expectations differ by parental education. Specifically, students whose parents obtained more education hope to get a higher level of education. In the next section, correlational analysis will be provided.

### **Correlational Analysis**

In the previous section, I have presented results of inferential analysis conducted with the purpose to examine how students' gender, ethnicity, grade, and family SES affect academic achievement, educational expectations, and the highest level of education students hope to achieve. In this section, I will demonstrate results of inferential analysis to understand how parental involvement, school environment, and peer support relate to academic achievement, educational expectations, and the highest level of education students hope to achieve. Correlational analysis was applied to determine the relationships between these variables. First, results of the relationship between parental involvement, school environment, peer support and academic achievement will be presented. Then, results of relationship between parental involvement, school environment, peer support and educational expectations will be provided. It will be followed by the results of relationship between parental involvement, school environment, peer support and the highest level of education students hope to achieve. This analysis will allow to determine if family and school contexts have a relationship with students' academic achievement and educational expectations. Parental involvement is a cumulative score for six items from the questionnaire that measured students' perception of the parents' involvement in their schooling. School environment is a cumulative score for six items from the questionnaire that measured students' perception of their teachers' support. Peer support is a cumulative score for five items from the questionnaire that measured students' perception of their peers' support. Correlations among parental involvement, school environment, and peer

support with academic achievement, educational expectations, and highest level of education are reported in Table 11.

**Academic achievement.** The correlations among parental involvement, school environment, peer support, and students' academic achievement were investigated using Pearson product-moment correlation coefficient. Results evidenced that academic achievement was unrelated to parental involvement ( $r=.07, p=.26$ ) and peer support ( $r=.06, p=.35$ ), but a modest positive correlation between academic achievement and school environment was found ( $r=.16, p=.02$ ).

**Educational expectations.** Results indicated that students' educational expectations were positively associated with parental involvement ( $r=.18, p=.007$ ), school environment ( $r=.22, p=.001$ ), and peer support ( $r=.21, p=.001$ ).

**The highest level of education.** The results suggested that the highest level of education students hope to achieve was unrelated to parental involvement ( $r=.04, p=.52$ ), as well as to school environment ( $r=-.03, p=.64$ ), and peer support ( $r=-.09, n=220, p=.18$ ).

Table 11.

*Intercorrelation Matrix Among Academic Achievement, Educational Expectations, Family and School Contexts Related Variables (N=238)*

Scale	1	2	3	4	5	6
1. Academic achievement	-	.293**	.250**	.074	.157**	.60
2. Educational expectations		-	.311**	.175**	.215**	.209**
3. Highest level of education			-	.044	-.032	-.091
4. Parental involvement				-	.142*	.235**
5. School environment					-	.642**
6. Peer support						-

\* $p < .05$ . \*\* $p < .01$

In this section, I demonstrated the results of correlational analysis for parental involvement, school environment, peer support, academic achievement, educational

expectations, and the highest level of education students hope to achieve. There is a positive correlation between parental involvement, school environment, peer support, and students' academic achievement and their educational expectations. However, all these variables were unrelated to the highest level of education students hope to achieve.

### Regression Analysis

In this section, I will present regression analysis for students' academic achievement, educational expectations, and the highest level of education they hope to achieve. This analysis will allow to examine the effect of demographic, family and school factors on the high school students' academic achievement and their further expectations in pursuing education.

**Academic achievement.** Table 12 demonstrates the regression of academic achievement onto student and family related characteristics, as well as family and school contexts related variables. Regression analysis corroborated the great importance of gender ( $B = .42, t = 6.63, p < .001$ ) and school environment ( $B = .29, t = 3.61, p < .001$ ) in the prediction of students' academic achievement. Other variables included in the regression analysis, such as ethnicity, family SES factors, parental involvement, and peer support, did not demonstrate predictive capability over students' academic achievement.

Table 12.

*Regression of Academic Achievement onto Student and Family Related Characteristics, and Family and School Contexts Related Factors*

	Academic achievement	
	<i>B</i>	<i>t</i>
Gender	.42	6.63***
Ethnicity	-.02	-.35
Family income	-.03	-.46
Father's education	.02	.23
Mother's education	.10	1.37
Father's occupation	.10	1.63
Mother's occupation	.02	.25
Parental involvement	.01	.18
School environment	.29	3.61***
Peer support	-.10	-1.20

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$

**Educational expectations.** Table 13 demonstrates the regression of educational expectations onto student and family related characteristics, as well as family and school contexts related variables. Regression analysis again corroborated the great importance of gender ( $B = .29, t = 4.59, p < .001$ ) and school environment ( $B = .21, t = 2.61, p < .01$ ) in the prediction of students' educational expectations. Moreover, family income ( $B = -.13, t = -1.98, p < .05$ ) was negatively related to educational expectations. Interestingly, the higher the family income the lower students' expectations. Other variables included in the regression analysis, such as ethnicity, parental education and occupation, parental involvement, and peer support, did not demonstrate predictive capability over students' educational expectations.

Table 13.

*Regression of Educational Expectations onto Student and Family Related*

*Characteristics, and Family and School Contexts Related Factors*

	Educational Expectations	
	<i>B</i>	<i>t</i>
Gender	.29	4.59***
Ethnicity	-.08	-1.24
Family income	-.13	-1.98*
Father's education	.14	1.81
Mother's education	.05	.69
Father's occupation	-.03	-.53
Mother's occupation	.11	1.69
Parental involvement	.09	1.27
School environment	.21	2.61**
Peer support	.10	1.22

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$

**The highest level of education.** Table 14 demonstrates the regression of the highest level of education students hope to achieve onto student and family related characteristics, as well as family and school contexts related variables. Regression analysis corroborated the great importance of gender ( $B = .31, t = 4.71, p < .001$ ) and father's education ( $B = .21, t = 2.62, p < .01$ ) in the prediction of the highest level of education



students hope to achieve. Other variables included in the regression analysis, such as ethnicity, family income, parental occupation, parental involvement, school environment, and peer support, did not demonstrate predictive capability over the highest level of education students hope to achieve.

