

**Academic burnout among high-school students in Kazakhstan: The protective role of
personality and academic motivation.**

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**NUGSE RESEARCH APPROVAL DECISION LETTER**

The NUGSE Research Committee reviewed the project entitled " Academic burnout among high-school students in Kazakhstan: The protective role of personality and academic motivation. " 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:

Consent form: Consent form for the principal is only in English. Either provide in Russian/Kazakh, or explain that the principal is fluent in English.

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

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Abstract

The current study aimed to investigate the relationship between Big Five Personality Factors, academic motivation elements and academic burnout of high-school students at NIS, Taraz. Additionally, the relationship between academic burnout and certain student background factors (gender, grade, profile subject, relationship with parents), together with school-related factors (teacher support, teacher attitude, school support, class atmosphere) was examined. Academic burnout manifests itself through feeling of emotional exhaustion, cynicism towards studying and feeling of inadequacy as a student. The study used a non-experimental explanatory cross-sectional survey design. The research site for the study was Nazarbayev Intellectual School of Taraz, Kazakhstan. The participants were selected using non-probabilistic convenience sampling procedure. The sample comprised 113 NIS students of 10th and 11th grades. Data was collected using School Burnout Inventory (SBI), Big Five Inventory (BFI), Academic Motivation Scale (AMS), and Academic Burnout Factors Questionnaire (ABFQ). Data was analyzed using descriptive (mean, standard deviation), inferential (t-test, ANOVA) and bivariate (correlation, regression) analyses.

The results of the study showed that the overall level of academic burnout among NIS high-school students is considered average. Furthermore, neuroticism was found to be a significant predictor of academic burnout in school. Intrinsic motivation oriented on accomplishment had a modest negative effect on academic burnout. Considering school-related factors, teacher support and school support were negatively related to academic burnout. Among student background factors, female students' burnout level was higher than of male students, tenth grade students had a lower academic burnout than eleventh grade, and natural sciences students experienced higher level of academic burnout than students majoring in technical sciences.

Keywords: academic burnout, personality factors, School Burnout Inventory, Big Five Personality Factors, high-school students.

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Chapter 1. Introduction

1.1 Introduction

Learning requires a lot of intellectual resources and emotional input for studying and interacting with group mates and teachers. Sometimes students may experience the pressure of workload, deadlines and obligations that their status imposes on them. All these factors put learners in the situation of constant stress. Maslach and Jackson (1981) argue that experiencing chronic stress may lead a person to a state of emotional exhaustion that they call “burnout”. Individuals may experience burnout in any setting. School is not an exception, and students can experience feelings of emotional exhaustion and inadequacy, as well as cynical attitude towards learning process in the school. Burnout that occurs in educational settings is known as academic burnout. Researchers that are studying burnout in school call it “school burnout”.

1.2 The Research Problem

Alarcon, Edwards, and Menke (2011) present general burnout syndrome as a loss of emotional, social and intellectual resources. They hold the position that burnout occurs when the person is trying to develop coping strategies against overload with tasks, but these strategies are being ineffective and lead to further loss of resources and the development of cynicism towards studying. Similarly, Maslach, Schaufeli, and Leiter call general burnout syndrome an erosion of engagement (as cited in Ugwu, Onyishi, & Tyoyima, 2013). Drawing a parallel between general burnout syndrome and academic burnout, it can be assumed that possible consequence of academic burnout for students is a loss of engagement in learning process. Lack of engagement, triggered by burnout, may further affect student’s self-efficacy and academic achievement in a negative way.

But this doesn’t happen to every single student. There are still those who stay academically engaged and motivated, who study hard and instead of developing cynical attitude, keep being enthusiastic. The question being posed is why burnout syndrome is real to some

students and doesn't happen to others. At early stages of the scientific study of general burnout syndrome, Mayou (1987) pointed out that personality may be included into the list of possible factors contributing to the development and prevention of burnout. Later, Jacobs and Dodd (2003) in turn, revealed the findings that burnout in educational settings may be predisposed by certain personality traits (f.e. by negative temperament, which means a person experiences chronic stress, nervousness, negative emotions and worry). Researchers further mention that positive personality traits (optimism, energy), on the contrary, serve as a buffer to frustration and stress coming from school-related situations, and thus, lessen the burnout level.

Academic motivation was also found to be connected to school-related burnout among university students. Thus, Pisarik (2009) stated that academic motivation was directly related to burnout of students. He further noticed that students who were motivated by academic tasks were less prone to experience cynicism and exhaustion than those, scoring higher on amotivation scale. Moreover, Stoeber, Childs, Hayward, and Feast (2011) also found that autonomous motivation (when individual's behavior is driven by intrinsic reasons and he/she finds such behavior enjoyable) was negatively associated with burnout related to studying and positively related to academic engagement. This means that academic motivation may also play a significant role in protecting students from school-related burnout.

In this context, examining students' academic burnout is important, because of the following reasons. First of all, the research conducted in the sphere of burnout worldwide is mostly related to work settings (i.e. job burnout). Secondly, the few research dedicated to academic burnout have been conducted in the sphere of higher education (college and university level) and these research were conducted outside of Kazakhstan. Third, and most importantly, academic burnout brings about serious outcomes, such as lowering of academic performance, school dropout, lack of motivation for completing school tasks, and depression.

1.3 Purpose of the Study

The purpose of this study is to analyze the levels of academic burnout among NIS high-school students in Taraz, Kazakhstan. In addition, this study will examine the role of personality and academic motivation in the prediction of academic burnout. Secondly, this study will analyze the potential causes that contribute to the development of academic burnout.

There are several reasons that justify the relevance of examining academic burnout among NIS high-school students. First, NIS schools are the first schools in Kazakhstan to implement a learner-centered approach in Kazakhstan and their educational approach is quite different from other Kazakhstani schools. This puts students and teachers in a new situation that has not been experienced before and requires them adapting to unfamiliar setting, requirements and people may be quite challenging and stressful. Due to the fact that NIS has more complex curriculum compared to other Kazakhstani mainstream schools, NIS students have additional subjects and spend approximately 8 hours in school every day, which can contribute to the development of academic burnout. The system of assessment is also different at NIS schools, because they have objectives to cover for each of the subjects, plus at the end of each semester students would sit internal final examinations, which is not the case in mainstream schools. At times, to achieve certain objective, students have to accomplish two or three tasks at the same time or do a project, which can also increase students' burnout levels. Unlike mainstream school students, high-school NIS students (grade 11 and 12) have subjects taught in three languages: Kazakh, Russian and English. If they struggle with any of these languages, they will also experience difficulties either in Geography, History or Biology, which may contribute to NIS students' feeling of stress and exhaustion that comes from studying process. Additionally, to study at NIS students need to obtain state funding and maintain a high GPA in order to keep this funding. Experiencing worry about being expelled from school due to lowering of GPA may as well be emotionally exhausting and tiring for students.

Furthermore, it is considered “prestigious” for Kazakhstani family if their child is studying at NIS. At times, parents would influence their children and motivate them to do their best to academically keep up with their gifted peers and to make sure they graduate from this institution. In case parents are more enthusiastic about their child studying than the student him/herself, this may trigger family conflicts, child protests against the will of their parents and student cynical attitude towards staying at this particular school.

All aforementioned factors coming from NIS educational context prepared a background for an assumption that NIS students may experience higher school burnout level compared to other schools in Kazakhstan. That is why, this study was conducted to bring some insights on the aspects of student’s school burnout and some protective factors that can moderate the effect of academic burnout, such as student’s personal traits, motivation and other background and school-related factors.

1.4. Research Questions

Accordingly, this study examines the following research questions:

1. What is the general academic burnout level of NIS high-school students in Taraz? This question is intended to explore the overall level of burnout in high-school students. Due to the fact that NIS is a selective school for gifted students with a rather heavy course-load and sophisticated curriculum, it is reasonable to assume that students may experience higher level of burnout.
2. How do academic burnout levels of NIS high-school students in Taraz differ by gender, year of study, and choice of profile subject? Finding answer to this question will show whether there are significant gender differences in burnout level, whether students of higher grades prone to burn out more, and if studying certain profile subject will make difference for burnout level.

3. What school-related factors (teacher support, teacher attitude, class atmosphere, school support, relationship with parents) are related to academic burnout of NIS high-school students? This question is intended to establish a relationship between school-related factors and academic burnout dimensions (emotional exhaustion, cynicism and inadequacy). It may be assumed that aforementioned school-related factors are negatively related to various burnout dimensions.
4. What is the role of personality and academic motivation in predicting academic burnout of high-school NIS students? This question is aimed to understand whether personality factors (extraversion, neuroticism, agreeableness, openness, conscientiousness) and academic motivation elements (extrinsic, intrinsic and amotivation) play any role (supposedly buffering role) in school burnout development.

1.5 Significance of the Study

This study aims to investigate the level of school burnout among NIS high-school students in Taraz, Kazakhstan. It is very important to be aware of the prevalence of students' academic burnout, because NIS study load and demands can be called rather challenging compared to mainstream schools. Moreover, school burnout may result in negative attitude towards learning, as well as in skipping classes and lowering of academic performance. For this reason, it is necessary to investigate the causes that produce school burnout in order to be able to prevent them at an early stage.

The proposed study may be found useful by the following audiences:

1. School counselors, NIS teachers and tutors will benefit from knowing the level of academic burnout of NIS students in Taraz, because as active participants of studying process they are able to make some necessary changes in order to diminish stress coming from learning. Additionally they will know how certain

personality profiles and academic motivation levels may protect students from experiencing academic burnout.

2. There are no direct benefits for the students, only possible long-term indirect benefits that may be related to some actions school counselors will take in order to lessen the level of students' academic burnout.

1.6 Definition of Variables

The following table presents the key variables and their definitions.

Table 1

Key variables definitions

Variable	Definition
Academic/learning/ school burnout	A psychological state of learning individuals occurring in school setting, which consists of the following elements: school-related exhaustion, school-related cynicism, and inadequacy (lack of school-related efficacy) (Salmela-Aro et al., 2009).
Personality	An individual set of psychological and behavioral patterns by which individuals differ from one another (Strickland, 2000).
The Big Five Personality Traits model	A model that contains five fundamental personality factors: agreeableness, conscientiousness, neuroticism, extraversion, openness.
Agreeableness	An individual's ability to get along with others. Scoring high on agreeableness means the person can cooperate well in a community, is friendly and understanding. Scoring low means the person is not cooperating well with others, irritable and poses himself/herself against others (Griffin & Moorhead, 2011).

Conscientious-ness	a personality trait that makes a person does his job thoroughly and considers his duties very seriously (Oxford Dictionary, 2015). Also it refers to the number of goals a person pursues. Scoring high on conscientiousness means a person is well-organized, has a clear set of goals and is diligent at achieving them. Scoring low on conscientiousness means a person is distracted by multiple goals he has, disorganized and irresponsible (Griffin & Moorhead, 2011).
Neuroticism	Emotional instability. People scoring high on neuroticism tend to be more stressed, vulnerable to outside factors, experiencing mood changes. People scoring less on this factor are more emotionally stable, reliable, and better cope with stress and pressure of environment (Griffin & Moorhead, 2011)
Openness	a personality factor that implies having broad range of interests, seeking new experience and information. People with higher scores on this dimension will demonstrate willingness to discover something new, open-mindedness, creativity (Daft, 2011). Scoring low on this dimension will characterize a person who is resistant to change and accept new ideas (Griffin & Moorhead, 2011).
Extraversion	A personality trait that refers to being sociable, open to conversation, outgoing, and willing to meet and communicate with new people. People who score low on extraversion are closed to communication, quiet and socially unconfident (Daft, 2011).
Academic motivation	a multidimensional concept that includes intrinsic, extrinsic and amotivation. Intrinsic motivation is a type that can be characterized by highest level of self-determination. Being motivated intrinsically a person would do something with pleasure and enjoy the activity. When an individual motivated extrinsically he

	would be engaged in an activity in order to end it sooner, but not for the sake of enjoying it.
Amotivation	The last type of motivation is amotivation, which is described by the deficit of extrinsic or intrinsic motivation and the person considers himself/herself incapable of doing an activity (Guay, Morin, Litalien, Valois, & Vallerand, 2015, p. 54-55)

Chapter 2. Literature review

2.1 Introduction

This chapter aims to critically analyze the literature on the topic of burnout developing in educational settings, featuring the nature of burnout, theoretical framework, and factors related to academic burnout, including personality and academic motivation.

2.2 The Nature of Burnout

Maslach, Leiter and Shaufeli (2008) claim that there is no agreement about the definition of burnout that everyone would accept and make it “universal” (p. 4). Researchers became interested in burnout process quite a while ago. As a concept, “burnout” appeared in the 1970s (Shaufeli, Leiter, & Maslach, 2008, p. 204). Freudenberger was one of the first researchers who made an attempt to define burnout syndrome, and he viewed burnout as a “psychiatric and physical breakdown” (Weber & Jaekel-Reinhard, 2000, p. 512). Later, Maslach introduced the Maslach Burnout Inventory – the primary and the most commonly used instrument for measuring burnout (Maslach, Leiter&Shaufeli , 2008, p.2). When Maslach and Freudenberger’s works were published, many other scholars became interested in burnout syndrome and US, Canadian, Israeli and European researchers started investigating this concept (Maslach et.al., 2008, p.3). The measurements of burnout and its definitions vary due to different theoretical frameworks and different audience that research is being done for.

It is necessary to mention that initially scholars started researching burnout syndrome in working individuals, viewing burnout as a work-related concept. That is why Maslach and Jackson define it as an outcome of chronic stress that appears in the work-setting (as cited in Weber & Jaekel-Reinhard, 2000, p. 512). Adding to this definition, Maslach et al. (2008) explain that various definitions of burnout share certain common points:

- Burnout happens at an individual level
- Burnout affects emotions, attitudes, expectations, and motives of a person

- It is definitely a negative psychological experience for a person
- Burnout is related to distress, dysfunction and brings negative consequences for an individual (p. 4).

Furthermore, Kaschka, Korczak and Broich (2011) provide the abridged version of burnout symptoms list suggested by Burisch (p. 782). The symptoms are being grouped into clusters:

- Warning signs at the early stage of burnout: increased dedication to goals and exhaustion;
- Reduced commitment towards patients and clients, towards work, towards other individuals generally, and increased demands;
- Emotional reactions (aggression, depression) and blaming;
- Diminished cognitive performance, motivation, creativity and judgment;
- Emotional, social and intellectual spheres of life flattened;
- Development of psychosomatic reactions;
- Feeling of despair (p. 782).

2.2.1 The dimensions and phases of burnout process.

According to Maslach burnout is a syndrome described in terms of three dimensions: exhaustion, cynicism and reduced efficacy (as cited in Makikangas & Kinnunen, 2016, p. 12; see Figure 1). Exhaustion happens when work overload drains individual emotional resources, leaving him to experience tiredness, and fatigue. Cynicism occurs through the development of negative attitude towards work, and individual's attempts to distance himself / herself from job. Reduced professional efficacy takes place when individual's productivity and capacity to do work is lost, and he/she tends to describe his/her past and present work performances negatively (Makikangas & Kinnunen, 2016, p. 13).

Burnout does not simply occur, but develops stage by stage (Hallsten, 2005; Kaschka et al., 2011). As Hallsten points out, burnout is actually the latest phase in the process of "burning out" (as cited in Hallsten, 2005, p. 518; see Figure 1). The first phase of burning out

is so-called “absorbing commitment”, which represents serious involvement and engagement together with anxiety and worry. The next possible phase is “frustrated strivings”, during which one is developing stress coping strategies. The last phase is the burnout itself, when stress coping strategies fail and individual’s functional capacity is diminished. As Hallsten argues, one goes all the way to “burnout” phase given that he experienced constant iterate stress (as cited in Hallsten, 2005, p. 518).

