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The impacts of adolescents' leisure activity types on psychological well-being, academic self-efficacy, self esteem, and stress

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THE IMPACTS OF ADOLESCENTS' LEISURE ACTIVITY TYPES ON PSYCHOLOGICAL WELL-BEING, ACEDAMIC SELF-EFFICACY, SELF ESTEEM, AND STRESS

An Abstract of a Dissertation

Submitted

in Partial Fulfillment

of the Requirements for the Degree

Doctor of Education

Approved:

Dr. Kathleen Scholl, Chair

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ABSTRACT

Korean teenager deviance, school violence, and school dropout caused by academic stress are serious social issues within the country. High levels of student stress are likely to bring about depression and suicide resulting in a significant effect on their psychological well-being and life satisfaction. It is of particular concern for middle school students experiencing rapid physical and psychological developmental changes without proper support. Forty-five percent of Korean students' indicated stress in their life and 27% experienced depression (Statistics Korea, 2019). Also, Korean middle school students (27.3%) have suicide impulse (Youm & Kim, 2019). These youth development issues are considered social problems not only in Korean society among other countries around the world (Adams et al., 1994; Nrugham et al., 2015)

In an attempt to reduce student stress due to high academic pressures and other burdens, out-of-school leisure activities become an important part of life for adolescence to learn how to manage their mental and emotional states, improve their cognitive abilities, and encourage self-autonomy. Leisure may play a more significant role adolescents' well-being and quality of life than currently valued in Korean society. Specific activities, such as organized leisure-time activities may provide balance and restoration that improves an adolescent's overall cognitive function, academic achievement, and school engagement both in short- and long-term outcomes (Badura et al., 2016).

This research investigated Korean adolescent self-reported free time usage and their leisure activities tendencies by analyzing the relationship between Korean middle school students' leisure activity types and their psychological well-being. This study found that

students' participation in leisure activities based on physical activity had a positive effect on students' stress relief. Creative leisure activities had a higher correlation with students' academic self-efficacy than any other type of leisure activity. Individual leisure activities had a more positive effect on students' psychological well-being, stress, and academic efficacy than other group or team leisure activities.

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CHAPTER I

INTRODUCTION

Korean Middle School Students and Their Leisure Activities

The importance of academic performance takes a toll on Korean students that can have a negative effect on their health and well-being (Jung & Kim, 2016). Providing various alternative activities for Korean teenagers are beginning to be incrementally integrated into the Korean school curriculum in helping increase their psychological well-being and quality of life satisfaction (Kim, 2009). These extracurricular activities have significant roles to help teenage students cope with stress and mediate factors related to students' self-esteem and academic achievement (Bartko & Eccles, 2003). Considering this need for understanding methods to help students improve their academic and overall life success, this study will investigate middle school students' leisure activities preferences to find the relationship between specific leisure activity types and their effect upon psychological well-being, academic self-efficacy, and stress.

Middle School for Korean Students.

The institution of Korean school serves as a venue for fostering the individual child's psychological, social, and cognitive potential, including fostering the students' ability to adapt harmoniously to changing social environments by forming correct values, and smooth interpersonal interactions, between peer and self-concepts. Students acquire basic knowledge and skills in school, develop intellectual skills, cultivate citizenship through compliance with school rules and develop their ability to adapt well to the social environment by establishing a mature self.

Academic stress due to intense competition in preparation for college entrance exams is linked to deviance, school violence and dropout for Korean adolescents **(**Kang et al., 2014). A typical adolescent school schedule is 40 hours a week, 8am-5pm, Monday through Friday. However, for many families who can afford private tutoring sessions at the cost of Korea Won ₩ 319,000 to 549,000 (US $291 - $501) per month, their child will also attend another 1-2 hours per day of academic learning, seven-days-a-week (See Figure 1 - 1 & 1 - 2).

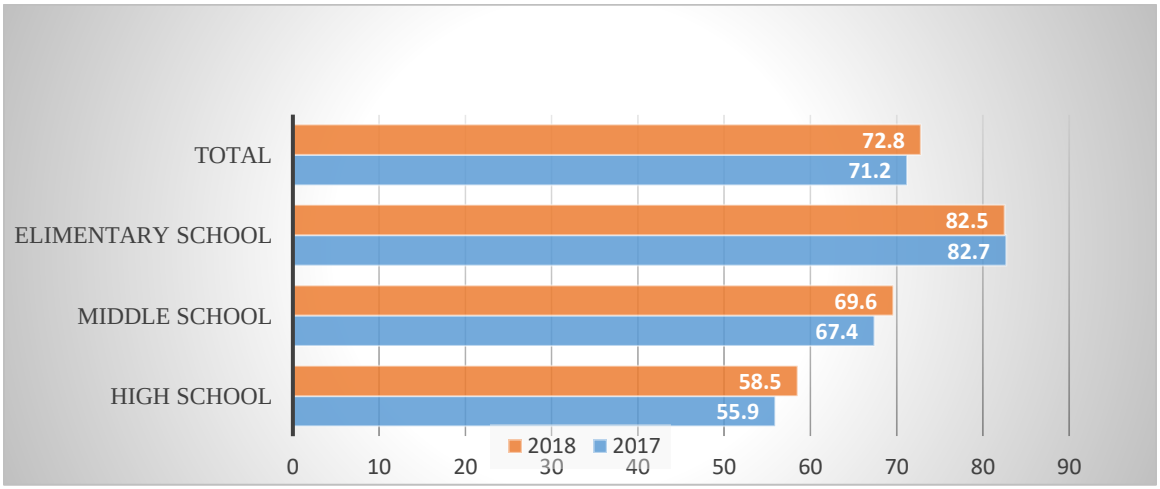


Figure 1-1. Korean Students' Participation in Private Institution Rate (%)