Table 14.

*Regression of The Highest Level of Education Students Hope to Achieve onto Student and Family Related Characteristics, and Family and School Contexts Related Factors*

	The Highest Level of Education	
	<i>B</i>	<i>t</i>
Gender	.31	4.71***
Ethnicity	-.04	-.62
Family income	.10	1.43
Father's education	.21	2.62**
Mother's education	.07	.81
Father's occupation	.07	1.04
Mother's occupation	.08	1.25
Parental involvement	.01	.07
School environment	.16	1.88
Peer support	-.14	-1.64

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$

In this section, I provided the result of regression analysis used to examine the effect of demographic, family and school factors on the high school students' academic achievement and their further expectations in pursuing education. It is found that gender and school environment are the strongest predictors of students' academic achievement. Moreover, gender, school environment, and father's education have significant influence on students' further educational expectations. Interestingly, family income level negatively relates to students' expectations for further education.

## **Findings**

In the previous sections, I presented the results of the data analysis. In this section, I will provide the following findings based on my data analysis results.

For the first research question, which is aimed to find out how do gender, ethnicity, family SES, parental involvement, school environment, and peer support affect students' academic achievement, there are the following findings:

1. Gender is a great predictor of students' academic achievement. Female students demonstrated better academic performance in comparison with male students.
2. Ethnicity does not have an effect on students' academic achievement. Students from Kazakh, Russian, and other ethnical groups reported similar academic scores.
3. Family SES, including family income level, parental education and occupation, has no effect on their child's performance. Students from families with different socioeconomic status demonstrated similar academic achievement.
4. Parental involvement does not have an effect on students' academic achievement. Students from families with different levels of parental involvement reported similar academic scores. However, parental involvement has positive relation to students' performance.
5. Among school-related factors, including school environment and peer support, only school environment was evidenced as a significant predictor of students' academic achievement. However, peer support still positively relates to academic performance.

For the second research question which aimed to find out how do gender, ethnicity, family SES, parental involvement, school environment, and peer support affect students' educational expectations, there are the following findings:

1. Students' educational expectations differ by gender. Female students have the higher educational expectations in comparison with male students, as well as they hope to achieve more education than their male counterparts do.

2. Ethnicity has an effect on students' educational expectations and the level of education they hope to achieve. The results suggest that Kazakh students and students from other ethnical groups demonstrate the higher educational expectations, as well hope to achieve the higher level of education than Russian students do.
3. Family income level has a negative effect on students' educational expectations. The lower the income level is, the higher educational expectations students have.
4. There is an influence of parental education on students' educational expectations. However, only father's education is the strongest predictor of students' expectations. The higher the level of education father obtained, the higher the level of education student hopes to achieve.
5. Parental involvement has positive relationship with students' educational expectations. The higher the level of parental involvement students reported, the higher educational expectations they demonstrate
6. There is positive relation of school-related factors on educational expectations. However, only school environment is a significant predictor of students' educational expectations.

In this section, I have presented the findings that are based on the data analysis results.

The purpose of this chapter was to present the results of data as well as findings which were based on those results. As it can be seen above, chapter was begun with descriptive information of the students' academic achievement and inferential statistics for academic achievement. After that, descriptive information of the students' educational expectations and inferential analysis for educational expectations was demonstrated. Then,

it was followed by correlational and regression analysis. Finally, the findings which were based on these results were presented in the end of the chapter. More in-depth interpretation of findings will be given in the next «Discussion» chapter.

## Chapter 5: Discussion

In the previous chapter, I provided results of this study. In this chapter, I will present discussion of these results. The purpose of the study was to examine the effect of demographic, family, and school-related variables on Kazakhstani high school students' academic achievement and their further educational expectations. There are two research questions that aimed to be investigated. The first question is aimed at finding out how gender, ethnicity, family background, parental involvement, school environment, and peer support influence Kazakhstani high school students' academic achievement from mainstream schools. The second question is aimed at finding out how gender, ethnicity, family background, parental involvement, school environment, and peer support influence Kazakhstani high school students' further educational expectations in mainstream schools. To conduct this study, a quantitative cross-sectional research correlational research design was implemented.

Discussion in this chapter will be presented under different sections. In the first section, I will discuss findings to answer to the first research question. In the second section, I will discuss findings that answer to the second research question.

### **Academic Achievement**

In this section, I will discuss findings that answer to my first research question. The first question was to find out how gender, ethnicity, family background, parental involvement, school environment, and peer support influence Kazakhstani high school students' academic achievement.

**Finding 1: Gender is a significant predictor of students' academic achievement.** The first finding that answer to my research question suggests that gender is a strong predictor of students' academic achievement. There was a moderate positive effect of gender on academic achievement. In particular, the results suggest that academic

achievement of females is statistically significant higher than academic achievement of males. This finding is in line with the previous research, which indicated that girls outperform boys in school (Farooq et al., 2011; Pomerantz et al., 2002; Voyer & Voyer, 2014). However, it contradicts to the findings made by Hyde et al. (1990) and Schreiber (2002), who found that boys' academic performance arises in high school, and males' grades begin to predominate over girls' ones. Moreover, the finding of this study is inconsistent with the results of studies claimed gender similarities in school performance (Else-Quest et al., 2010; Lindberg et al., 2010).