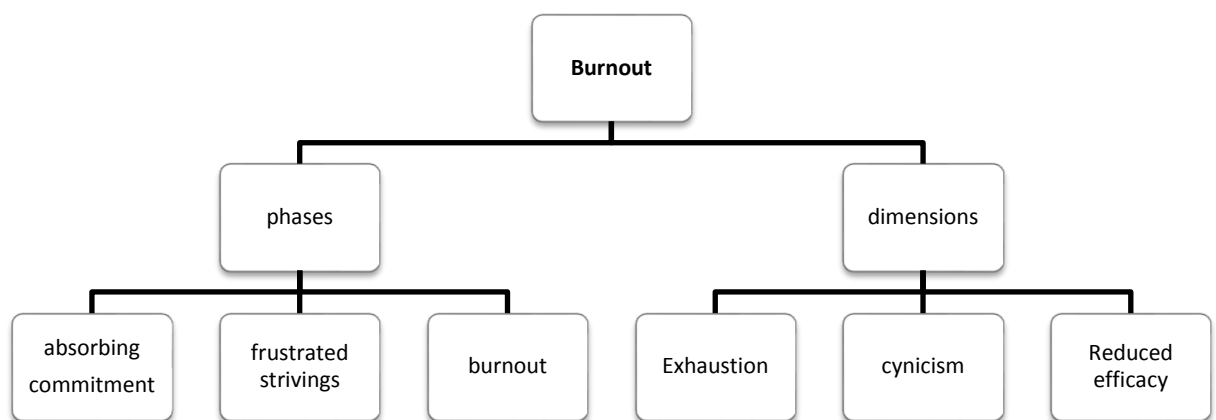


Figure 1. The phases and dimensions of burnout process.

2.3 Academic Burnout

Previously research of the phenomenon was mostly related to job context, whereas currently researchers claim that burnout develops in many other spheres of human life as well, such as family relationships, during intensive job search, and in the sphere of education (Hallsten, 2005, p.518, Toppinnen-Tanner, 2011, p. 15).

Galbraith and Merrill (2012) report that researchers’ interest to student academic burnout started growing a decade ago, and since then, a number of studies on academic burnout have been conducted. Pishghadam and Sahebjam (2012) outlined that burnout syndrome in educational sphere was considered one of the key concepts that requires more accurate

consideration. Saying this, the authors meant that stressful factors coming from educational environment need to be researched more thoroughly. To this end, Wu (2010) is speaking about such student individual factor of academic burnout as lack of self-regulation, which leads to failures in studying and damages students' enthusiasm of learning (p.133). When students lose enthusiasm for studying, they stop trying to get better marks, and as a result, their academic achievement will suffer. Supporting that, Chen, Jin, Yin and Li (2013) also point out that students' with better marks have a lower burnout level than their peers with lower marks (p.609). Some researchers draw a parallel between job burnout and school-related burnout. Thus, Lin and Huang (2014) outline that students are prone to burnout, just as workers do, since their studying process is organized in a structured way and is similar to work. Likewise job burnout, academic burnout consists of identical phases, which are school-related emotional exhaustion, cynicism and feeling of inadequacy as a student. Thus, school-related emotional exhaustion can be defined as the feeling of tension, anxiety and chronic fatigue caused by overload with schoolwork (Salmela-Aro et al., 2009). School-related cynicism is expressed through aloof attitude towards everything related to schoolwork as well as through loss of interest in one's academic work, devaluing the meaning of studying (Salmela-Aro et al., 2009). Finally, feeling of inadequacy as a student is manifested through a feeling of reduced competence, lack of progress in schoolwork and lack of success in academic achievement (Salmela-Aro et al., 2009). Job and academic burnout share similarities in the outcomes: skipping classes, low motivation to complete required assignments, and dropout, among others (Lin & Huang, 2014, p. 78).

2.4 Explanation of burnout development

The development of burnout may be better understood through The Conservation of Resources model suggested by Hobfoll (1989). This model explains individual's behavior in a situation of stress (Hobfoll, 1989). By resources, Hobfoll (1989) understands objects, conditions, energies and personal characteristics that an individual values, and that serve as a tool to gain other additional resources (in the same form of objects, conditions, energies and personal

characteristics). Gorgiyevski and Hobfoll (2008) add that there are primary (essential for survival and well-being) and secondary resources (necessary to maintain primary ones) that individuals tend to gain or lose during their lifetime. Moreover, Hobfoll holds the position that each person has an inborn drive to conserve, protect, and nourish these resources' amount and quality (as cited in Gorgiyevski & Hobfoll, 2008, p.2). With regards to burnout, the authors consider that burnout in individuals occurs as a result of stress that happens due to three possible scenarios:

- Individual's key resources are under the loss threat;
- Resources are lost
- Individual made a significant resource investment however did not gain any resources out of it.

Burnout as a phenomenon does not occur overnight, but it is a slow process that accompanies the exhaustion of individual's resources, without any resource gain or renewal. The loss of resources leads to the development of loss prevention strategies, rather than to further resource investment and search for chances to gain new resources (Gorgiyevski & Hobfoll, 2008, p. 5). However, not all individuals function in the same way of developing loss prevention strategies. On the contrary, as Gorgiyevski and Hobfoll (2008) mention, it depends on the individual's resource capacity and resource reserve. Individuals with bigger resource reserve or those who come from resource rich environment tend to be more successful at keeping their resources and searching for new chances to renew and obtain new resources (see Figure 2). This means that dealing with resource loss not all individuals will experience the same level of stress, and not all will cope with this stress successfully. Ivanova (2013) argues that of all types of resources in COR theory, personal characteristics are the resources that are essential in coping with stress. The idea proposed by Ivanova (2013) is strongly interconnected with what this study is aiming to investigate in terms of personality relatedness to burnout process.

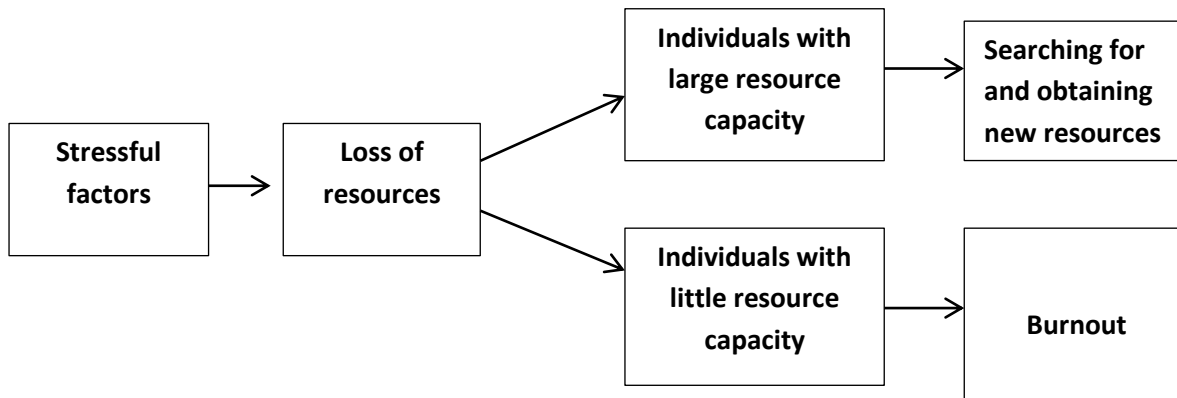


Figure 2. Explanation of burnout development

2.5 Academic Burnout in Schools

As it was mentioned above, the majority of scholars are researching academic burnout in terms of university and college context. Despite the fact that burnout syndrome may as well develop in school settings, not many researchers are interested in this topic.

Nevertheless, Salmela-Aro, psychology professor at University of Jyväskylä in Finland, and her colleagues, primarily focus on academic burnout in schools. Salmela-Aro describes academic burnout in school in terms of three components: emotional exhaustion, cynicism towards studying and feeling of inadequacy as a student.

It was mentioned previously that academic burnout has its dimensions. In respect to this, Salmela-Aro, Kiuru, Leskinen and Nurmi (2009) give a deeper insight on what it means for school context in particular. In this sense, the researchers share that emotional exhaustion happens due to school demands, such as deadlines, overload with tasks, different types of pressure and stress related to school and studying. The dimension of cynicism develops not in general, but exactly towards school and everything related to it. And consequently, an individual is experiencing the feeling of inadequacy related to his/her student role. Salmela-Aro et al. (2009) reported that these dimensions of school burnout (academic burnout in school setting) are positively correlated, yet they are still separate concepts.

2.5.1 Consequences of academic burnout in school. The study conducted by Salmela-Aro, Savolainen, and Holopainen (2009) showed that school burnout leads to depressive symptoms. They conducted a 3-year longitudinal study among adolescents aging from 15 to 19. The purpose of the study was to explore cross-lagged relationship between school burnout and depression. The analysis of data showed that there was a reciprocal relationship between the two variables and they formed a cyclic process. First depressive symptoms led to school burnout development, which is being manifested through exhaustion, feeling of inadequacy and cynicism that again lead to depression. However, the analysis showed that school burnout was found to predict depressive symptoms more than vice versa (Salmela-Aro et al., 2009). Such findings outline the importance of exploring school burnout and finding possible ways to prevent it, since it leads to depression in adolescents.

Furthermore, other researchers have suggested that school burnout not only leads to depression, but also to school dropout. Hence, Bask and Salmela-Aro (2012) in their research chose high-school Finnish students, starting from grade 9 to understand the relationship between school burnout and school dropout. To measure school burnout they used School Burnout Inventory. The analysis of the results showed that emotional exhaustion was not at all related to school dropout, however, cynicism was. This can be explained by the fact that feeling of inadequacy and emotional exhaustion might be considered by individual as temporary mood changes. Cynicism, on the contrary, is an active position that a student holds and manifests in school society (Bask & Salmela-Aro, 2012).

2.6 Student Background Factors and Academic Burnout

There is scientific evidence that certain student background factors (gender, relationships with parents, year of studying, area of origin, etc.) influence the development of academic burnout in school settings. First, studies collectively suggest that girls are more likely to burn out than boys (Backović, Ilić Živojinović, Maksimović & Maksimović, 2012, p.178; Salmela-Aro et

al., 2008, p.20). This can possibly be explained by the fact that female students experience more stress related to studying process, examinations, and communication with teachers and examiners (Backović et al., 2012).

Second, students' good relationships with their parents also seem to contribute to their positive attitude towards schoolwork and buffer negative influence of peers concerning studying. According to Marion, Laursen, Kiuru, Nurmi, and Salmela-Aro (2014), if adolescent children have problematic relationships with their parents, then parents may lose influence over their children's academic life, because children will not value parental opinion about education. Consequently, they will listen to their peers, and try to blend in with their views and attitudes. (Marion et al., 2014; p. 770). Marion et al. (2014) found that friends with higher level of academic burnout create a risk for students whose academic burnout level is lower (p.769). It seems plausible to assume that if students do not have strong relationships with their parents and get along with peers who have negative attitude towards schoolwork, they may be prone to the development of academic burnout.

Third, year of academic study may possibly be related to academic burnout. However, studies analyzing the influence of year of study on academic burnout have yielded contradictory findings. On the one hand, Lin and Huang (2014) investigated this aspect in terms of university 4-year study process and found no significant difference in burnout level differentiated by year of study (p. 84). Fu & Yang (2013), on the contrary, found that there was a difference in the burnout level between freshmen and sophomore (sophomore scoring higher on the scale of dejection). The authors explained it with the assumption that freshmen are new to university life, and they get more support from family and school, rather than sophomores who are considered accustomed to studying conditions (p. 195).

Fourth, very limited research on the influence of area of origin (urban vs rural) on academic burnout has been conducted to date. An exception is the study by Fu and Yang (2013),

which found a higher level of absenteeism, inappropriate behavior and tardiness for classes among students from rural area compared to students from urban area (p.195).

Fifth, peer groups have direct influence on the way individuals burn out. In their longitudinal study of ninth graders, Kiuru, Aunola, Nurmi, Leskinen and Salmela-Aro (2008) came to the following conclusions: individuals who have peers with a certain level of burnout syndrome, will burn out as well, following the same trajectory. Thus, it can be derived that if a student with good academic attitude and motivation will end up in a peer group that holds a cynical position towards studying, sooner or later, this student will also start experiencing burnout. The researchers explain this through the fact that peers communicate to each other, sharing their negative school experiences, shaping each other's attitude towards school (Kiuru et al., 2008). Fortunately, there is another scenario possible, which is known as peer groups with good academic engagement (the authors explain this concept as the antagonist of school burnout). If a burned out individual gets into such peer group, his stress related to studying relieves, his cynical attitude towards academic achievement slightly changes for good. Kiuru et al. (2008) conclude that such peer groups promote academic achievement, engagement with studies and alleviate distress related to study demands.

2.7 School-related Factors and Academic Burnout

Besides the aforementioned background factors, research findings also show that school-related factors (such as academic performance, teacher support, school support, class atmosphere, and course load) may also contribute to academic burnout in school setting.

Thus, students with higher academic performance tend to burn out less than those with lower GPA (Salmela-Aro et al., 2008, p.20). These findings were supported by Wang and Xu (2011) who suggested low academic achievement as one of the factors causing demotivation towards studying, boredom and avoidance in academic sphere (p. 37). Furthermore, Shaufeli, Martinez, Marques Pinto, Salanova and Bakker (2002) also claim the same, adding that academic

performance is positively related to academic engagement (p. 477). Moreover, researchers discovered that GPA played a significant role in developing feeling of inadequacy as a student (Bask & Salmela-Aro, 2012). This probably could happen because of many academic failures that are evidenced by low GPA. In this case student feels useless academically and his self-esteem suffers considerably.

Course load has also been found to be a contributor to the development of academic burnout in school setting. Hence, Salmela-Aro and Upadyaya (2014) indicate that school-related demands (e.g. overload with academic tasks) trigger burnout symptoms in students (p.147). The researchers explain that school-related demands require a lot of effort from an individual in order to achieve academic goals. When an individual spends his inner resources on school-related demands, he/she is experiencing strain and the exhaustion of inner resources leads to poor goal accomplishment, feeling of failure and dissatisfaction. The latter, in their turn, may possibly lead to depression and withdrawal behavior in students (Salmela-Aro & Upadyaya, 2014). Similar idea was expressed by Yang (2004), who claimed that school-related overload was strongly associated with academic burnout (p.290). School-related overload happens when student realizes that he/she has too many academic tasks to accomplish in a limited time. Yang (2004) noticed that school-related overload is the biggest stressing factor for students, thus having direct positive effect on academic burnout. Kiuru, Aunola, Nurmi, Leskinen and Salmela-Aro (2008) also mention that overload at school may be the antecedent of burnout due to the fact that it may lead to academic failure, stress and affect self-esteem negatively(p. 25).

Lack of social support in school and lack of positive motivation from teachers (teacher support) contribute to the development of school burnout according to several studies. For example, Salmela-Aro et al. (2008) claimed that when students get supported by school teachers and administration they gain more confidence in their academic life, which reduces levels of academic burnout. Also, positive motivation from teachers serves as a buffer against negative psychological effects for students, such as stress, exhaustion, and diminished academic

accomplishment at school (Salmela-Aro et al., 2008). Similarly, Yang and Farn (2005) outline that social support helps individuals cope with stress. Furthermore, the researchers add that when individual realizes he/she is getting social support who those who surround them, it improves their mental and even physical health. The findings of the study suggested that teachers should encourage students in order to higher their self-efficacy and reduce the level of burnout. Moreover, Yang and Farn (2005) added that social support can play a major role in coping with academic burnout, due to the fact that it alleviates stress coming from academic environment (p.929).

Negative class atmosphere has been found to be positively related to the development of burnout. Thus, Reyes, Brackett, Rivers, White, and Salovey (2012) state that positive class climate promotes academic engagement with learning (the opposite of academic burnout) (p. 9). Salmela-Aro's (2008) findings point in the same direction, mentioning that not only class climate, but the whole school positive climate may buffer the development of burnout in students (p.13). Such findings can be possibly explained by the fact that negative class atmosphere is an additional stressful factor to academic life. If there is bullying or any other negative experience in the class, it may influence student self-esteem and self-perception. Moreover, as it was mentioned before by Salmela-Aro et al. (2008), classmates with higher level of burnout influence their peers to have similar cynical attitude towards studying process, and through this may trigger the development of their classmates' academic burnout. On the other hand, classrooms with positive atmosphere help to prevent students from developing burnout. This may be explained by the fact that acceptance, emotional warmth and teacher consideration of students' emotional and academic needs will promote trusting relationship and perception of social support in a studying process (Reyes et al, 2012). Consequently, as it was mentioned in the previous paragraph, this perception of social support will reduce stress and protect student from feeling of inadequacy, exhaustion and cynicism towards school.

The aforementioned studies provided an overview of variables school burnout can be attributed to, such as peer group influence, relationship with parents, class atmosphere, and academic achievement. Adding to this, the present study aims to investigate whether school burnout is somehow related to personality of the students and their academic motivation. Therefore, the following section provides an overview of personality factors and their relationship to academic burnout.

2.8 Academic Burnout and Personality

Very little research has been done to investigate whether academic burnout is related to personality factors. Still, researchers are interested in the role of personality in developing burnout due to the fact that given the same external factors (study overload, stress, high study demands, etc.), not all students develop the same level of burnout, and some do not develop it at all. This poses a question, whether there are other factors, possibly internal ones, that together with external factors trigger burnout syndrome.

Hence, Jacobs and Dodd (2003) found that personality can stimulate the development of academic burnout (p. 298). Using regression analysis, they found that personality was the strongest predictor of academic burnout in a sample of 149 college students. Negative temperament had relationship with all three components of academic burnout, and positive temperament was found to have a positive correlation with sense of personal accomplishment of students (Jacobs & Dodd, p.298).

Another study done by Zhang, Gam and Cham (2007) investigated whether maladaptive and adaptive perfectionism is related to academic burnout. The researchers found that when an individual is prone to maladaptive neurotic perfectionism (when person sets unrealistic unachievable goals), he/she will have a higher level of academic burnout. This can be explained by the fact that having high expectations for himself, a student will put more intellectual and emotional resources in the studying process. However, since his goals are unrealistic, he will not

get the desired result and in the end may experience exhaustion, stress and lose confidence in his academic capabilities. If this happens often, student finally may develop cynical attitude towards school and stop trying to excel in his school life. Adaptive perfectionism (when person sets realistic goals), on the contrary, may lead student to inputting efforts into studying and succeeding in that, gaining satisfaction, joy and sense of accomplishment. In this case, these positive consequences will lessen distress coming from school work and the level of academic burnout may be lowered (Zhang et al., 2007).

All these studies discussed above were conducted in university settings; however, there is limited research that would explore the role of personality in developing academic burnout in secondary school setting. For this reason, the present study will try to fill in this gap of knowledge and investigate academic burnout and personality profile of secondary school students.

2.9 Academic Burnout and Academic Motivation

There is a wide agreement among researchers that academic motivation is related to burnout development. For example, study conducted by Lemyre, Roberts, and Stray-Gundersen (2007), in their study about self-determined motivation as a predictor of burnout among athletes, showed that low levels of self-determined motivation were associated with burnout (p.123). Further, Stoeber, Childs, Hayward, and Feast (2011) in their study of passion and motivation as predictors of academic burnout, confirmed that harmonious passion towards studying was positively related to motivation and negatively related to all three burnout components (p. 523). Similar results were demonstrated in the study conducted by Rostami, Reza Abedi and Shaufeli (2012), where the authors found that interest in studying has a negative relationship to burnout (p.881). Furthermore, Meriläinen's findings (2014) supported aforementioned results and also showed that academic motivation plays cumulative intermediary role between teaching-learning environment perceptions and burnout (p. 322). That is why the primary task of a teacher is to

improve teaching and learning practices in order to nourish students' positive perceptions of studying process and reduce school-related stress (Meriläinen, 2014, p.323).

2.10 Conceptual Framework for Academic Burnout

Figure 3 presents the conceptual framework for the development of academic burnout in school setting. This framework is rooted in the reviewed literature, which outlines all key factors and outcomes of academic burnout. The present study aims to test this framework and examine whether the factors listed in it influence academic burnout. Academic burnout consists of three dimensions: emotional exhaustion, cynicism towards school and studying, and feeling of inadequacy as a school student. Personality factors such as extraversion, openness, conscientiousness, neuroticism and agreeableness might be contributing to the development of academic burnout, or, on the contrary, buffering its formation.

Academic motivation includes such elements as intrinsic motivation, external motivation and amotivation may also play contributive or buffering role in the development of academic burnout in school.

Besides previously mentioned major concepts, there are also two groups of factors that might be attributed to academic burnout: student background factors and school-related factors . Student background factors include: gender, grade, profile subject, relationship with parents, whereas school-related factor group consists of teacher support provided to students, teacher attitude towards students, school support, and class atmosphere.

Observed literature mentions several outputs of academic burnout which are decline in academic achievement (GPA), school dropout, low level of academic motivation oriented on task completion, and student depression (see Figure 3).

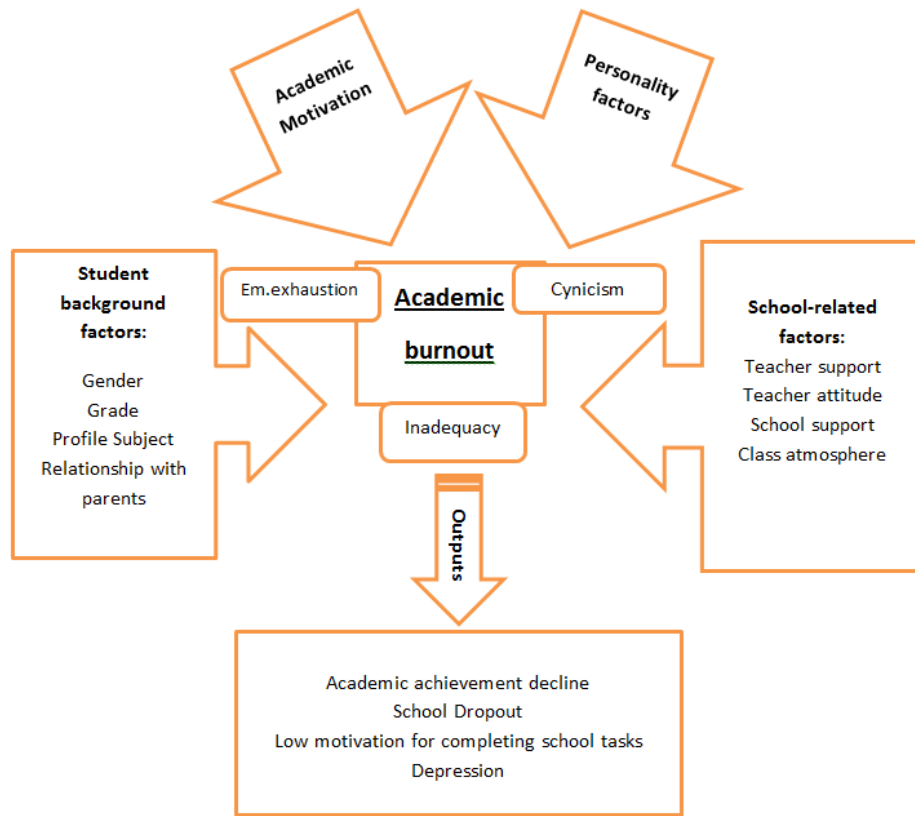


Figure 3. Conceptual Framework for Academic Burnout.

Chapter 3. Methodology

3.1. Introduction

The purpose of the study is to analyze academic burnout in NIS high-school students. Additionally, the study will consider the predictive ability of personality and academic in predicting academic burnout. Furthermore, it will explore the factors contributing to the development of academic burnout in NIS high-school students. Present research will explore students' academic burnout level, school-related as well as student background factors contributing to academic burnout development.

This section aims to present the research design, sampling method, data collection procedure, and ethical considerations of the study.

3.2 Research Design

The present study used a non-experimental explanatory cross-sectional survey design. The explanatory study was used to understand how some variables were related and why they were related (O'Dwyer & Bernauer, 2014, p.58). This particular study aimed to identify whether academic burnout was related to academic motivation and personality factors. Moreover, O'Dwyer and Bernauer (2014) state that explanatory study is good to use when one needs to establish possible causal relationships with the use of non-experimental data (p.157). This particular study aimed to understand if certain factors (personality, level of motivation, gender, grade, and academic achievement) may have predicted the development of academic burnout in high-school students. Finally, the cross-sectional survey design component allowed getting a "snapshot" of certain phenomena and attributes (O'Dwyer & Bernauer, 2014, p.69). Doing cross-sectional survey study showed the present situation related to academic burnout of NIS students in Taraz.

3.3 Sample

The target population in this study was high-school students of Nazarbayev Intellectual School, Taraz. The sample consisted of 113 NIS high-school students (51 males) who were studying in 11th (52.2 %) and 10th grade. Among them, the sample included students who don't have any profile subject (54 students), students majoring in technical sciences (28) and those majoring in natural sciences (31) (see Table 2). Students in the sample varied slightly in their academic achievement (GPA) from 4.0 to 5.0 ($M=4.68$, $SD= .24$).

Participants were selected using non-probabilistic convenience sampling procedure. The research was conducted at Nazarbayev Intellectual School in Taraz, Kazakhstan. This school was selected because NIS schools are known as selective schools, where students study under a pressure of strict academic requirements and heavy study load, parental expectations, foreign curriculum (Cambridge), learning subjects in English and having classes during summer break (summer school). That is why it is assumed that students of NIS may experience higher levels of academic burnout rather than students from mainstream schools.

Table 2

Descriptive Statistics for Gender, Grade, and Profile Subject of Students.

Variable		<i>n</i>	%
Gender	Male	51	46.4
	Female	59	53.6
Grade	10	54	47.8
	11	59	52.2
Profile subject	None	54	47.8
	Technical	28	24.8
	Natural	31	27.4

3.4 Data Collection Tools

The constructs of personality traits and school burnout elements were codified into numbers using four instruments: School Burnout Inventory (SBI), Big Five Inventory (BFI), Academic Motivation Scale (AMS), and Academic Burnout Factors Questionnaire (ABFQ).

School burnout was measured using the SBI developed by Salmela-Aro and Naatanen (2005). This instrument consists of 9 statements related to school life (as cited in Salmela-Aro et al., 2009). SBI includes such statements as: “I feel overwhelmed by my homework” and “I feel that I am losing interest in my schoolwork”. The respondents indicated the level of agreeing or disagreeing with the statement on the scale from 1 (completely disagree) to 6 (completely agree). The scores for each scale separately can be calculated summing up certain items that measure this scale. The overall burnout score can be obtained through calculating total of all items.

Personality factors were measured using the BFI developed by Goldberg (1993). The BFI includes 44 statements related to personality traits (for example: “I see myself as someone who can be moody”) to which respondents gave a score on the scale from 1 (disagree strongly) to 5 (agree strongly). The statements were then grouped to form a composite score for each of 5 personality factors: agreeableness, conscientiousness, neuroticism, extraversion, openness. Extraversion, agreeableness and neuroticism were measured with 8 items each, whereas conscientiousness and openness have 9 and 10 items, respectively. Each scale had a certain number of reversed items, which need to be preliminary recoded. The score for each factor was calculated summing up all the scores obtained for each item. No cumulative score can be calculated for this inventory.

Academic motivation was measured using AMS developed by Vallerand, Pelletier, Blais, Briere, Senecal, and Vallieres (1992). The instrument consists of 28 statements, such as “I can’t understand what I’m doing at school” and “I go to school, because I want to have “the good life” later on”. Participants are given the scale (1 to 7) to show to which extent they agree or disagree

with the statements. The instrument measures several instruments of academic motivation: intrinsic (knowledge oriented, experience oriented, accomplishment oriented), external (identified, introjected, external regulation) and amotivation. The score for each element is obtained through summing up the scores of items that belong to the element.

Factors contributing to the development of academic burnout were measured using ABFQ that contains 10 statements related to school support and class atmosphere (f.e. “teachers encourage me to express my opinions in class”). Each of 10 statements should be answered with the help of Likert scale (from 1 to 4). There were no reversed items. The questionnaire included the following subscales: teacher support, teacher attitude, class atmosphere, school support and relationship with parents. This questionnaire was specially created for the current study and the majority of questions were taken from School Health Promotion Survey, plus 4 demographic questions about participants’ gender, grade, GPA, and major subject.

3.5 Procedure

In order to obtain the permission from the gatekeeper to conduct a study at NIS, Taraz, a letter to the Principal of the school was sent, informing him of researcher’s intentions and asking for permission to conduct a study at the proposed research site. Moreover, a face-to-face meeting with the principal was arranged to provide him with details and procedures of the study. Since the age of the students of these grades was less than 18, and they were considered minors, it was necessary to obtain their parents’ written permission for them to participate in a study. However, in a conversation with a principal it became evident, that, since NIS is an educational experimental platform, the principal of the school has an authority to permit students on behalf of their parents to participate in the study.

When all these procedures were taken care of, the students were approached during the lessons. The students were sitting in their usual classrooms and they were supervised by the researcher. The details of the study were briefly explained to students and consent form was

given to them beforehand. After students had read and signed informed consent, they were given printed versions of surveys. Each student completed the survey individually. Since the surveys were provided in three languages, there were no problems related to understanding questions. Completing the survey took approximately 30 minutes. Upon completion, the survey were collected by the researcher and students were thanked and dismissed.

3.6 Ethical Considerations

Since the participants completed the surveys using paper versions, anonymity and confidentiality needed to be carefully considered. First of all, participation in survey was anonymous and all participants were informed about that in consent form. Moreover, the surveys were anonymized by not collecting any personal information that could identify participants.

After collecting filled in survey papers, all the papers were kept in researcher's house to avoid theft and confidentiality break. After collected data was put into electronic format, all paper versions of survey were eliminated and electronic data was kept on a researcher's personal laptop (that was not used for any other purposes and will be kept at researcher's house). The computer had no access to internet and was password-protected. The file with collected data was also password protected. After data analysis, the document containing data was deleted from the researcher's laptop.

The participation in the study did not contain any risks greater than those participants encounter in their everyday life. However, students might have experienced a slight discomfort answering the questions about their school life and academic burnout and become more aware about what they were experiencing. To minimize this potential risk, the researcher informed the students (also it will be written in the consent form) that whenever they feel the feeling of discomfort, they may have refused to answer a particular question or withdrawn from the research study right away without any consequences for their status as a student of NIS or their grades.