Females' dominance in academic performance in this study could be explained by some reasons. First, stereotypes about gender and academic achievement predict students' perception of their own abilities (Hyde et al., 1990; Pomerantz et al., 2002). In particular, parents and teachers stereotypically consider girls as more studious and smart students. As a result, girls evaluate themselves more positively and demonstrate better results in school than boys do (e.g., Pomerantz et al., 2002). Second, Silverman, La Greca, and Wasserstein (1995) suggested that girls worry over their academic performance more than boys do, thus, females make more efforts to do best in school. Third, Pomerantz et al. (2002) stated that girls are more concerned with pleasing adults, such as parents and teachers. Such concern among girls may heighten their motivation to do well in school and thereby their performance in school (p.397). These suggestions may also be applicable to Kazakhstani society, where girls are stereotypically considered as more calm, studious, and smart students. Due to the social attitude, girls more worry about pleasing adults and, as a result, they are more concerned with academic achievement.

**Finding 2: Ethnicity does not have an effect on students' academic achievement.** Finding regarding students' ethnical origin suggests that ethnicity does not have an effect on students' academic achievement. Students from Kazakh, Russian and

other ethnical groups reported similar academic scores. This finding contradicts to the major part of research that declared that students from minor ethnical groups get lower marks because living in close small ethnical communities and limited language skills decrease opportunities for the minority youth and, consequently, leads to their low academic achievement (Bonstaed-Bruns, 1998; Glick & White, 2004; Kao & Tienda, 1995; Krahn & Taylor, 2005). However, the current finding corresponds to the finding of Hao and Bonstaed-Bruns (1998) stated that family ethnic background, including culture of solidarity, contexts of reception, modes of incorporation, and parents-children interactions in learning, has a positive effect on schooling of student from minor ethnical groups.

The current finding may suggest that this tendency is caused by the historical background of ethnical groups in Kazakhstan. Due to different historical events, people of many ethnicities inhabited our country. Today, its population includes more than hundred different ethnical groups, either of which lives keeping their traditions alive. Moreover, as the predecessors of the represented ethnicities lived in Kazakhstan during the long time, the participants of the current study have similar educational background. Thus, students from different ethnical groups have particularly equal conditions for doing their study.

**Finding 3: Family SES, including family income level, parental education and occupation, has no effect on their child's performance.** The findings concerning the family SES suggest that family status does not affect students' academic achievement. The results showed that students performance does not differ in regard on family income level, as well as parental education and occupation. These findings are unexpected and contradict to the most research conducted in other countries, which evidenced a strong influence of family background on students' academic achievement (Battle & Lewis, 2002; Bradley & Corwyn, 2002; Orr, 2003; Sirin, 2005). Particularly, it is at variance with Battle and Lewis (2002) finding that family socioeconomic status is three times more important than

students' demographic characteristics in academic success. Moreover, the current finding rejected other research findings stated positive influence of family income level (Bradley & Corwyn, 2002; Duke, 2000; Dufur, 2001; Sirin, 2005; Teachman, 1987), parental education (Caldas & Bankston III, 1997; Davis-Kean, 2005; De Serf, 2002; Hill et al. 2004; Tavani & Losh, 2003), and parental occupation (Saunders, 2012; Sirin, 2005) on students' performance.

These unexpected findings may have several explanations. First, there is a lack of variety of representatives from different socioeconomic groups participated in this research. Due to the convenience sampling approach, students from two mainstream schools in Astana were recruited to participate in the current study. This group of participants is characterized by similar socioeconomic status and family income level. That is why lack of variety of responses concerning family socioeconomic status may lead to such unexpected findings. Second, as students measured their family income level according to their own estimation, the self-reported data may not be accurate. Thus, the current findings may be inconsistent with the literature because of research limitations.

Moreover, the current findings may suggest that there are no differences in academic achievement between students from families with different socioeconomic status because of the historical background of the economic development in Kazakhstan. During a long period of time, the Soviet administration made a lot of efforts to create equal educational opportunities for all people. Since the independence, the Kazakhstani government also contributes a lot to ensure equality in education and secondary education in Kazakhstan applies a standardized curriculum for all schools and is free for all students, which might contribute to the reduction of achievement gaps across ethnic groups (Law on Education, 2007).



**Finding 4: Parental involvement does not have an effect on students' academic achievement.** The results of this study show that parental involvement has not a significant influence on students' academic achievement, although there is a weak positive correlation between parental involvement and academic achievement. This finding contradicts to the major part of research which declared the significant influence of parental involvement on children's school performance (Fan & Chen, 2001; Fehrmann et al., 1987; Keith et al., 1998). Interestingly, almost all respondents indicated that they speak with their family members about their schooling and future education, moreover, they have a quiet place to do homework. However, participants mentioned that their parents scarcely help them with their homework and meet with teachers. Thus, parental involvement is associated mostly with parents' high educational expectations for their children, rather than involvement in schooling, as Cabrera and La Nasa (2000) and Fan and Chen (2001) stated. However, it has no significant influence on students' academic success.

A reason that could explain this finding is related to the tendency of decrease in parental involvement on students' academic performance from the primary and middle school to the high school (Brewster & Bowen, 2004; Rosenfeld, Richman, & Bowen, 2000; Spera, 2005). High school students undergo a period of transition from childhood to adolescence, marked by an increasing sense of self-exploration and autonomy (Spera, 2005). During this period, adolescents begin to explore their relationships not only within the family but with larger society, as teachers, peers, and community (Spera, 2005). Thus, there is a shift in the degree of influence on students' behavior, and academic achievement as well, from parents to the society. As all the participants of this study were the high school students, parental involvement does not have a significant effect on their academic achievement.

**Finding 5: Among school-related factors, only school environment was evidenced as a significant predictor of students' academic achievement.** The next findings indicate that among school-related factors, including school environment and peer support, only school environment is a significant predictor of students' academic achievement. However, peer support is still positively related to students' performance. The higher students measured their school environment, in particular teacher support, the higher grades they gained. This finding is consistent with the majority of other research findings stated the positive relation between school environment and students' academic achievement (Eamon, 2005; Irvin et al., 2011; Marks et al., 2006). In line with the previous research (Brewster & Bowen, 2004; Machell et al., 2016; Wentzel, 1997) the results of this study demonstrate that teachers' behavior and social support have the high impact on students' school performance. Moreover, this finding supports the research study of Brewster and Bowen (2004) stated that teachers support seems to be more influential than parental involvement. Furthermore, the finding concerning peer support is in line with the results of research stated positive relations between reciprocal friendship, peer acceptance and students' academic achievement (Flook et al., 2005; Wentzel & Caldwell, 1997).

Several plausible reasons may explain these findings. First, positive school environment and teacher supportive communication may have significant effect on students' academic performance, as it reduces perception of uncertainty and, in contrary, helps students to cope with stressful circumstances, gain skills, and recognize that help is available (Rosenfeld et al., 2000). Second, positive school environment decreases the level of problem behavior among students, that contributes to better academic performance (Brewster & Bowen, 2004). Third, positive atmosphere and teacher support lead to increase in perception of school meaningfulness that, in its turn, improves students' academic achievement (Brewster & Bowen, 2004). Fourth, cultural peculiarities of local

society should be taken into consideration. In Kazakhstan, parents bring up their children in the atmosphere of respect for adults. This culture is spread to the teacher-students' relationships. Teachers in Kazakhstani schools are considered by students as wise mentors and friends. In this context, the influence of teacher support is significant in terms of students' behavior and academic success.

For the first research question, which is aimed to find out how do gender, ethnicity, family SES, parental involvement, school environment, and peer support affect students' academic achievement, there are the following findings. First, gender is a great predictor of students' academic achievement. Female students demonstrate better academic performance in comparison with male students. Second, ethnicity does not have an effect on students' academic achievement. Students from Kazakh, Russian, and other ethnical groups reported similar academic scores. Third, family SES, including family income level, parental education and occupation, has no effect on their child's performance. Students from families with different socioeconomic status demonstrated similar academic achievement. Fourth, parental involvement does not have an effect on students' academic achievement. Students from families with different levels of parental involvement reported similar academic scores. Fifth, among school-related factors, including school environment and peer support, only school environment was evidenced as a significant predictor of students' academic achievement, while peer support still positively relates to students' performance.

### **Educational Expectations**

In the previous section, I discussed findings that answer to my first research question. In this section, I will discuss findings that answer to my second research question. The second question was to find out how gender, ethnicity, family background,

parental involvement, school environment, and peer support influence Kazakhstani high school students' further educational expectations.

**Finding 1: Students' educational expectations differ by gender.** There is a modest positive effect of gender on educational expectations. This result suggests that students' educational expectations do differ significantly according to gender, in particular, female students have higher educational expectations than their male peers do. This finding is in line with some previous research claimed that girls express significantly higher educational expectations than boys (Krahn & Taylor, 2005; Mau & Bikos, 2000). However, the current finding contradicts Chenoweth and Galliher' study (2004), who found no gender differences in students' intention to continue their education after school. Moreover, the finding of this study is inconsistent with the results of York (2008), who found that female students intend to attend less selective colleges and plan careers in lower paying occupations than boys do.

The finding of this study may be explained by some reasons. First, according to Chenoweth and Galliher (2004) and Mau and Bikos (2000), academic achievement is strongly associated with students' plans for future education. As, according to the findings of the current research, girls demonstrate better academic performance in school, consequently, they have higher expectations for further education. Second, girls in comparison with boys hardly expect to obtain a technical profession (Krahn & Taylor, 2005). Technical school diploma might be sufficient for boys, while girls have to get higher education for the future job position.

**Finding 2: Ethnicity has an effect on students' educational expectations and the level of education they hope to achieve.** Finding regarding students' ethnical origin suggests that ethnicity has an effect on students' educational expectations. In particular, Kazakh students and students from minor ethnical groups demonstrate the higher

educational expectations than Russian students do. This finding, suggesting the high educational expectations of Kazakh students and students from minor ethnic groups, partially contradicts to the majority of the findings that claimed that students from minor ethnical groups have lower expectations in comparison with major groups (Hao & Bonstaed-Bruns, 1998; Mau, 1995; Mau and Bikos, 2000). However, if to consider Russian students as the minor ethnic group, the current finding is in line with the previous research.

The current findings may suggest some explanations. First, as Mau and Bikos (2000) stated, academic and occupational success is considered as source of pride for families. This tendency is very applicable to the Kazakhstani society, where family members, in particular in Kazakh families and families from minor ethnic groups, pride of their children's educational and occupational success. This might stimulate students from Kazakh and minor ethnic groups to get more education and obtain better job position. Moreover, the important role of close parent-children relationships in shaping students' educational expectations, mentioned by Mau (1995) and Mau and Bikos (2000), can also apply to the Kazakh culture.

On the other hand, the low educational expectations of Russian students may be explained by language difficulties, which are mentioned by some research as a barrier for further education (Khran and Taylor, 2005; Mau and Bikos, 2000). There is a tendency of increasing demand on work force with advance Kazakh language skills in Kazakhstan. Russian students, in comparison with Kazakh students and students from minor ethnic groups, such as Uygur, Kyrgyz, Tatar, and Uzbek, have lower Kazakh language skills proficiency. As a result, Russian students might have lower expectation about their future education and occupation.