3.7 Data Analysis

Collected data was analyzed using IBM SPSS Statistics Version 22. Two types of data analysis were performed: descriptive and inferential. In order to see the overall picture of academic burnout, descriptive analysis (mean, standard deviation) was made. For understanding the differences in academic burnout by age, gender and grade of students, inferential analysis (t-test, ANOVA) was done. To analyze the relationship between academic burnout, motivation and personality factors bivariate analysis was implemented (correlation and regression).

Chapter 4. Results

4.1 Descriptive Analysis

Table 4 displays number of items, means, standard deviations and internal consistency of instruments used to measure academic burnout, personality factors and academic motivation.

The results showed that the level of academic burnout of NIS high-school students may be described as average ($M=30.78$, $SD=8.10$). It is possible to consider School Burnout Inventory an internally consistent instrument ($\alpha=.75$). However, looking at each dimension separately, it is seen that exhaustion dimension has a lower internal consistency coefficient ($M= 30.78$, $SD= 8.10$, $\alpha= .52$) than other dimensions.

As for Big Five Instrument, the internal consistency coefficient for extraversion ($M=26.76$, $SD=5.77$, $\alpha=.77$) is higher than for other factors. Agreeableness ($M=31.13$, $SD=5.02$, $\alpha=.55$), conscientiousness ($M=28.97$, $SD=4.89$, $\alpha=.56$) and neuroticism ($M=26.25$, $SD=4.60$, $\alpha=.56$) showed similar internal consistency coefficients. Internal consistency coefficient for openness was lower than for extraversion, but higher than for other factors ($M=38.42$, $SD=5.58$, $\alpha=.68$).

Looking at the descriptive statistics of Academic Motivation scale, students of NIS scored higher in intrinsic motivation oriented on knowledge, external motivation identified and external motivation oriented on external regulation, and lower in internal motivation oriented on accomplishment, internal motivation oriented on experience, and external motivation introjected. Internal consistency coefficients of intrinsic ($\alpha=.92$), external ($\alpha=.85$) and amotivation ($\alpha=.79$) were satisfactory (see Table 3).

Table 3

Descriptive Statistics for key variables factors with internal consistencies

Variable	Items	<i>M</i>	<i>SD</i>	α
ABS total	9	30.78	8.10	.75
Exhaustion	4	14.09	4.01	.52
Cynicism	3	10.04	3.75	.74
Inadequacy	2	6.58	2.84	.70
PF				
Extraversion	8	26.76	5.78	.77
Agreeableness	9	31.13	5.02	.55
Conscientiousness	9	28.97	4.89	.56
Neuroticism	8	26.25	4.60	.56
Openness	10	38.42	5.58	.68
AM				
IM total	12	54.27	16.06	.92
IM_knowledge	4	19.65	5.95	.88
IM_accomplishment	4	17.64	6.37	.87
IM_experinece	4	16.78	5.57	.71
EM total	12	60.25	13.22	.85
EM_identified	4	21.07	5.36	.78
EM_introjcted	4	16.87	5.96	.77
EM_external regulation	4	22.11	5.40	.80
Amotivation	4	9.93	5.51	.79

ABS= Academic Burnout in School setting; PF= personality factors; AM= academic motivation; IM=intrinsic motivation; EM=extrinsic motivation; *M* = Mean; *SD* = Standard Deviation.

4.1.1 Relationship between academic burnout dimensions

Table 4 presents the bivariate correlation for academic burnout dimensions for the total sample. The relationship between exhaustion, cynicism, inadequacy and cumulative score for academic burnout in school setting (as measured by School Burnout Inventory) was investigated using Pearson product-moment correlation coefficient. Overall, all three variables resulted in a moderated positive correlation among each other. More specifically, results evidenced a moderate positive correlation between exhaustion and cynicism ($r=.39, n=113, p=.01$), as well as between inadequacy and cynicism ($r=.31, n=113, p=.01$), and between inadequacy and emotional exhaustion ($r=.39, n=113, p=.01$). Cynicism and inadequacy had a strong positive relationship with the cumulative academic burnout in school setting score ($r=.77, n=113, p=.01$),

($r=.69$, $n=113$, $p=.01$), whereas exhaustion had a very strong positive relationship with academic burnout in school total score ($r=.80$, $n=113$, $p=.01$). Such results suggest that the dimensions of academic burnout in school are interrelated and when one dimension level increases, others will also grow.

Table 4

Bivariate Correlations of Academic Burnout Dimensions in the Total Sample (N=113)

	1	2	3
ABS dimensions			
1.Exhaustion	-		
2.Cynicism	.39**	-	
3. Inadequacy	.39**	.31**	-
4. ABS total	.80**	.77**	.69**

ABS= academic burnout in school

** . Correlation is significant at the .01 level

* . Correlation is significant at the .05 level

4.1.2 Descriptive statistics for key variables broken down by gender and grade

Table 5 presents means and standard deviations for academic burnout and its dimensions, personality factors and academic motivation broken down by gender and grade (see Table 5).

Gender. Results showed that girls tend to experience greater level of emotional exhaustion and feeling of inadequacy compared to their male counterparts. Subsequently, girls' level of academic burnout ($M= 32.7$; $SD= 8.31$) is considerably higher than boys' ($M= 27.33$; $SD= 11.84$), even though the boys results are more dispersed from the mean. In terms of personality factors, girls scored higher on agreeableness, openness, and neuroticism. However, boys outscored girls for extraversion ($M=27.76$; $SD=5.75$). As for conscientiousness, male and female high-school students got similar average results (see Table 5). Analyzing the results of academic motivation, it is possible to mention that female students tend to be more intrinsically motivated than males. In the meantime, the results for external motivation broken down by gender are very similar. Further, boys seem to be more amotivated academically than girls.

Grade. Considering the year of study, tenth graders experience slightly lower level of total academic burnout compared to students of eleventh grade. However, regarding each burnout dimension, their scores are very similar to each other. Interestingly, on personality factors students of tenth and eleventh grade average scores are also very similar. The dispersion of answers between the grades is also similar. Regarding academic motivation, students of tenth grade have higher scores for both intrinsic and extrinsic motivation, than those of eleventh grade. However, the same tenth grade student experience slightly higher level of amotivation than students of eleventh grade.

4.1.3 Descriptive statistics for key variables broken down by profile subject

Considering descriptive statistics for profile subjects of students, results showed that overall level of academic burnout is quite similar comparing students with different profile subjects. Nevertheless, students majoring in natural sciences score slightly higher ($M=33.32$, $SD=7.00$) than two other groups. Students with no profile subject scored higher on extraversion, agreeableness and conscientiousness than two other groups. Students majoring in technical sciences had lower average score for neuroticism as well as for openness. The highest average score for openness was obtained by students without any profile subject (see Table 6).

Concerning academic motivation, technical science students scored higher in intrinsic motivation, whereas students without profile subject had higher external motivation level. Students from natural sciences scored lowest both in intrinsic and external motivation (see Table 6). Interestingly, the highest scores for amotivation were obtained by students majoring in technical sciences ($M=11.07$, $SD=6.64$), and students of natural sciences got the lowest score in amotivation ($M=8.71$, $SD=4.39$).

4.1.4 Descriptive statistics for school-related factors

The descriptive statistics for school-related factors with number of items, means, standard deviations, and percentages for answers is displayed in Table 7. Thus, the scale of teacher

support obtained a higher mean than teacher attitude and school support, which means that students overall feel better about teacher support than about teacher attitude or school support. The means of other factors cannot be compared due to different number of items for each factor. Considering the class atmosphere factor, the majority of students agreed on all three items. Moreover, it is important to notice that larger number of students agreed on getting along with others in the class (item 1), than on other items. As for relationship with parents, the vast majority of students indicated that they are maintaining a good one.

Table 5

Descriptive Statistics for Academic Burnout in School Dimensions, Personality Factors, Academic Motivation Elements differentiated by gender and grade

Variable	Male (n=51)		Female (n=59)		10th grade (n=54)		11th grade (n=59)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
ABS								
Exhaustion	12.00	4.58	15.37	3.59	13.39	4.29	14.73	3.65
Cynicism	9.67	7.63	9.97	3.85	9.46	4.24	10.58	3.19
Inadequacy	5.67	1.15	7.34	3.04	5.96	2.77	7.14	2.81
ABS total	27.33	11.84	32.75	8.31	28.96	8.79	32.44	7.08
PF								
Extraversion	27.76	5.75	25.97	5.75	27.61	5.67	26.03	5.75
Agreeableness	29.94	5.42	32.07	4.51	31.93	4.94	30.41	5.02
Conscientiousness	28.67	4.12	28.98	5.40	29.76	4.58	28.25	5.09
Neuroticism	25.00	5.00	27.44	4.02	26.33	4.94	26.17	4.30
Openness	37.71	6.10	39.05	4.95	39.12	5.46	37.81	5.66
IM total	51.96	16.58	55.36	15.82	56.78	17.62	51.59	14.33
Knowledge	19.41	5.76	20.08	5.86	20.28	6.37	19.08	5.53
Accomplishment	17.49	6.36	17.81	6.32	18.87	6.40	16.51	6.17
Experience	16.57	5.84	17.14	5.23	17.63	6.01	16.00	5.06
EM total	60.20	13.48	59.31	13.58	63.70	11.64	56.69	14.26
Identified	20.51	5.63	21.56	5.19	22.15	5.04	20.08	5.49
Introjected	16.53	6.123	17.32	5.78	18.41	5.46	15.46	6.08
External regulation	21.69	5.69	22.32	5.24	23.15	4.15	21.15	6.21
Amotivation	10.59	5.69	9.27	5.02	10.04	5.41	9.83	5.65

ABS= Academic Burnout in School setting; PF= personality factors; AM= academic motivation; IM=intrinsic motivation; EM=extrinsic motivation; *M* = Mean; *SD* = Standard Deviation

Table 6

Descriptive Statistics for Academic Burnout in School Dimensions, Academic Burnout in School Total Score, Personality Factors, Academic Motivation categories differentiated by profile subject

Variable	N/PS (n=54)		TS (n=28)		NS (n=31)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
ABS total	28.96	8.79	31.46	7.17	33.32	7.00
Exhaustion	13.39	4.29	14.25	3.97	15.16	3.34
Cynicism	9.46	4.24	10.79	3.14	10.39	3.28
Inadequacy	5.96	2.77	6.43	2.30	7.77	3.11
PF						
Extraversion	27.61	5.67	26.04	5.78	25.94	5.96
Agreeableness	31.93	4.94	30.64	5.73	30.19	4.38
Conscientiousness	29.76	4.58	28.36	4.78	28.16	5.44
Neuroticism	26.33	4.94	24.57	4.05	27.61	4.06
Openness	39.12	5.46	36.78	6.62	38.71	4.59
IM total	56.78	17.62	57.75	13.77	50.55	14.97
Knowledge	20.28	6.37	18.07	5.68	20.00	5.31
Accomplishment	18.87	6.40	14.86	5.87	18.00	6.15
Experience	17.63	6.01	15.21	5.13	16.71	4.98
EM total	63.70	11.64	57.36	14.56	56.10	14.20
Identified	22.15	5.04	18.57	5.62	21.45	5.07
Introjected	18.41	5.46	14.36	5.76	16.45	6.29
External regulation	23.15	4.15	19.89	6.77	22.29	5.52
Amotivation	10.04	5.41	11.07	6.64	8.71	4.39

ABS= Academic Burnout in School setting; N/PS=no profile subject; TS= technical sciences; NS= natural sciences; PF= personality factors; IM=intrinsic motivation; EM=extrinsic motivation; M = Mean; SD = Standard Deviation.

Table 7

Descriptive Statistics for school-related factors

Variable/Items	Items	<i>M</i>	<i>SD</i>	answers in %			
				1	2	3	4
TS	2	6.17	1.08				
1.Teachers encourage me to express my opinions in class		3.33	.57	0	5.3	56.6	38.1
2.Teachers are interested in how I am doing		2.84	.72	1.8	30.1	50.4	17.7
TA	2	5.45	1.06				
1.My teachers expect too much from me at school		2.39	.73	12.4	38.9	46.0	2.7
2.Teachers treat us fairly		3.05	.67	.9	17.7	56.6	24.8
CA	3	9.23	1.62				
1.The pupils in my class get along well		3.19	.67	.9	12.4	54	33
2.The classroom discipline in my class is good		2.81	.78	5.3	26.5	50.4	17.7
3.The mood in our class is such that I dare to speak my opinion freely		3.24	.72	.9	14.2	45.1	39.8
SS	2	5.30	1.28				
1.The opinions of pupils are taken into consideration in the development of school work		2.73	.80	7.1	27.4	50.4	15.0
2.I know how to influence school matters in my school		2.57	.78	8.0	38.1	43.4	10.6
RP	1	3.67	.61				
I have a good relationship with my parents				2.7	0	24.8	73

TS= teacher support; TA= teacher attitude; CA=class atmosphere; SS= school support; RP=relationship with parents; *M*=mean; *SD*=standard deviation; I = reversed item

4.2 Inferential Analysis

4.2.1 Differences in academic burnout scores compared by gender and grade

Gender. An independent-samples t-test was conducted to compare academic burnout in school setting scores for males and females. There was a significant difference in the scores for males ($M= 28.7, SD=7.18$) and females ($M= 32.75, SD=8.31$); $t(108) = -2.70, p=.008, d= .52$. The effect of gender on academic burnout was moderate. These results suggest that female high-school students of NIS tend to have statistically significant higher level of burnout than their male counterparts.

Grade. An independent-samples t-test was conducted to compare academic burnout in school setting scores for students of tenth and eleventh grades. There was a statistically significant difference in academic burnout scores for tenth-grade students ($M= 28.96, SD=8.79$) and eleventh grade ($M= 32.44, SD=7.08$); $t(111) = -2.32, p=.022, d= .43$. The effect of year of study on academic burnout was modest. These results suggest that students of tenth grade experience statistically significant lesser levels of academic burnout that students of eleventh grade.

4.2.2 Differences in academic burnout scores compared by profile subject

A one-way between-groups ANOVA was conducted to compare the effect of profile subject on the overall academic burnout level for students who do not have any profile subject, those majoring in technical sciences (ICT, physics) and students of natural sciences (biology, chemistry). There was a significant effect of profile subject on academic burnout at the $p<.05$ level for the 3 groups [$F(2,113) = 3.09, p=.049, \eta^2=.05$]. However, the effect size, calculated using eta squared was weak.

Post hoc comparisons using the Scheffe test indicated that the mean score obtained by students without profile subject ($M= 28.96, SD=8.79$) was significantly lower that the score

obtained by students majoring in natural sciences ($M= 33.32$, $SD=7.00$). However, natural sciences students score did not significantly differ from technical science students ($M= 31.46$, $SD=7.17$). Taken together, these results suggest that there is no difference in academic burnout scores of natural science and technical science students. However, students who do not have any profile subject experience statistically significant lower levels of academic burnout than students majoring in natural sciences.

4.2.3 Relationship between school-related factors and academic burnout dimensions

Table 8 shows the relationship between school-related factors, personality factors, academic motivation, GPA and academic burnout dimensions computed using Pearson product-moment correlation coefficient. Results showed that there was a moderate negative significant relationship between cynicism and teacher support ($r=-.31$; $n=113$; $p=.01$). Teacher attitude towards students and cynicism were also negatively significantly related, and the relationship was modest ($r=-.26$; $n=113$; $p=.01$). Furthermore, total academic burnout was modestly negatively correlated with teacher support ($r=-.25$; $n=113$; $p=.01$) and with school support ($r=-.23$; $n=113$; $p=.05$). Other factors were not found to have a significant relationship with academic burnout dimensions.