**Finding 3: Family income level has a negative effect on students' educational expectations.** Findings concerning the family SES, including family income level, parental education and occupation, suggest that some of these factors affect students' educational expectations rather than others. The results of regression analysis corroborate that family income level is negatively related to students' educational expectations. Thus, the lower the family income level is, the higher educational expectations students have. The current finding contradicts to the previous research stated that high level of family income increases students' further expectations (Boxer et al., 2011; McLoyd, 1989). Moreover, it does not support the idea that children from families experiencing economic hardship may have emotional problems and deviant behavior, that cause decline of educational and occupational expectations (McLoyd, 1989).

High educational expectations of students from low income families may have several explanations. First, parents from families with poor economic conditions may expect better lives for their offspring and make a lot of efforts to ensure better education for them (Hao & Bonstaed-Bruns, 1998; Mao & Bikos, 2000). In its turn, this may enhance students' educational expectations and their desire to live up to parental expectations. Second, since the independence obtained, the Kazakhstani government tend to ensure equal educational opportunities for children from different social and economic background. This includes financial support for obtaining higher education for children from families with poor economic conditions, as orphan children, for families with many children, for returnees' children, and for students with disabilities (Law on Education, 2007). These measures tend to enhance educational expectations of students from low income families.

**Finding 4: There is an influence of parental education on students' educational expectations.** The current finding states an influence of parental education in the

prediction of students' further educational expectations. However, only father's education was evidenced as a significant predictor of the highest level of education students hope to achieve. The higher the level of education father obtained, the higher the level of education student hopes to achieve. In line with the previous research, this finding supports the idea that educated parents tend to encourage their children to get more education, that, as a result, leads to rise of children's educational expectations (Hill et al., 2004). However, the current finding contradicts to the finding of De Serf (2002), who claimed that mother's education has a more significant effect on children's expectations.

The current finding may have some reasonable explanations. First, parents with a high level of education value education to a higher degree than those with less levels of education (De Serf, 2002). In addition, children reflect their parents' actions and attitudes, that is why they also attempt to obtain the higher level of education (De Serf, 2002). Moreover, the great influence of father's education on students' educational expectations may be caused by the cultural peculiarities of Kazakhstani society. Traditionally, in Kazakh families, father is considered as the householder and provider, he makes his career to provide for the family, while mother mostly keeps house and care about children. Such kind of families is quite popular in Kazakhstan nowadays. In this context, the father's influence on children's attitude is significant.

**Finding 5: Parental involvement positively relates to students' educational expectations.** The next finding states that parental involvement has positive relationship with students' educational expectations. The higher the level of parental involvement students reported, the higher educational expectations they demonstrate. This finding is consistent with the findings of the major research declared positive effect of parental involvement on high school students' expectations (Astone & McLanahanl, 1991; Cabrera & La Nasa, 2000; Hill et al., 2004). Moreover, according to the respondents' answers,

parental involvement is associated mostly with parents' high educational expectations for their children, rather than involvement in schooling. Thus, the current finding is in line with the conclusion made by Astone and McLanahan (1991) and Hossler and Stage (1992) about the positive effect of parents' educational expectations for their children on students' own expectations.

Several suggestions can be made for the current finding. First, there is a relation between students' behavior, academic performance, and further educational expectations (Hill et al., 2004). Through parental involvement, parents establish relationships with teachers, school administrators, and other parents, and learn important information about school policies and behavioral expectations. Thus, parents may shape their adolescents' school behavior (Hill et al., 2004, p.1506). In this context, parental involvement may improve students' educational expectations by reducing behavioral problems. Second, parents may have their own knowledge of college and work experience, thus, they can inspire adolescents to obtain academic skills and knowledge that prepare them for considering higher level occupations (Cabrera & La Nasa, 2000; Hill et al., 2004).

**Finding 6: School environment is a significant predictor of students' educational expectations.** There is a positive correlation of school-related factors, including school environment and peer support, on students' educational expectations. However, only school environment has a great importance in the predication of students' educational expectations. The higher students measure their school environment, in particular teacher support, the higher educational expectations they have. This finding is in line with the previous research stated the great influence of school context on students' future expectations (Goodenow & Grady, 1993; Irvin et al., 2011).

The significant influence of school environment students' educational expectations may have acceptable explanation. First, positive school environment contributes to



students' better academic achievement (Brewster & Bowen, 2004; Rosenfeld et al., 2000). In its turn, academic success in school can enhance adolescents' expectations for further education. Second, positive environment and school belonging are highly associated with students' motivation and expectancy for success (Goodenow & Grady, 1993; Irvin et al., 2011). Third, school environment has a positive effect on students' further educational expectations, as they can talk with teachers and counselors about college admission and career choice (Lapan, Aoyagi, & Kayson, 2007).

For the second research question, which is aimed to find out how do gender, ethnicity, family SES, parental involvement, school environment, and peer support affect students' academic achievement, there are the following findings. First, students' educational expectations differ by gender. Female students have the higher educational expectations in comparison with male students, as well as they hope to achieve more education than their male counterparts do. Second, ethnicity has an effect on students' educational expectations and the level of education they hope to achieve. The results suggest that Kazakh students and students from other ethnical groups demonstrate the higher educational expectations, as well hope to achieve the higher level of education than Russian students do. Third, family income level has a negative effect on students' educational expectations. The lower the income level is, the higher educational expectations students have. Fourth, there is an influence of parental education on students' educational expectations. However, only father's education is the strongest predictor of students' expectations. The higher the level of education father obtained, the higher the level of education student hopes to achieve. Fifth, parental involvement positively relates to students' educational expectations. The higher students value their parents' involvement, the higher educational expectations they have. Sixth, there is positive relation of school-

related factors on educational expectations. However, only school environment is a significant predictor of students' educational expectations.