4.2.4 Relationship between personality factors, academic motivation and academic burnout dimensions

Total academic burnout. The Pearson product-moment correlation analysis was conducted to identify if there was a relationship between personality factors, academic motivation and total academic burnout. There was a modest negative significant correlation between conscientiousness and total score for academic burnout in school ($r= -.24$; $n=113$; $p=.01$). On the contrary, neuroticism was found to be positively moderately related to academic burnout ($r= .37$; $n=113$; $p=.05$). No significant relationships were found between the total score academic burnout and the other personality dimensions (see Table 8).

Furthermore, Pearson product-moment correlation analysis showed that there was a moderate negative relationship between total score for academic burnout and total score for intrinsic motivation ($r = -.40$; $n = 113$; $p = .01$). Additionally, academic burnout was found to be moderately negatively related to external motivation ($r = -.32$; $n = 113$; $p = .01$). Amotivation had a moderate positive significant relationship with academic burnout ($r = .30$; $n = 113$; $p = .01$). Each element of academic motivation (except for amotivation and external regulation) was moderately negatively significantly related to academic burnout (see Table 8). In addition, the results of Pearson product-moment correlation show that among suggested school-related factors possibly contributing to academic burnout, only teacher support and school support were significantly related to it. Because this relationship is negative, it may be assumed that students' level of academic burnout may rise when teacher and school support diminish. Also, when teacher support and teacher attitude levels rise, academic burnout may lower. Finally, there was no significant correlation between GPA and total academic burnout.

Academic burnout dimensions. Speaking about academic burnout dimensions, exhaustion had a moderate positive significant correlation with neuroticism ($r = .39$; $n = 113$; $p = .01$). Cynicism was found to be modestly negatively correlated with agreeableness and conscientiousness. Cynicism was also negatively correlated with all the dimensions of academic achievement, both extrinsic and intrinsic. The only positive significant relationship cynicism had was with amotivation and this relationship was considered to be strong ($r = .55$; $n = 113$; $p = .01$). The dimension of inadequacy was modestly negatively correlated to conscientiousness, intrinsic motivation oriented on accomplishment and experience, as well as with introjected external motivation. On the contrary, inadequacy was moderately positively related to neuroticism ($r = .30$; $n = 113$; $p = .01$). Furthermore, cynicism was modestly negatively correlated to teacher attitude ($r = -.26$; $n = 113$; $p = .01$), and moderately negatively related to teacher support ($r = -.31$; $n = 113$; $p = .01$).

Finally, GPA did not have a significant relationship with any of academic burnout dimensions.

Further, results suggest that academically burned out students will be less conscientious and more neurotic. In terms of academic motivation, such students might feel amotivated by school and studying and might lack internal and external interest in anything related to school. Students with cynical attitude towards school will be less willing to study and less diligent and responsible in their studies. Moreover, they will be less interested in getting knowledge. Experience, or accomplish some educational goal. However, external regulation still might somehow make them motivated in coming to school. Students suffering from inadequacy might experience higher levels of neuroticism and might be more reserved to new experience, less diligent and shyer in interpersonal relationships. Such students may also lack intrinsic and external motivation to attend school.

Table 8

Bivariate correlations in the key variables in the total sample (N=113)

SRF	<u>ABS dimensions</u>			ABS total
	Exhaustion	Cynicism	Inadequacy	
Teacher support	-.16	-.31**	-.09	-.25**
Teacher attitude	-.12	-.26**	.07	-.16
Class atmosphere	-.12	-.08	.03	-.07
School support	-.11	-.30	-.11	-.23*
Relationship with parents	.00	-.02	.00	-.00
PF				
Extraversion	-.00	-.10	-.19*	-.10
Agreeableness	.01	-.28**	-.11	-.16
Conscientiousness	-.03	-.25**	-.26**	-.22*
Neuroticism	.39**	.14	.30**	.37**
Openness	.12	-.09	-.12	-.01
AM				
IM_total				-.40**
IM_knowledge	-.04	-.52**	-.13	-.31**
IM_accomplishment	-.16	-.50**	-.31**	-.42**
IM_experince	-.08	-.49**	-.20*	-.34**
EM_total				-.32**
EM_identified	-.04	-.53**	-.10	-.30**
EM_introjcted	-.11	-.40**	-.28**	-.34**
EM_external regulation	.00	-.18*	.05	-.06
Amotivation	.06	.55**	.05	.30**
GPA	-.07	-.14	-.04	-.11

SRF=school-related factors ; ABS= academic burnout in school; PF= personality factors;

AM= academic motivation;

**. Correlation is significant at the .01 level

*. Correlation is significant at the .05 level

4.2.5 The effect of key variables on academic burnout in school setting

A series of multiple linear regressions were performed in order to identify the effect of school-related factors, personality factors, academic motivation elements and GPA on the development of academic burnout in school (see Table 9). The independent variables were school-related factors, personality factors, academic motivation elements and GPA. The dependent variable was academic burnout total score.

A multiple linear regression was calculated to understand the effect of school-related factors on academic burnout. Results evidenced that of all school-related factors (such as teacher support, teacher attitude, class atmosphere and school support and relationship with parents), only teacher support had a weak significant effect on academic burnout ($F(5,10)=2.66$, $\beta=-.25$, $p<.05$) with an adjusted R^2 of .06.

A multiple linear regression was calculated to predict the effect of personality factors (i.e. extraversion, agreeableness, conscientiousness, neuroticism and openness) on academic burnout in school settings. The independent variables were personality factors, and the dependent variable was total score for academic burnout. A significant regression equation was found ($F(5,104)=5.13$, $p<0.01$) with an adjusted R^2 of .15. The result showed that among personality factors, only neuroticism was a significant predictor of academic burnout in school ($F(5,104)=5.13$, $\beta=.34$, $t=3.75$, $p<0.01$).

A multiple linear regression was also calculated in order to predict the effect of academic motivation elements (intrinsic, external, amotivation) on academic burnout in school settings. The independent variables were academic motivation elements, and the dependent variable was total score for academic burnout. A significant regression equation was found ($F(7,105)=4.57$, $p<0.01$) with an adjusted R^2 of .18. Considering academic motivation, only intrinsic motivation oriented on accomplishment was a negative significant predictor of academic burnout in school ($F(7,105)=4.57$, $\beta=-.51$, $t=-2.43$, $p<0.05$). This variable was a modest predictor of academic burnout (adjusted $R^2=.18$).

Table 9

Linear Regression of Academic Burnout in School Total Score onto Personality Factors, Academic Motivation and GPA

	<u>ABS total</u>		<i>B</i>	<i>F</i>	<i>R</i> ²
	β	<i>t</i>			
ABF					
Teacher support	-.25*	-2.33	-1.87	2.66	.06
Teacher attitude	-.12	-1.21	-.92		
Class atmosphere	.97	.91	.48		
School support	-.15	-1.45	-.95		
Relationship with parents	.98	1.02	1.28		
PF				5.13	.15
Extraversion	-.05	-.55	-.17		
Agreeableness	-.13	-1.43	-.16		
Conscientiousness	-.17	-1.88	-.23		
Neuroticism	.34**	3.75	.63		
Openness	-.02	.19	-.13		
AM				4.57	.18
IM_knowledge	.32	1.73	.44		
IM_accomplishment	-.51*	-2.43	-.65		
IM_experince	-.10	-.81	-.15		
EM_identified	-.23	-1.64	-.35		
EM_introjected	.02	.12	.27		
EM_external regulation	.14	1.33	.22		
Amotivation	.08	.82	.13		
GPA	-.11	-1.18	-3.96	1.39	.00

ABS= academic burnout in school; PF= personality factors; AM= academic motivation;

** . Correlation is significant at the .01 level

* . Correlation is significant at the .05 level

Additionally, of all personality factors measured, only neuroticism might predict the development of academic burnout. This may possibly mean that if a student has high level of neuroticism, he is more likely to develop academic burnout. Moreover, intrinsic motivation for accomplishment may also be a predictor of academic burnout. The results suggest that if a student is not motivated on accomplishment, in other words, if he does not enjoy studying process, he might also be more prone to develop academic burnout in school setting. Finally, a simple linear regression showed that GPA did not have any significant effect on academic burnout in school ($F(1,99)=1.39, p=.24$), with an adjusted R^2 of .004.

The results acquired from regression analysis may mean that the factors that were assumed to have some effect on the development of burnout (teacher support, teacher attitude, class atmosphere, school support, relationship with parents), in fact do not have any significant effect, except for only weak negative effect of teacher support. This suggests that if students do not get enough support (in a form of encouragement, interest in students' well-being) from their teachers, their level of academic burnout may rise.

4.3 Conclusion

Summarizing the findings, this study aimed to find out about the general academic burnout level of NIS high-school students. General academic burnout level was considered "average", with results being quite dispersed. As for differences in academic burnout among male and female students, and students of different grades and profile subjects, the differences were found in all three groups: female students' burnout level was higher than of male students (especially on the dimension of emotional exhaustion); students of tenth grade having lower level of academic burnout than eleventh grade students; and students majoring in natural sciences having higher level of academic burnout than students without any profile subject. Further, none of the school-related factors was significantly related to academic burnout in school setting, except for teacher support and school support to students.

However, regression analysis showed that teacher support had a weak but significant effect on academic burnout in school. Moreover, of all personality factors, neuroticism was evidenced as a significant predictor of academic burnout in school. Speaking about the role of academic motivation, results showed that intrinsic motivation oriented on accomplishment has a modest negative effect on academic burnout. Finally, this study revealed that GPA of students did not have any significant effect on the level of academic burnout in school.

4.4 Summary of the Findings

Academic burnout of NIS high-school students. The general academic burnout level of Taraz NIS high-school students is average. Emotional exhaustion is related to academic burnout in school more than any other dimension.

Student gender and academic burnout, personality factors and academic motivation.

Female students have higher academic burnout level than males (especially for emotional exhaustion). Girls experience higher exhaustion and inadequacy than boys.

Girls are more agreeable and open, but less extraverted. Girls score higher on neuroticism, more intrinsically motivated and less amotivated than boys.

Student grade and personality factors and academic motivation. Eleventh-grade students have higher level of academic burnout than tenth-grade students. Tenth and eleventh grades scores for personality factors are similar. Tenth-grade students have higher intrinsic, external motivation and amotivation than eleventh-grade students. External motivation scores are similar for both grades.

Student profile subject and personality factors and academic motivation. Students majoring in natural sciences have slightly higher level of burnout than students without any profile subject. Students without any profile subject are more extraverted, agreeable, conscientious and open, than students of other groups. They are more externally motivated than others. Technical science students are less neurotic and less open to communication and experience. They are more intrinsically motivated, and at the same time more amotivated to study, than other groups. Natural science students score lower on both intrinsic and external motivation, as well as on amotivation.

School-related factors contributing to the development of academic burnout in school.

Among all tested school-related factors, only teacher support had a significant effect on

academic burnout. Other school-related factors did not. School support had a significant negative relationship with academic burnout. Teacher attitude towards students was negatively related to students' cynicism towards studying.

Personality factors and academic burnout. Of all personality factors, neuroticism was a significant predictor of academic burnout in school. Conscientiousness was also negatively related to academic burnout in school.

Academic motivation and academic burnout. Intrinsic motivation and external motivation were negatively related to academic burnout in school. Amotivation, however, was positively related to academic burnout. Moreover, of all academic motivation scale elements, intrinsic motivation oriented on accomplishment had a modest negative effect on academic burnout in school.

Academic achievement and academic burnout. GPA of NIS students was not related to academic burnout.

This chapter observed the detailed findings of the primary research, interpretations of the findings linked with relevant literature will be presented in the next chapter.

Chapter 5. Discussion

5.1 Introduction

Collected data was analyzed and results were presented in the previous chapter; this chapter is dedicated to the interpretation of data results and to answering the main research questions. The purpose of the study was to explore the level of academic burnout among NIS high-school students in Taraz. Additionally, current research aimed to explore if certain school-related factors may have some effect on the development of academic burnout in school. Finally, this study aimed to understand the role of personality factors and academic motivation in predicting academic burnout in school setting.

In the beginning of the research process, several research questions were posed. The first research question was intended to examine the overall level of academic burnout among NIS high-school students. The second question was posed to determine academic burnout levels among students of different gender, grade, and profile subject. Third research question was dedicated to the relationship between certain school-related factors (teacher support, teacher attitude, class atmosphere, school support, and relationship with parents) and academic burnout dimensions. The fourth research question aimed to investigate the role of personality factors and academic motivation in the development of academic burnout in school.

In order to answer these research questions, a non-experimental explanatory cross-sectional survey design was used. The sample consisted of 113 high-school NIS students of Taraz. The data was analyzed using SPSS and presented in Findings chapter. Present chapter will give answers to the research questions and provide an extensive interpretation of findings, connecting them to the literature..

5.2 Interpretation of the Major Findings and Connection to the Literature

Finding 1. Academic burnout of NIS high-school students.

The level of academic burnout of NIS high-school students can be considered average. Previous research showed that course-load and school-related demands add a lot of stress to individuals and trigger the development of burnout (Salmela-Aro & Upadyaya, 2014). Despite the fact that NIS is a school with its special curriculum and very intensive study-load, high-school students do not show high level of academic burnout. This may possibly mean that there are buffering factors present at NIS that lessen the level of academic burnout at school. In this research several school-related factors were investigated, however, few of them were found to be related to academic burnout. From this, it might be assumed that there may be some other factors that have a diminishing effect on the development of school burnout, and this area requires further investigation. Second possible explanation to this finding may be rooted in the grades of students chosen as participants of the study. NIS school system at Taraz includes grades from 7 to 12. Students of grade 10 and 11 have been in this system for at least 3-4 years, and spent enough time to get accustomed to the course load and study program of NIS. Such explanation finds support in the literature, where it was found that students who spent more years studying experience lower academic burnout than those who just entered educational organization (Fu & Yang, 2013)

Thirdly, average level of academic burnout of NIS high-school students may be explained by good teacher support. Present study found that when teachers provide enough support for their students, it has a significant effect on lowering academic burnout level. Yang and Farn (2005) also claim that encouragement that comes from teacher reduces student academic burnout level and makes their self-efficacy higher. This is probably the case with NIS high-school students, due to the fact that NIS teachers are trained on special courses to implement student-centered approach and further, teachers are expected to practice this approach in their classrooms. The same idea was also supported by Meriläinen (2014), who states that teaching-learning experience is crucial for preventing the development of academic burnout. In order to lessen academic burnout level teachers should be supportive, encouraging, approachable, and

taking into consideration learning abilities of students (Meriläinen, 2014). These attributes of teacher go in accordance with teaching ethics of NIS and different learning abilities of students are met through differentiated educational approach that functions at NIS on a regular basis (NIS Centre for Educational Programs, 2016; p.149).

Forth possible explanation for the reduced levels of burnout of NIS students may be grounded in a solid level of psychological support provided to students. Since there is a special relaxation room for students and psychologists establish supportive and trusting relationship with students, who can come to meet them at any time. Such explanation may be possible, taking into consideration another major finding, also supported by observed literature (Salmela-Aro,2008; Yang & Farn,2005) that if the support of whole school community is provided to students, their level of academic burnout may be lowered.

Finding 2. Female students experience higher levels of academic burnout than males

NIS female students tend to experience significant higher levels of emotional exhaustion, inadequacy and overall burnout than their male counterparts. First of all, these results support the previous research findings by Backović, Ilić Živojinović, Maksimović & Maksimović (2012) and by Salmela-Aro et al. (2008), who also discovered that female students are more vulnerable to burnout, due to the fact that girls experience more stress from study-demands, from communication with teachers and from anxiety related to exams (Backović et al., 2012). Second, research results evidenced that emotional exhaustion had the strongest positive relationship with academic burnout total score. This fact explains why having higher level of exhaustion girls experienced higher level of burnout than boys.

Another possible explanation to the fact that girls demonstrated higher levels of emotional exhaustion is their level of neuroticism, which is considerably higher than male students. Neuroticism may be a source of additional distress. If a student is always nervous, afraid of failure, sets unrealistic study-goals, and is perfectionistic in his/her studying, it might

create more probability for failure and frustration in academic life. Academic failure might cause the individual to question his/her adequacy as a student. This is also well supported by the observed literature in the findings of Zhang et al. (2007), when they describe how maladaptive neurotic perfectionism leads to the development of academic burnout.

Additionally, it was found that girls are slightly more intrinsically motivated on getting knowledge than boys. Considering that girls scored higher on neuroticism, it is plausible to assume that they would worry a lot about what kind of students they are, also, they would input more efforts into studying, because they are more internally motivated. This is probably how emotional exhaustion may develop. On the other hand, there is a controversial explanation to this finding. Maybe intrinsic motivation for knowledge serves as a protector from getting even higher level of academic burnout. Such explanation is supported by the observed literature (Meriläinen, 2014; Rostami, Reza Abedi & Shaufeli, 2012; Stoeber et al., 2011).

Finally, except for getting higher scores on academic burnout, they also got higher scores on agreeableness. Present research findings show that agreeableness is negatively related to cynicism dimension of burnout. It may be assumed that if girls would be less friendly and understanding, they would become more cynical towards their classmates and studying process and that would possibly accumulate higher overall level of burnout. However, this explanation can also be refuted by another one. Knowing that scoring high on agreeableness relates to being emphatic and friendly, it is possible to make friends with classmates who experience high level of academic burnout. Literature shows that students who get along with peers experiencing high level of burnout, with time tend to experience similar level of burnout themselves, because they start sharing views and attitudes of their peers (Kiuru et al., 2008; Marion et al., 2014). Basically, this means that sometimes, agreeableness may lead a student to associate with “burned out” peers, which triggers the development of academic burnout.

Finding 3. Eleventh-grade students have higher level of academic burnout than tenth-grade students.

The findings concerning the year of study explored in literature review showed controversial results (Fu & Yang, 2013; Lin & Huang, 2014). Some studies report that there was no difference in academic burnout in terms of year of study, while others have found that students of smaller grades tend to experience higher burnout. The results of the present study also contradict both findings described in the observed literature. However, there is an explanation to that: such results may possibly occur due to the fact that tenth-grade students study in general stream at NIS, and they do not have any profile subject they are majoring in, meaning they do not have external summative assessment for this profile subject, no extra lessons and less pressure from school-related demands. All aforementioned aspects add distress to the eleventh graders who have profile subject.

Students of both grades manifested similar results on personality factors, which means that their personality profiles are quite similar. This may be understood in a sense that they are mostly of the same age, or possibly have 1-2 year difference. Because of that, it is possible to assume that they are on the similar stage of psychological development and share similar personality factors scores.

Concerning motivation, tenth graders experience higher level of amotivation. Such result may possibly be interpreted with the fact that tenth-grade students have no profile subject (that students usually choose because they are interested in it). Results of the current study evidenced that amotivation is positively related to cynicism. This means that even though tenth graders experience lower level of burnout in general, their level of amotivation should make school psychologist consider some actions that would help them to cope with lack of interest towards studies and prevent the development of cynical attitude towards school.

Finding 4. Students majoring in natural sciences have slightly higher level of burnout than students of technical sciences and those, without any profile subject.

Students majoring in natural sciences have slightly higher level of burnout than students of technical sciences and those without any profile subject. Natural science students also scored higher on emotional exhaustion. The possible reason for this may be found in the fact that students of natural sciences are predominantly females, whereas technical science subjects are usually chosen by male students. As it was discussed above, the findings of this study show that female students score higher on neuroticism, and this may explain their higher emotional exhaustion level.

Finding 5. Among all tested school-related factors, only teacher support had a significant effect on academic burnout.

Of all school-related factors, only teacher support had a significant effect on academic burnout. This finding is supported by previously observed research of Salmela-Aro et al. (2008) and Yang and Farn (2005), that are stating that in order to diminish the level of academic burnout in school, teachers should encourage their students, give them positive motivation for studying and support them. When teachers do this, their students will have more self-efficacy and will be mentally and even physically healthier. Without teacher support and encouragement serving as a buffer, students will suffer from stress, exhaustion and reduced academic accomplishment (Salmela-Aro et al., 2008). This result was quite predictable due to the fact that NIS system is promoting student-centered approach in education, putting student as a main figure at school. As it was already mentioned before, teachers of NIS undergo special training courses that teach them to use methods of active learning, learning through research and student-centered classroom techniques. Another aspect that explains this finding is that unlike mainstream schools, NIS schools have only 8-12 students per group and teacher manages to establish rapport with each student throughout the academic year. NIS teachers have time and

opportunity to spot every student personality features, his/her potential, abilities and interests, in order to provide these students with necessary academic and emotional support.

Unfortunately, other school-related factors were not found to have any effect on academic burnout of NIS high-school students. The exceptions are school support, being negatively related to academic burnout, and teacher attitude negatively related to cynicism. This finding is also supported by Salmela-Aro et al. (2008) and Yang and Farn (2005). Researchers hold a position that the whole school community should provide students with encouragement, support and positive motivation during their studying process.

Relationship with parents was not found to have any relationship or any effect on academic burnout among NIS students. This finding does not correspond with the finding of Marion et al. (2014) who claim that good relationship with parents may indirectly buffer the development of cynical attitude towards studying through protecting students from destructive influence of their “burned out” peers. Possibly, in the present study there are other confounding variables that intermediate between relationship with parents and academic burnout.

Another explanation to this may be the school day of NIS students. NIS is a school with a full school day that starts at 8 am and finishes at 5 pm or sometimes later. Students spend most of their time at school communicating with teachers and peers, but not parents. There is also a solid number of students coming to study at NIS from rural areas, that live in the dormitory throughout the academic year and meet their parents 2-3 times in 9 months. These aspects may possibly lessen the influence of parents on students’ academic lives and attitude towards studying. In this case, it may be assumed, that it is probably not parents who form student attitude towards school.

Finding 6. Neuroticism was a significant predictor of academic burnout in school.

The present research found that neuroticism is a significant predictor of academic burnout in school. In other words, when student is negative about his studying, worrying about his

academic life, is perfectionistic and maladaptive, he is more prone to burn out academically. This finding links to the findings of Jacobs and Dodd (2003) presented in the literature review, where they state about what they call “negative temperament” that is related to all three dimensions of burnout. By negative temperament they mean neurotic personality, feeling of constant stress and nervousness together with strong negative emotions and worry (Jacobs & Dodd, 2003).

Moreover, this is also supported by the study of Watson, Deary, Thompson and Li (2008) who state that neuroticism is strongly related to psychological morbidity of an individual, emotional exhaustion, and emotion-oriented coping with stress. This finding fits well in the whole picture of academic burnout, due to the fact that neuroticism is directly related to negative emotions, which cause distress (Griffin & Moorhead, 2011). Chronic distress may lead to emotional exhaustion, which in its turn is the “core” dimension of academic burnout.

Another finding in terms of personality factors is that conscientiousness was negatively related to overall academic burnout in school, to cynicism and inadequacy. In fact, this finding suggest that when a student is well-organized, manages time well, is diligent in achieving his/her academic goals, he/she will be less likely to develop cynical attitude towards school, will avoid feeling of inadequacy as a student and overall academic burnout. Similar findings were reported by Morgan and de Bruin (2010), who also indicated that when a student is conscientious he will not experience so much stress coming from work load or exams, because he organizes his studying process well and does not procrastinate, but works consistently to meet deadlines and accomplish tasks without additional feeling of tension from study-load. When a student is very serious in his attitude towards his academic life, he will not have cynicism towards what he is putting so much effort into. Moreover, managing tasks and study-load well, student knows how to function in the educational system in order to succeed, which prevents him from feeling inadequate and useless academically.

Finding 7. Intrinsic motivation oriented on accomplishment and external motivation were negatively related to academic burnout in school. Amotivation was positively related to academic burnout.

Speaking about the relationship between motivation elements and burnout, only intrinsic motivation oriented on accomplishment was found to have a modest significant negative effect on burnout in the regression analysis. Next, amotivation was positively related to burnout, whereas all elements of intrinsic and external motivation were negatively associated with burnout (except for external regulation, which was not significantly related).

First of all, the only element of intrinsic motivation that had a significant negative effect on academic burnout is accomplishment-oriented motivation. Such results may somehow be explained by Ryan and Deci (2000) who are stating that intrinsically motivated activities satisfy innate psychological needs. Keeping this in mind, it is possible to assume that intrinsic motivation towards accomplishment will satisfy student need for proving himself that he is able to reach some level of knowledge through successful completion of certain school-related tasks. That is why when he is engaged in study-activities he enjoys them. The feeling of pleasure from school-related activities alleviates stress and thus, may possibly diminish academic burnout.

Second, more amotivated students were more cynical towards studying. The same findings were obtained by David (2010), who links amotivation to neuroticism. Thus, neurotic students tend to be more amotivated, which triggers the feeling of inadequacy and indifference towards studying (David, 2010). This is understandable, due to the fact that such students probably do not see any meaning in studying process and might consider it a waste of time and energy. Cynicism in this case may manifest a form of coping strategy against distress coming from study-demands.

Third, all elements of intrinsic and external motivation were negatively related to burnout. David (2010) explains this using self-determination theory that states that these two

types of motivation should be considered in continuum, not separately. Further, looking closely at the dimensions of burnout, it is seen that academic motivation elements were negatively related to cynicism and inadequacy, but not to emotional exhaustion. From this finding it can be derived that possibly personality traits (mostly neuroticism) together with other various factors will play some role in the formation of exhaustion, whereas academic motivation (intrinsic and external) will contribute to the development of cynicism and inadequacy. However, this finding and explanation differs from the finding of David (2010), who holds the position that no matter what personality profile a student has, it is academic motivation that determines whether he will develop academic burnout or not. The difference in the results of the present study and David's may lie in the participants, because present study investigates academic burnout among school students, and David's participants were college students. It is possible to assume that while students are still at school, they are in their teenage years and their personality is still developing, maybe they yet do not know how to handle their feelings and to pursue the academic goal, knowing that it will benefit their future.

Finding 8. GPA of NIS students was not related to academic burnout.

Concerning academic achievement, GPA was not found to have any significant relationship or effect on academic burnout. This contradicts the findings of Bask and Salmela-Aro (2012), who stated that in their study GPA played an important role in developing inadequacy dimension. In case of present study, such result can be explained with the fact that students of NIS are mostly overachievers, and it is seen from descriptive statistics that their average GPA score is higher than 4.00. Because their academic achievement is above average, it is possible that students know how to manage study-demands and do not worry a lot about getting a bad grade. Moreover, it is assumed that NIS students undergo strict selection process and only gifted students get accepted. It may be possible that if a child is considered to be gifted, even if some grades for certain subject are not good, teachers will be inclined to give him a higher mark, keeping in mind that he is gifted in another sphere.

5.3 Answers for Research Questions

The first research question was concerning the general academic burnout level of NIS high-school students. It may be assumed that the results of the study are useful in answering this question. The information containing the answer on this research question is presented in Finding 1, where the descriptive analysis results for academic burnout were presented and reasons for such level of burnout were analyzed. Overall, the finding concerning this question suggests that academic burnout level of NIS high-school students in Taraz is considered average. As it is seen from the discussion of Finding 1, the reasons to such academic burnout level are grounded in such contextual factors as participants' year of study, support from teachers and school psychologists that students get on a regular basis.

RQ2 was related to the divergence of academic burnout levels in students of different gender, year of study, and choice of profile subject. The answers to these questions are discussed in Findings 2, 3 and 4. In general the information that can be provided by current study in order to answer this question is the following:

1. As it is shown in Finding 2, females experience higher level of burnout (scoring higher in exhaustion and inadequacy) than males. Such result might have been obtained due to various factors, among which the major possible factor is higher level of neuroticism.
2. Students of tenth grade experience slightly lower level of academic burnout, than those, who study in eleventh grade, as evidenced in Finding 3. Such result may be explained with the fact that tenth-graders are still studying in general stream, without having any profile subject and additional study load and demands.
3. Finding 4 shows that students of natural sciences experience burnout more than students of technical sciences and those who do not have any profile subject. The possible explanation to this is related to personal experience of students choosing

natural sciences as a major subject, which may cause ongoing additional distress and trigger the development of emotional exhaustion in natural science students.

RQ3 was focused on the factors (teacher support, teacher attitude, class atmosphere, school support, relationship with parents, academic achievement) that are related to academic burnout of NIS high-school students. The information concerning this question was discussed in Finding 5. Thus, among school-related factors mentioned in Research Question 3, teacher support had a significant negative effect on academic burnout. Additionally, school support was negatively related to burnout. Overall the findings suggest that if teachers and school community provide adequate emotional and school-related support to the students, they may not be prone to burn out academically.

RQ 4 evolved around the role of personality and academic motivation in predicting academic burnout of high-school NIS students. As discussed in Finding 6, among personality factors only neuroticism might play a role of academic burnout predictor. Such result was explained previously with the assumption that neuroticism causes a lot of distress to the individual through negative emotions. When the state of distress becomes chronic it causes emotional exhaustion, which is one of the strongest dimensions of academic burnout.

Moreover, conscientiousness was negatively related to all three dimensions of burnout. The explanation to this is rooted in student's ability to be diligent at his studies and to manage his time and resources well enough to diminish the level of stress, coming from study-load. As discussed in Finding 7, only intrinsic motivation on accomplishment has a modest negative effect on the development of academic burnout. The attempt to explain this finding was grounded in the feeling of pleasure a student experiences when he fulfills the study task and through that academic burnout lowers.

Moreover, amotivation was positively related to academic burnout, due to the fact that he does not consider studying meaningful and views it as a waste of time.

Intrinsic and external motivation was negatively related to academic burnout, because both these types of motivation complement each other and having them, a student may enjoy studying. The feeling of enjoyment is contrary to the feeling of stress, which is one of the major factors for the development of academic burnout.

The purpose of this chapter was to discuss and interpret the findings of primary research using observed literature and additional sources. In the beginning of the chapter major findings were presented. Further, these findings were discussed, and the information concerning main research questions was provided. The discussion of findings prepared a platform for speaking about limitations of the study and for drawing final conclusions in the following chapter. The following chapter will look at implications to several stakeholders, limitations of the study and final conclusions.

Chapter 6. Conclusion

6.1 Introduction

This chapter will present final conclusions of the study, implications for key beneficiaries, limitations and recommendations for future research. The present study aimed to explore the academic burnout level among NIS high-school students. Secondary aim of the research was to find out if certain student background and school-related factors somehow affect the development of academic burnout in school. Additionally, present research aimed to discover the role of personality and academic motivation in academic burnout development.

This chapter consists of several parts. Firstly, the implications to teachers and school psychologists, as well as to whole school community will be provided. Second, limitations of the study will be stated and suggestions for further research will be given. Finally, final statement will be closing the chapter.