The purpose of this chapter was to discuss the findings that answer to my research questions. As we saw above, the chapter was begun with discussing findings answering my first research question. Next, I provided discussion of findings aimed to answer my second research question. The summary of the conclusions based on the abovementioned discussion will be provide in the next chapter.

## **Chapter 6: Conclusion**

In the previous chapter, I presented the discussions of findings. In this chapter, I will provide conclusion chapter of my research. The purpose of the study is to examine the effect of demographic, family, and school-related variables on Kazakhstani high school students' academic achievement and their further educational expectations. There are two research questions that aimed to be investigated. The first question is aimed at finding out how gender, ethnicity, family background, parental involvement, school environment, and peer support influence Kazakhstani high school students' academic achievement. The second question is aimed at finding out how gender, ethnicity, family background, parental involvement, school environment, and peer support influence Kazakhstani high school students' further educational expectations.

The first section of this chapter includes the answers to research questions of my study. In the second section, I will provide recommendations based on the major conclusions of the study. Then, I will present suggestions for future research. Finally, I will describe limitations of this research.

### **Answering Research Questions**

For the first research question, which is aimed to find out how do gender, ethnicity, family SES, parental involvement, school environment, and peer support affect students' academic achievement, there are the following findings. First, gender is a great predictor of students' academic achievement. Female students demonstrate better academic performance in comparison with male students. Second, ethnicity does not have an effect on students' academic achievement. Students from Kazakh, Russian, and other ethnical groups reported similar academic scores. Third, family SES, including family income level, parental education and occupation, has no effect on their child's performance. Students from families with different socioeconomic status demonstrated similar academic

achievement. Fourth, parental involvement does not have an effect on students' academic achievement. Students from families with different levels of parental involvement reported similar academic scores. Fifth, among school-related factors, including school environment and peer support, only school environment was evidenced as a significant predictor of students' academic achievement, while peer support still positively relates to students' performance.

For the second research question, which is aimed to find out how do gender, ethnicity, family SES, parental involvement, school environment, and peer support affect students' academic achievement, there are the following findings. First, students' educational expectations differ by gender. Female students have the higher educational expectations in comparison with male students, as well as they hope to achieve more education than their male counterparts do. Second, ethnicity has an effect on students' educational expectations and the level of education they hope to achieve. The results suggest that Kazakh students and students from other ethnical groups demonstrate the higher educational expectations, as well hope to achieve the higher level of education than Russian students do. Third, family income level has a negative effect on students' educational expectations. The lower the income level is, the higher educational expectations students have. Fourth, there is an influence of parental education on students' educational expectations. However, only father's education is the strongest predictor of students' expectations. The higher the level of education father obtained, the higher the level of education student hopes to achieve. Fifth, Parental involvement positively relates to students' educational expectations. The higher students value their parents' involvement, the higher educational expectations they have. Sixth, there is positive relation of school-related factors on educational expectations. However, only school environment is a significant predictor of students' educational expectations.

## **Recommendations**

In light of the conclusions of the study, some recommendations have been formulated. These recommendations are mainly addressed to the audience I identified in the introduction section of the thesis.

The following recommendations could be suggested for parents and family members in regard of promoting students' academic achievement and educational expectations. First, taking into consideration differences in academic achievement and future educational expectations between girls and boys, parents should apply different strategies of motivation for their children. In some instances, parental involvement should be expressed in parents' high educational expectations for their children, sometimes home supervision and participating in school matters could more effective. Second, parents should take into consideration the influence of their own education level on children's future educational expectations. They should follow the principles of life long learning and improve their knowledge and skills.

Taking onto account the high importance of school environment in regard of students' academic success and in shaping their further educational expectations, the following recommendations could be suggested for school administrators and educators. First, there is need to learn more about practices that are effective to increase academic achievement of female and male students, students from different ethnic groups, as well as students from families with different socioeconomic status. Second, it is necessary to promote positive interactions with students' families to become aware of different cultures and possible reasons that may inhibit students' academic performance and expectations. Finally, there is need to create positive school environment through promotion the culture of trust, help, and support between teachers and students, as well as among students.

The following recommendations could be suggested for policy makers. First, taking

into account psychological pressure high school students suffering from, it is necessary to promote supporting policy for high school students. Second, considering low educational expectations of Russian ethnic students, measures improving Kazakh language skills should be promoted. Fourth, taking into account the great importance of teachers' influence on students' academic achievement and educational expectations, it is necessary to provide supportive collaboration between teachers, administrators, parents, and students to avoid teachers' burnout.

### **Limitations of the Study**

After discussing findings of this study, it has been recognized that there are several limitations. The first limitation of this study is the small number of participants and the nature of sampling approach. The findings of this study cannot be generalized because of applying of convenience sampling. The second limitation relates to the lack of representative variety of respondents. All the students involved in the study were representatives of two mainstream schools in Astana. It does not allow to determine how different factors affect students' academic achievement and educational expectations in Kazakhstan in general. Third, only a limited number of variables were considered in this study. Other important variables, such as students' psychological characteristics, community and neighbourhood were not researched. The fourth limitation relates to the accuracy of self-reported data of participants. Students involved to the study provided answers according to their own estimation and honesty. There were no instruments to check the veracity of their responses.

### **Suggestions for Future Research**

Based on the results and limitations of this study several recommendations for further research can be suggested. First, the future research should involve more participants for study. Moreover, the sampling approach should be more reliable and

objective. Second, to address the restriction of the lack of representative variety of respondents, the further research should involve a more diverse group of respondents, including students from different urban and rural areas of Kazakhstan. Third, include more variables not included in this study. Finally, to ensure the accuracy of data self-reported by students, it is necessary to involve other participants related to this research, in particular parents, school administration and teachers.

### **Conclusion**

I believe this study made a modest contribution in understanding the influence of demographic, family- and school-related factors on Kazakhstani high school students' academic achievement and educational expectations. First of all, positive tendencies were found in high performance and educational expectations of female students, and students from low income families. Moreover, it is important to highlight the significant influence of family and school environment in students' academic success and further expectations. However, the thorough attention should be paid to low educational expectations Russian ethnic students have in high school. Taking into account the importance of academic outcomes and expectations for future education, it is necessary to conduct more in-depth analysis of aspects affecting students' achievement and aspirations.

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## Appendix A: Student Questionnaire

1. What is your gender?

Male

Female

2. What is your ethnicity?

Kazakh

Russian

Uzbek

Ukrainian

Korean

Uighur

Kyrgyz

Tatar

German

Other \_\_\_\_\_

3. What is your age in years?

\_\_\_\_\_

4. What grade you study in?

\_\_\_\_\_

5. How would you rate yourself according to the following criteria?

\_\_\_ I am from a well-off family, and we have everything is we need and we want.

\_\_\_ I consider myself being from a family with enough to do somethings but not anything.

\_\_\_ I am from a family, that requires more resources to meet the needs of each member.

6. What is your father's education?

- Less than high school graduation
- High school graduation only
- Fewer than two years of vocational school after high school
- Fewer than two years of college
- Finished college
- A master degree or equivalent
- Ph.D. or other advanced professional degree

7. What is your mother's education?

- Less than high school graduation
- High school graduation only
- Fewer than two years of vocational school after high school
- Fewer than two years of college
- Finished college
- A master degree or equivalent
- Ph.D. or other advanced professional degree

8. What is your father's occupation field?

- Service (manager, medicine, teacher, official, sales worker, clerk, ...)
- Industry (mining, engineer, plant operator, machine operator, ...)
- Agriculture (agricultural worker, fishery or hunting worker, forester, ...)
- Retired
- Unemployed

9. What is your mother's occupation field?

- Service (manager, medicine, teacher, official, sales worker, clerk, ...)



15. Parents or family members often meet with my teachers individually.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly agree	Agree	Neither agree, neither disagree	Disagree	Strongly disagree

16. I am happy to be at this school.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly agree	Agree	Neither agree, neither disagree	Disagree	Strongly disagree

17. I feel close to people at this school.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly agree	Agree	Neither agree, neither disagree	Disagree	Strongly disagree

18. Teachers in my school are kind and reliable.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly agree	Agree	Neither agree, neither disagree	Disagree	Strongly disagree

19. Teachers do their best to make lessons interesting.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly agree	Agree	Neither agree, neither disagree	Disagree	Strongly disagree

20. Teachers show an interest in me.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly agree	Agree	Neither agree, neither disagree	Disagree	Strongly disagree

21. Overall, I like going to school.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly agree	Agree	Neither agree, neither disagree	Disagree	Strongly disagree

22. Students in my school are kind and reliable.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly agree	Agree	Neither agree, neither disagree	Disagree	Strongly disagree

23. Students in my school help each other.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly agree	Agree	Neither agree, neither disagree	Disagree	Strongly disagree

24. Students in my school can be trusted.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly agree	Agree	Neither agree, neither disagree	Disagree	Strongly disagree

25. Students in my school understand each other.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly agree	Agree	Neither agree, neither disagree	Disagree	Strongly disagree

26. Students in my school think doing well at school is important.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Strongly agree	Agree	Neither agree, neither disagree	Disagree	Strongly disagree

27. Rate the type of grades you usually get.

\_\_ Mostly 5s

\_\_ Half 5s and 4s

\_\_ Mostly 4s

\_\_ Half 4s and 3s

\_\_ Mostly 3s

\_\_ Half 3s and 2s

\_\_ Mostly 2s

28. Rate the type of grades you were getting this semester.

- Mostly 5s
- Half 5s and 4s
- Mostly 4s
- Half 4s and 3s
- Mostly 3s
- Half 3s and 2s
- Mostly 2s

29. What is the highest level of education that you hope to achieve?

- Less than high school graduation
- High school graduation only
- Vocational, trade, or business school after high school - fewer than two years
- Vocational, trade, or business school after high school - two years or more
- College program - fewer than two years
- College program - two years or more
- College program - finished four or five years
- College program - master degree or equivalent
- College program - Ph.D. or equivalent
- Don't know

**Please, tick the most appropriate option (only one answer for each statement).**

30. I am interested in attending more school.

- |                          |                          |                                    |                          |                          |
|--------------------------|--------------------------|------------------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>           | <input type="checkbox"/> | <input type="checkbox"/> |
| Strongly agree           | Agree                    | Neither agree,<br>neither disagree | Disagree                 | Strongly disagree        |

31. I am willing to work hard to get more education.

                         
Strongly agree      Agree      Neither agree,  
neither disagree      Disagree      Strongly disagree

32. One of my most important goals is to get more education.

                         
Strongly agree      Agree      Neither agree,  
neither disagree      Disagree      Strongly disagree

33. I would put effort into a school or a training program if it would lead to a good job.

                         
Strongly agree      Agree      Neither agree,  
neither disagree      Disagree      Strongly disagree

## Appendix B: Parental Informed Consent Form for Research Involving Children

### **The effect of demographic, family and school-related variables on academic performance and educational expectations of high school students in Kazakhstan**

**DESCRIPTION:** Your child is invited to participate in a research study on how demographic, family, and school factors influence Kazakhstani high school students' academic achievement and their further educational expectations. The rules and the procedures of the research were discussed and agreed with the school administration. The research will be conducted during the lessons in the classrooms. Your child will be asked to fill a 33 items questionnaire. The questionnaire includes some personal background information (e.g. grade, age, gender, ethnicity, family income level, parental education and occupational status). Moreover, student will measure family, school and peers' support in her or his school learning. Also, your child will be asked to provide information about their grades and further educational expectations. Anonymity will be guaranteed to each participant. No personal information that can identify your child will be collected. All the data will be kept confidentially and not shared with other participants or individuals other than the researcher and her supervisor.