6.2 Implications for theory and practice

Taking into consideration the findings of current study, it is possible to draw some practical implications for policy makers, teachers, school community, and school psychologists.

Hence, policy makers or AEO of Nazarbayev Intellectual Schools should organize a special professional development course for teachers that would be focused around psycho-emotional component of learning process. Since, till present, NIS teachers develop a lot in the teaching sphere, but psychological training is, unfortunately, neglected by AEO. It would be good if after this course teachers could get certificates and this could be included in teacher appraisal requirements in order to enhance teacher motivation for this training.

Next, knowing that teacher support is negatively related to burnout, teachers should be more considerate to their students, practice personal approach to each student during the lessons (considering the features of their personality and learning abilities; dedicating more lesson time

to each student). Further, it may possibly benefit the students' well-being, if teachers will be approachable, and if they will differentiate their lessons.

School community should also provide support for students, because school support was also negatively related to burnout. Hence, school may support students through providing them with comfortable learning environment, words of encouragement from school administration or from curators. Moreover, school community should organize various events that would involve both students and teachers working together outside of classrooms in order to improve communication between them, to encourage both parties to know each other better (including personal lives details such as hobbies, cuisine, etc.) and build up mutual positive empowering attitude. Finally, school community should promote studying as a valuable and interesting activity that would bring students certain benefits in adult life. They should together take actions that would trigger students' intrinsic motivation and interest to get knowledge and to develop academically.

School psychologists, in their turn, need to pay more attention to students personality traits, and those, scoring high on neuroticism, should be additionally supported emotionally through conversations or training sessions with specialists. Additionally, school psychologists should organize workshops for students on the topic of coping with stress, and meta-cognition topics in order to build up students' self-confidence and make them reflect on their learning process.

6.3 Limitations and future research recommendations

There are several limitations of the current study. One of them is that while trying to understand whether profile subject is related to the development of academic burnout, it is important to take into consideration the fact that not all students may have willingly chosen that profile subject. Some students were obliged to study there, because the classes with other profile subjects were already full. Majoring in the subject they are not interested in may have affected

student scores for academic motivation and academic burnout. Future research should take this aspect into consideration and include questions about the choice of profile subject.

Another limitation was that during primary research such student-background factors, as coming from urban or rural area, was not considered. Moreover, the same factors are tied to another possible background factor-which is living at home with family during the academic year, or living at school dormitory with other students, being supervised by dormitory curators. It is possible that academic burnout levels of students who live at home and in the dormitory may differ.

Primary research has also revealed that not all students want to go to school. Despite the fact that NIS school is considered to be elite school in the area, not all students want to study there, but still they continue to attend the school. May be such factor as parental influence takes place in this situation. If a student keeps attending NIS school because his parents want him to graduate elite school, this may cause him/her additional stress.

There is one limitation connected to school-related factors. Due to the fact that NIS students get a government grant to study at NIS, their parents do not pay for their studying and such things as meals, books and uniform is being covered by government. Moreover, students are provided with comfortable facilities and resources for studying. These aspects might either play a buffering role in the development of academic burnout, or on the contrary, trigger the feeling of “entitlement” and make student cynical towards everything given to them by school and teachers, thus adding to academic burnout level. Future research needs to explore these aspects and investigate the relationship between them and academic burnout and academic motivation.

Furthermore, after answering survey questions, participants of the study commented on the amount of questions in Big Five Inventory. Next time, it is possible to use a shortened version of this instrument.

Summarizing what was previously stated, future research should take a closer look at student school-related and background factors that may play role in the development of academic burnout, such as: area of origin, living conditions (with family or in a dormitory), voluntary or involuntary choice of profile subject, parental influence on studying at NIS, and government provision for students (in terms of finances, facilities and resources).

6.4 Conclusion

Present study aimed to examine the relationship between personality factors, academic motivation and academic burnout of NIS high-school students. Additional purpose of the study was to research possible factors that contribute to the development of burnout, among which are student gender, year of study, teacher attitude towards student, and class atmosphere.

Study results revealed that NIS high-school students are subject to academic burnout, and their level of burnout is average. Additionally, it is necessary to beware that personality profile and academic motivation play an important role in academic burnout formation and development. Consequently, such factors as gender, teacher support, choice of profile subject, and year of study also contribute to academic burnout among NIS high-school students.

Considering the findings of the study, it is necessary to take the next actions in order to solve the problem of academic burnout at NIS high school in Taraz and pay attention to the recommendations given in the implications such as developing a special course for teachers that would cover the psychological aspects of learning to raise the awareness of teachers about the matter.

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Appendices

Appendix A

Informed Consent (School Principal Version)

Academic burnout among high-school students in Kazakhstan: The protective role of personality and academic motivation.

DESCRIPTION: The students of your school are invited to participate in a research study on academic burnout (feeling of emotional and physical exhaustion at school caused by stress). It aims to explore the causes of academic burnout, and how motivation and personality can be connected to academic burnout. Students will be asked to fill in a survey that includes questions about their school life and their personal traits. Students will be asked to fill in the survey using the computer. After analyzing their answers in the research study, the researcher will delete all the results from the computer. The findings of this research study will be used in master's thesis. No information that can somehow identify students, such as their names or the name of your school, will be recorded.

TIME INVOLVEMENT: Students' participation will take approximately 20 minutes

RISKS AND BENEFITS: The risks associated with this study are minimal and may only include feeling of emotional discomfort thinking about your school experiences. The benefits which may reasonably be expected to result from this study are mostly for school counselors, teachers and tutors: they may benefit from knowing the level of academic burnout of NIS students in Taraz. Additionally they will know how certain personality profiles and academic motivation levels may protect students from experiencing academic burnout.

There are no direct benefits for the students, only possible long-term indirect benefits that may be related to some actions school counselors will take in order to lessen the level of students' academic burn

PARTICIPANT'S RIGHTS: If you have read this form and have decided to give your consent for students of your school to participate in this project, please understand students' participation is voluntary and they have the right to withdraw their consent or discontinue participation at any time without penalty or loss of benefits to which they are otherwise entitled. The alternative is not to participate. Students have the right to refuse to answer particular questions. Students' decision whether or not to participate in this study will not affect their grades at school, or school status as a student. The results of this research study may be presented at scientific or professional meetings or published in scientific journals.

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, (Daniel Torrano, daniel.torrano@nu.edu.kz, +7 7172 709359).

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

Please sign this consent form on behalf of the students' parents if you give your consent for their participation 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 students are 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 give consent for students 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).

Appendix B

Informed Consent (Participant Version)

Academic burnout among high-school students in Kazakhstan: The protective role of personality and academic motivation.

DESCRIPTION: You are invited to participate in a research study on academic burnout (feeling of emotional and physical exhaustion at school caused by stress). It aims to explore the causes of academic burnout, and how motivation and personality can be connected to academic burnout. You will be asked to fill in a survey that includes questions about your school life and your personal traits. You will be asked to fill in the survey using the computer. After analyzing your answers in the research study, the researcher will delete all the results from the computer. The findings of this research study will be used in master's thesis. No information that can somehow identify you, such as your name or the name of your school, will be collected.

TIME INVOLVEMENT: Your participation will take approximately 20 minutes

RISKS AND BENEFITS: The risks associated with this study are minimal and may only include feeling of emotional discomfort thinking about your school experiences. The benefits which may reasonably be expected to result from this study are mostly for school counsellors, teachers and tutors: they may benefit from knowing the level of academic burnout of NIS students in Taraz. Additionally they will know how certain personality profiles and academic motivation levels may protect students from experiencing academic burnout.

There are no direct benefits for the students, only possible long-term indirect benefits that may be related to some actions school counsellors will take in order to lessen the level of students' academic burnout.

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. Your decision whether or not to participate in this study will not affect your grades at school, or school status as a student. The results of this research study may be presented at scientific or professional meetings or published in scientific journals.

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, (Daniel Torrano, daniel.torrano@nu.edu.kz, +7 7172 709359).

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

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).

Appendix C

School Burnout Inventory (SBI)/Мектептегі шаршауды анықтайтын сауалнама/ Опросник выгорания учеников

Please choose the alternative that best describes your situation (estimation from previous month)

Сіздің жағдайыңызды дұрыс сипаттайтын жауапты таңдаңыз (өткен айдан бері)

Выберите варианты ответов, который наиболее подходит Вашей ситуации (за прошлый и нынешний месяц)

		Completely disagree/ Мүлдем келіспеймін/ Абсолютно не согласен	Partly disagree/ Жартылай келіспеймін/ Частично не согласен	Disagree/ келіспеймін/ Не согласен	Partly agree/ Жартылай келісемін/ Частично согласен	Agree/ Келісемін /согласен	Completely agree/ Толықтай келісемін/ Абсолютно согласен
1	I feel overwhelmed by my schoolwork мектептегі берілетін жұмыс маған ауыр тиеді Я чувствую, что не справляюсь с учебными заданиями и требованиями						
2	I feel a lack of motivation in my schoolwork and often think of giving up мектептегі жұмысқа деген мотивациям (қызығушылығым) төмен және жиі аяқтамау туралы ойланамын Мне не хватает мотивации учиться, и меня часто посещают мысли о том, чтобы прекратить обучение						
3	I often have feelings of inadequacy in my schoolwork мектептегі жұмысты істеуге қабілетім шамалы деп жиі ойлаймын Мне часто кажется, что я у меня недостаточно способностей, чтобы успешно учиться						
4	I often sleep badly because of matters related to my schoolwork. мектепте берілетін жұмыстың салдарынан ұйқым жиі нашар У меня часто бывают проблемы со сном из-за учёбы						

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5	I feel that I am losing interest in my schoolwork мектептегі жұмысқа деген қызығушылым жоғалып бара жатқанын сеземін Я чувствую, что теряю интерес к обучению						
6	I'm continually wondering whether my schoolwork has any meaning мектептегі жұмыстың қандай да бір мәні бар екендіне сенімсізбін Я постоянно задаюсь вопросом о том, есть ли смысл в моём обучении						
7	I brood over matters related to my schoolwork a lot during my free time бос уақытымда мектепте берілетін жұмыс туралы ылғи ойланамын Даже в свободные от учёбы дни я много думаю о своих учебных делах						
8	I used to have higher expectations of my schoolwork than I do now Қазіргі кезеге қарағанда бұрын мектепте берілетін жұмыс туралы жоғары ойда болатынмын Раньше у меня были более высокие ожидания относительно моих учебных результатов, чем теперь						
9	The pressure of my schoolwork causes me problems in my close relationships with others мектептегі берілетін жұмыстың салдарынан өзгелермен қарым-қатынасқа түсуде қиындықтар тууда Требования учёбы приводят к трудностям в других сферах моей жизни (близкие отношения и др.)						

Appendix D

The Big Five Inventory (BFI)/Үлкен бестік сауалнамасы/Опросник Большой Пятерки

Here are a number of characteristics that may or may not apply to you. Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement.

Төменде сізге сәйкес немесе сәйкес емес мінез қасиеттері көрсетілген. Өзіңіздің сол көрсеткішпен қаншалықты келісетіндігіңізді немесе келіспейтіндігіңізді анықтау үшін сөйлемнің қасына сан жазыңыз.

Ниже приведены характеристики, которые могут подходить или не подходить к Вам. Пожалуйста, напишите соответствующее число возле каждого утверждения, чтобы показать в какой степени Вы согласны или не согласны с ним.

	I see Myself as Someone Who... Мен өзімді төмендегідей адам ретінде есептеймін: Я могу себя охарактеризовать как человека, который	Strongly disagree/ Мүлдем келіспеймін/ Абсолютно не согласен	Disagree a little/ Аздап келіспеймін / Немного не согласен	Neither agree nor disagree/ Немғұрайлы қараймын/ Отношусь нейтрально	Partly agree/ Жартылай келісемін/ Частично согласен	Agree a little/ Аздап келісемін / Немного согласен	Strongly agree/ Толықтай келісемін/ Абсолютно согласен
1	Is talkative/Сөзшен/Общительный						
2	Tends to find fault with others/Өзгелерді кінәлауға дайын Склонен обвинять других						
3	Does a thorough job/Жұмысын тиянақты орындайтын/Тщательно выполняет работу						
4	Is depressed, blue/Жабырқау/Депрессивный						

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5	Is original, comes up with new ideas Ерекше, жаңа идеяларды ойлап табуға бейім Оригинальный, со свежими идеями						
6	Is reserved/тұйық/ замкнутый						
7	Is helpful and unselfish with others Көмектесуге және өзгелерге қол ұшын беруге дайын Готовый прийти на помощь и не эгоистичный с другими						
8	Can be somewhat careless/Бейқам/ Бывает беспечным						
9	Is relaxed, handles stress well/Сабырлы, стресті жеңе алатын/ Спокоен, хорошо справляется со стрессом						
10	Is curious about many different things/Көптеген нәрселерді білгісі келетін Интересуется разными вещами						
11	Is full of energy/Энергияға толы/Полон энергии						
12	Starts quarrels with others/Өзгелермен ұрысты бастайтын/Начинает споры с другими						
13	Is a reliable worker (student)/Адал қызметкер (оқушы)/надежный работник (ученик)						
14	Can be tense/Уайымшыл/Бывает напряженным						
15	Is ingenious, a deep thinker/Тапқыр, терең ойлайтын/Изобретательный, глубокомыслящий						
16	Generates a lot of enthusiasm/Энтузиазмға толы/ Полон энтузиазма						
17	Has a forgiving nature/Кешіруге дайын жансыз/Умеет прощать						
18	Tends to be disorganized/Жүйесіз/ Зачастую неорганизован						
19	Worries a lot/Көп уайымдайтын/ Много переживает						
20	Has an active imagination/Белсенді қиялдайсыз/ Имеет живое воображение						
21	Tends to be quiet/Сабырлысыз/ Зачастую тихий						
22	Is generally trusting/сенгішсіз/ обычно доверяет другим						
23	Tends to be lazy/ Жалқаулыққа бейім/ Зачастую ленивый						
24	Is emotionally stable, not easily upset/ эмоциясы тұрақты, оңай ренжи қоймайтын Эмоционально уравновешенный, не расстраивается по пустякам						
25	Is inventive /тапқыр, қиялы ұшқыр/ изобретательный						
26	Has an assertive personality/Тік мінезді, өзіне сенетін/ решительный						
27	Can be cold and aloof/Суық, тұйық/ холодный, сдержанный						

Running head: ACADEMIC BURNOUT AMONG HIGH-SCHOOL STUDENTS

28	Perseveres until the task is finished/Істі аяғына дейін жеткізуді көздейтін/ доводит дела до конца						
29	Can be moody/ көңіл күйі тез өзгертін/ бывает в дурном настроении						
30	Values artistic, aesthetic experiences/Өнерді, эстетиканы бағалайтын Ценит творческие,эстетические вещи						
31	Is sometimes shy, inhibited/ Кейде ұялшақ, тұйық/ иногда застенчив, заторможен						
32	Is considerate and kind to almost everyone/ Өзгенің көңіл-күйіне қарайтын, мейірімді Тактичный, добрый почти ко всем						
33	Does things efficiently/Істі сәтті тыңғылықты орындайтын Поступает разумно						
34	Remains calm in tense situations/Қиын сәттерде өзін сабырлы ұстайтын Остается спокойным в напряженных ситуациях						
35	Prefers work that is routine/Күнделікті қайталанатын жұмысты істеуді ұнататын Предпочитает рутинную деятельность						
36	Is outgoing, sociable/Көпшіл, тез тіл табысатын/ Общительный						
37	Is sometimes rude to others/Кейде өзгелерге дөрекі Бывает груб с другими						
38	Makes plans and follows through with them/ Жоспар әзірлеп, сонымен жүресіз/ Планирует и следует своим планам						
39	Gets nervous easily/Тез ашуланасыз/ Легко раздражается						
40	Likes to reflect, play with ideas/Рефлексия жасауды, идеяларды ойлануды ұнататын Любит рефлексировать, “играть” с идеями						
41	Has few artistic interests/Өнерге қызығатын/ Интересуется творчеством						
42	Likes to cooperate with others/Өзгелермен қарым-қатынасқа түскенді ұнататын Любит сотрудничать с другими						
43	Is easily distracted/Сіздің назарыңызды ауыстыру оңай Легко отвлекается						
44	Is sophisticated in art, music, or Literature/ Өнерде, музыкада немесе әдебиеттен біліміңіз терең Искусный в рисовании, музыке или литературе						

Appendix E
Academic Motivation Scale
Опросник Академической мотивации

Using the scale below, indicate to what extent each of the following items presently corresponds to one of the reasons why you go to school.

Используя шкалу, укажите в какой степени следующие выражения соответствуют причинам, по которым Вы ходите в школу.

Why do you go to school?
ПОЧЕМУ ВЫ ХОДИТЕ В ШКОЛУ?

Does not correspond at all	Corresponds a little	Corresponds moderately	Corresponds a lot	Corresponds exactly		
1	2	3	4	5	6	7
Совсем Не подходит	Немного подходит	Более или менее подходит	Сильно подходит	Абсолютно подходит		

1. Because I need at least a high-school degree in order to find a high-paying job later on.

**Потому что мне необходимо
иметь хотя бы сертификат
высшей школы, чтобы найти
хорошо оплачиваемую работу.**

1 2 3 4 5 6 7

2. Because I experience pleasure and satisfaction while learning new things.

Потому что я получаю удовольствие, когда изучаю что-то новое

1 2 3 4 5 6 7

3. Because I think that a high-school education will help me better prepare for the career I have chosen.

**Потому что я думаю, что школьное
образование поможет мне лучше
подготовиться к будущей карьере**

1 2 3 4 5 6 7

28. Because I really like going to school

Потому что мне очень нравится

ходить в школу.

1 2 3 4 5 6 7

28. Honestly, I don't know; I really feel that I am wasting
my time in school.

Честно говоря, я не знаю;

я чувствую, что трачу свое

время впустую в школе.

1 2 3 4 5 6 7

28. For the pleasure I experience while surpassing
myself in my studies.

Из-за удовольствия, которое я испытываю,

когда превзойду самого себя в обучении.

1 2 3 4 5 6 7

28. To prove to myself that I am capable of completing my
high-school degree.

Чтобы доказать самому себе,

что я способен закончить школу

1 2 3 4 5 6 7

28. In order to obtain a more prestigious job later on.

Чтобы в будущем иметь более

престижную работу.

1 2 3 4 5 6 7

28. For the pleasure I experience when I discover
new things never seen before.

Из-за удовольствия, которое я испытываю,

Когда я узнаю то, что до этого не знал.

1 2 3 4 5 6 7

28. Because eventually it will enable me to enter the
job market in a field that I like.

Потому что, в конце концов, это даст мне возможность

быть на рынке труда, в той сфере, которая меня

интересует

1 2 3 4 5 6 7

11. Because for me, school is fun.

Потому что для меня школа – это развлечение.

1 2 3 4 5 6 7

12. I once had good reasons for going to school;
however, now I wonder whether I should continue.

Однажды у меня были хорошие причины

ходить в школу, сейчас я думаю,

стоит ли мне продолжать ходить в школу или нет.

1 2 3 4 5 6 7

13. For the pleasure that I experience while I am surpassing
myself in one of my personal accomplishments.

Из-за удовольствия, которое я испытываю,

Когда превосхожу самого себя

в личных достижениях

1 2 3 4 5 6 7

14. Because of the fact that when I succeed in school
I feel important.

**Из-за того, что когда я преуспеваю в школе,
я чувствую себя значимым.**

1 2 3 4 5 6 7

15. Because I want to have “the good life” later on.

**Потому что я хочу иметь «хорошую жизнь»
в будущем.**

1 2 3 4 5 6 7

16. For the pleasure that I experience in broadening my
knowledge about subjects which appeal to me.

**Из-за удовольствия, которое я испытываю,
Когда расширяю горизонты своих знаний
по предметам, которые мне интересны.**

1 2 3 4 5 6 7

17. Because this will help me make a better choice
regarding my career orientation.

**Потому что это поможет мне сделать лучший
выбор моей профессии.**

1 2 3 4 5 6 7

18. For the pleasure that I experience when I am taken by
discussions with interesting teachers.

**Потому что мне нравится вести беседы
с интересными учителями.**

1 2 3 4 5 6 7

19. I can't see why I go to school and frankly,
I couldn't care less.

Честно, я не знаю, почему я хожу в школу,

Running head: ACADEMIC BURNOUT AMONG HIGH-SCHOOL STUDENTS

- мне все равно.** 1 2 3 4 5 6 7
20. For the satisfaction I feel when I am in the process of accomplishing difficult academic activities.
- Из-за удовольствия, которое я испытываю, когда справляюсь с трудными учебными заданиями.** 1 2 3 4 5 6 7
21. To show myself that I am an intelligent person.
- Чтобы показать себе, что я умный человек.** 1 2 3 4 5 6 7
22. In order to have a better salary later on.
- Чтобы в будущем иметь лучшую зарплату.** 1 2 3 4 5 6 7
23. Because my studies allow me to continue to learn about many things that interest me.
- Потому что учеба помогает мне продолжать изучать интересные мне вещи.** 1 2 3 4 5 6 7
24. Because I believe that my high school education will improve my competence as a worker.
- Потому что я верю, что школьное образование улучшить мою компетентность в будущей профессии** 1 2 3 4 5 6 7
25. For the “high” feeling that I experience while reading about various interesting subjects.
- Из-за особых чувств, которые я испытываю,**

Running head: ACADEMIC BURNOUT AMONG HIGH-SCHOOL STUDENTS

когда читаю о рзных интересных вещах. 1 2 3 4 5 6 7

26. I don't know; I can't understand what I am
doing in school.

Я не знаю, я не понимаю, что я делаю в школе. 1 2 3 4 5 6 7

27. Because high school allows me to experience a
personal satisfaction in my quest for excellence
in my studies.

Потому что я испытываю удовольствие

от своего успеха в учебе 1 2 3 4 5 6 7

28. Because I want to show myself that I can succeed
in my studies.

Потому что я хочу показать себе,

что я могу преуспеть в учебе. 1 2 3 4 5 6 7

Appendix F

Academic Burnout Factors Questionnaire/ Опросник факторов академического выгорания

Академиялық шаршау факторлары сауалнамасы

1. **Your gender/ Ваш пол/ Сіздің жынысыңыз**
 - a) Male (Мужской)/ ер
 - b) Female (Женский)/әйел
2. **Your GPA/ Средний балл/ Сіздің орта балыңыз**
3. **Grade/Класс/Сынып**
 - a) 10 (go to question 5) / (переходите к вопросу 5)/(5-ші сұраққа қараңыз)
 - b) 11 (go to question 4)/ (переходите к вопросу 4)/(4-ші сұраққа қараңыз)
4. **Profile subject/ Профильный предмет/Таңдау пәніңіз**

The following statements are related to factors causing academic burnout. Please read each of the following statements carefully. Select the alternative that best describes your opinion. Please give an answer for each item.

Данные выражения связаны с факторами академического выгорания. Пожалуйста, прочитайте, следующие выражения и выберите наиболее подходящий вариант ответа. Пожалуйста, не пропускайте выражения.

Төмендегі көрсеткіштер академиялық шаршауға әкеп соғатын факторларға қатысты. Соларды оқып шығып, сізге неғұрлым сәйкес нұсқасын таңдаңыз. Бәріне жауап беріңіз.

		Fully Agree/Абсолютно согласен Толықтай келісемін	Agree/Согласен/ Келісемін	Disagree/ Не согласен/ Келіспеймін	Fully disagree/Абсолютно не согласен/ Мүлдем келіспеймін
1	Teachers encourage me to express my opinions in class Учителя поощряют меня выражать мое мнение в классе Мұғалімдер өз ойымды айтуға ынталандырады				
2	Teachers are interested in how I am doing Учителя интересуются тем, как у меня дела Мұғалімдер менің жағдайымды сұрайды				

Running head: ACADEMIC BURNOUT AMONG HIGH-SCHOOL STUDENTS

3	<p>My teachers expect too much from me at school Мои учителя ожидают слишком многого от меня в школе Мұғалімдер менен тым көп нәрсе күтеді</p>				
4	<p>Teachers treat us fairly Учителя относятся к нам справедливо Мұғалімдер бізге әділ қарайды</p>				
5	<p>The pupils in my class get along well Ученики в классе ладят друг с другом Менің сыныбымдағы оқушылар бір-бірімен жақсы тіл табысады</p>				
6	<p>The classroom discipline in my class is good В моем классе хорошая дисциплина Менің сыныбымның тәртібі жақсы</p>				
7	<p>The mood in our class is such that I dare to speak my opinion freely Обстановка в моем классе позволяет мне выражать открыто свое мнение Менің сыныбымдағы ахуал өз ойымды еркін жеткізуге мүмкіндік береді</p>				
8	<p>The opinions of pupils are taken into consideration in the development of school work Мнения учеников учитываются при планировании работы в школе Оқушылардың пікірлері мектептегі жұмыстарды жоспарлауда ескеріледі</p>				
9	<p>I know how to influence school matters in my school Я знаю как повлиять на различные школьные вопросы в моей школе Мен мектептегі жағдайларға қалай әсер етуге болатынын білемін</p>				
10	<p>I have a good relationships with my parents Я в хороших отношениях с моими родителями Мен ата-анаммен қарым-қатынасым жақсы</p>				

Appendix E

Название:

Синдром академического выгорания среди студентов старшей школы в Казахстане:
защитная роль личности и академической мотивации.

Аннотация

Целью данного исследования являлось изучить связь между Большой Пятеркой личностных факторов, элементами академической мотивации и академическим выгоранием студентов старшего звена Назарбаев Интеллектуальной Школы (НИШ) г. Тараз. Также, изучалась связь между академическим выгоранием и некоторыми факторами, относящимися к жизни учащихся (пол, класс обучения, выбор профильного предмета, отношения с родителями), а также факторами, относящимися к учебному процессу (поддержка учителя, отношение учителя к ученику, поддержка школьного сообщества, атмосфера в классе между учащимися). Академическое выгорание проявляется через чувство эмоционального истощения, цинизм по отношению к учебе и ощущением никчемности в роли учащегося. Дизайн данного исследования – не экспериментальный объяснительный кросс-секционный дизайн с использованием опросника. Объектом исследования была выбрана Назарбаев Интеллектуальная школа города Тараз. Участники исследования отбирались при помощи простой случайной выборки. Выборка включала 113 студентов НИШ из 10-х и 11-х классов. При сборе данных были использованы следующие инструменты: Опросник Академического Выгорания, Опросник Большой Пятерки, Шкала Академической Мотивации, Опросник Факторов Академического Выгорания. Для обработки данных был проведен описательный (среднее значение, стандартное отклонение), сравнительный (t-test, ANOVA) и эмпирический (корреляция, регрессия) анализ.

Результаты исследования показали, что средний уровень академического выгорания учащихся старшей школы НИШ может быть охарактеризован как «средний». Более того, нейротизм является значимым показателем академического выгорания школьников. Врожденная мотивация на достижения имеет незначительное негативное влияние на академическое выгорание. Касательно факторов, относящихся к учебному процессу, поддержка учителя и поддержка школьного сообщества имеет отрицательное влияние на выгорание. Касательно факторов, относящихся к жизни учащегося, можно отметить, что девочки имеют более высокий уровень выгорания, чем мальчики; 10-ти классники страдают от выгорания меньше, чем 11-ти классники; ученики, выбравшие естественные науки профильным предметом, имеют более высокий уровень выгорания, чем ученики технических наук.

Ключевые слова: академическое выгорание, Опросник Академического Выгорания, Большая Пятерка личностных факторов, студенты старшей школы.

Appendix G

Қазақстандағы жоғарғы сынып оқушыларының арасындағы академиялық қажу: тұлғаны қорғаудың ролі және академиялық мотивация (ынталандыру)

Түйіндеме

Бұл зерттеу жұмысында Тараз қаласындағы НЗМ жоғарғы сынып оқушыларының арасындағы академиялық қажу мен академиялық мотивация элементтері мен тұлғаның жоғарғы бес факторларлары арасындағы өзара байланысына зерттеу жүргізілді.

Сонымен қатар оқушылардың нақты факторлары мен (жынысы, сынып, тұлғалық келбеті, ата-аналармен байланысы), оқуға қатысты факторлармен (мұғалімнің қолдауы, мұғалімнің қатыснасы, мектеп тарапынан көмек) және академиялық қажудың өзара байланысы анықталды.

Академиялық қажу жағдайы эмоциялық шаршау мен қажу сезімі, оқуға деген көзқарасы және оқушының тәртібі мен келеңсіз мінез –құлқының орын алуы барысында қалыптасады.

Зерттеу жүргізудің түрі- сынақсыз(эспериментсіз) түсіндірмелі сұрау арқылы жүзеге асырылатын көлденең кросс – секциялық зерттеу әдісі.

Зерттеу жүргізудің объектісіне – Қазақстан Тараз қаласындағы физика-математика бағытындағы Назарбаев Зияткерлік Мектебі болып табылады. Зерттеуге қатысушылар эмперикалық емес қолайлы таңдау әдісі арқылы таңдалынып, іріктеліп алынды. Іріктеуге НЗМ-ң 10-11 сынып оқушылары арасынан 113 оқушы таңдалынып алынды. Мәліметтер Burnout Burnout (SBI), Big Five Inventory (BFI) құралы арқылы, (AMS) мотивацияның академиялық өлшемі және (ABFQ) академиялық қажу факторларының сұрау құралдары арқылы жинақталды.

Мәліметтерге сипаттау (орта, стандартты ауытқу) түріндегі, қорытынды (t-тест, ANOVA) және екіжақты (коррелляциялық, регрессиялық) талдау түрлері арқылы жүргізілді.

Зерттеу нәтижелері НЗМ оқушыларының академиялық қажу көрсеткішінің орташа екендігін көрсетті. Сонымен қатар невротизм мектеп ішіндегі академиялық қажудың болжамды көрсеткіші ретінде орын алған. Жетістікке жетуге бағытталған ішкі мотивация академиялық қажу деңгейіне кері әсер етті. Оқуға байланысты факторларды ескерсек, мұғалімдер қолдауы мен мұғалімдермен қатыс факторлары академиялық қажу мен кері байланыста орын алды. Оқушы ер балаларға қарағанда оқушы қыздардың академиялық қажу көрсеткіштері төмен көрсеткішті көрсетті, сонымен қатар техникалық бағытқа бағытталған оқушыларға қарағанда жаратылыстану ғылымы бағытындағы оқушылардың академиялық қажу көрсеткіштері жоғарғы көрсеткішке ие болды.

Кілт сөздер: академиялық қажу, тұлғалық факторлар, мектептің қажу құралы, тұлғаның үлкен бестік факторы, жоғарғы сынып оқушылары.