**RISKS AND BENEFITS:** This study poses no physical or health risks to your child. The only possible minimal risk is minimal emotional discomfort from answering some questions in the questionnaire. Your child will be informed about the purpose of the study in detail and explained that no information will be communicated to other individuals. There will be no direct immediate benefits to you or your child from participating in this study. However, indirect benefits will include better awareness of the role of your family in your child's academic success. Moreover, the study may contribute to school administrators' awareness about the role of the providing the school positive learning environment in students' achievement. Additionally, the implication of the research will be helpful for policy makers and education policy makers to frame further reforms.

**TIME INVOLVEMENT:** Your child's participation in this study will take approximately 20 minutes.

**SUBJECT'S RIGHTS:** If you have read this form and have decided to allow your child to participate in this study, please understand your child's participation is voluntary and your child has the right to withdraw his/her consent or discontinue participation at any time without penalty or loss of benefits to which he/she is otherwise entitled. Your child has the right to refuse to answer particular questions. Your child's individual privacy will be maintained in all published and written data resulting from the study. Your decision whether or not to allow your child to participate in this study will not affect your child's grades or participation in school.



**CONTACT INFORMATION:**

**Questions:** If you have any questions, concerns or complaints about this research, its procedures, risks and benefits, you should ask the Master's thesis Supervisor, Daniel Torrano, [daniel.torrano@nu.edu.kz](mailto:daniel.torrano@nu.edu.kz), +77172709359, and Master student, Mariya Zdorovets, [mariya.zdorovets@nu.edu.kz](mailto:mariya.zdorovets@nu.edu.kz), +77051729989.

**Independent Contact:** If you are not satisfied with how this study is being conducted, or if you have any concerns, complaints, or general questions about the research or your rights as a participant, please contact the NUGSE Research Committee to speak to someone independent of the research team at +7 7172 709359. You can also write an email to the NUGSE Research Committee at [gse\\_researchcommittee@nu.edu.kz](mailto:gse_researchcommittee@nu.edu.kz)

I (we) have read the information above and hereby consent to have my (our) child participate in this study by signing below.

---

\_\_\_\_\_  
Signature(s) of Parent(s) or Guardian

Date

**The extra copy of this signed and dated consent form is for you to keep.**

## Appendix C: Inform Consent Form

**The effect of demographic, family and school-related variables  
on academic performance and educational expectations of high school students in  
Kazakhstan**

**DESCRIPTION:** You are invited to participate in a research study on how personal, family, and school factors influence Kazakhstani high school students' academic achievement and their further educational expectations. The rules and the procedures of the research were discussed and agreed with the school administration. You will be asked to fill a 33 items questionnaire. Anonymity is guaranteed to each participant. No personal information that can identify you or your school will be collected. All the data will be kept confidentially and not shared with other participants or individuals other than the researcher and her supervisor.

**TIME INVOLVEMENT:** Your participation will take approximately 20 minutes.

**RISKS AND BENEFITS:** This study poses no physical or health risks to you. The only possible minimal risk is emotional discomfort from answering some questions in the questionnaire. You will be informed about the purpose and the procedures of the study in detail. There will be no direct immediate benefits to you from participating in this study. However, indirect benefits will include better awareness of the role of your family in your academic success. Moreover, the study may contribute to school administrators' awareness about the role of the providing the school positive learning environment in students' achievement. Additionally, the implication of the research will be helpful for policy makers and education policy makers to frame further reforms.

**PARTICIPANT'S RIGHTS:** If you have read this form and have decided to participate in this project, please understand your **participation is voluntary** and you have the **right to withdraw your consent or discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled. The alternative is not to participate.** You have the right to refuse to answer particular questions. The results of this research study may be presented at scientific or professional

meetings or published in scientific journals. Your decision whether or not to participate in this study will not affect your grades or participation in school.

### **CONTACT INFORMATION:**

**Questions:** If you have any questions, concerns or complaints about this research, its procedures, risks and benefits, contact the Master's Thesis Supervisor for this student work, Mariya Zdorovets, [mariya.zdorovets@nu.edu.kz](mailto:mariya.zdorovets@nu.edu.kz), +77051729989.

**Independent Contact:** If you are not satisfied with how this study is being conducted, or if you have any concerns, complaints, or general questions about the research or your rights as a participant, please contact the NUGSE Research Committee to speak to someone independent of the research team at +7 7172 709359. You can also write an email to the NUGSE Research Committee at [gse\\_researchcommittee@nu.edu.kz](mailto:gse_researchcommittee@nu.edu.kz)

Please sign this consent form if you agree to participate in this study.

- I have carefully read the information provided;
- I have been given full information regarding the purpose and procedures of the study;
- I understand how the data collected will be used, and that any confidential information will be seen only by the researchers and will not be revealed to anyone else;
- I understand that I am free to withdraw from the study at any time without giving a reason;
- With full knowledge of all foregoing, I agree, of my own free will, to participate in this study.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**The extra copy of this signed and dated consent form is for you to keep.**

**According to the law of the Republic of Kazakhstan an individual under the age of 18 is considered a child. Any participant falling into that category should be given the Parental Consent Form and have it signed by at least one of his/her parent(s) or guardian(s).**