Source: Results of the 2018 Private Education Expenditure Survey (Korean Statistical Information Service, 2019)

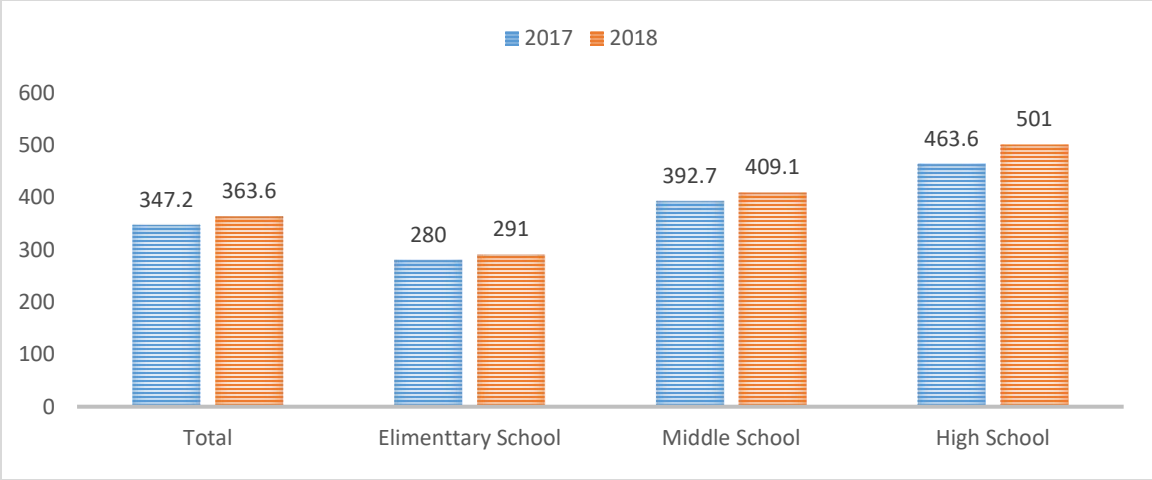


Figure 1-2. Korean Private Institution Participants' Monthly Cost in US Dollars

Source: Results of the 2018 Private Education Expenditure Survey (Korean Statistical Information Service, 2019)

The Korean Education Department Ministry has attempted various policy changes to reduce deviance and dropout rates with changes in curriculum means of reducing the academic class time with extra-curricular after school activities such as art, team sports, and music programs. Unfortunately, these policy changes are not enough to decrease the most severe problem of teenage suicide, which is the most prevalent cause of youth deaths in Korea and is consistently over 7% of all Korean youth since 2015 (Korean Statistical Information Service, 2019; See Table 1-1). Factors that affect student stress come from several different domains beyond school (i.e., individual, family, and community).

Table 1-1

Korean Teenager and Young People' Death Cause

Year	Suicide	Auto Accidents	Genetic illness	Heart Disease\Obesity	Drowning
2015	708 (7.2%)	394 (4.0%)	282 (2.9%)	74 (0.8%)	47 (0.5%)
2016	744 (7.8%)	363 (3.8%)	293 (3.1%)	67 (0.7%)	52 (0.5%)
2017	722 (7.7%)	314 (3.4%)	257 (2.7%)	74 (0.8%)	37 (0.4%)

Source: Korean Statistic Information Service. (2019)

According to the World Population Review (2019), Korean parents press their children to excel. High performance demands and expectations in their child's academic activities are considered a main factor of Korea teenager suicide. This excessive parental pressure leaves one in four teenagers diagnosed with clinical depression due to academic stress, including feelings of dishonoring their parents that produce thoughts of suicide. Per day, an average of 1.5 teens are taking their life due to their academic grades.

It is understood that adolescence is an important transition period from child to adult that includes rapid physical, psychological, and social change. It is also a time when middle school students naturally worry about their status, role, the meaning of life, and the formation of self-discovery, which contributes to additional anxiety (Kim, 2009). A few interesting terms highlight this time of adolescent transformation found in a variety of cultures. In Korea, the symbol "중 2병" (pronounced *Joong-E Byung*); in Japan, *Chuunibyou;* and in the U.S. the origin of the term, "Edgelord", represents the social

phenomenon of adolescent maladjustment, abnormal behavior in the school, family, social community, and social network service.

To reduce teenage suicide rates, understanding ways to modify psychological symptoms of stress and pressure is necessary. Leisure may play a more significant role and influence on adolescents' well-being and quality of life than currently valued in Korean society, however, the impact of leisure activities on adolescent mental health is not included in national reports on the health and well-being of students in schools (Jung & Kim, 2016).

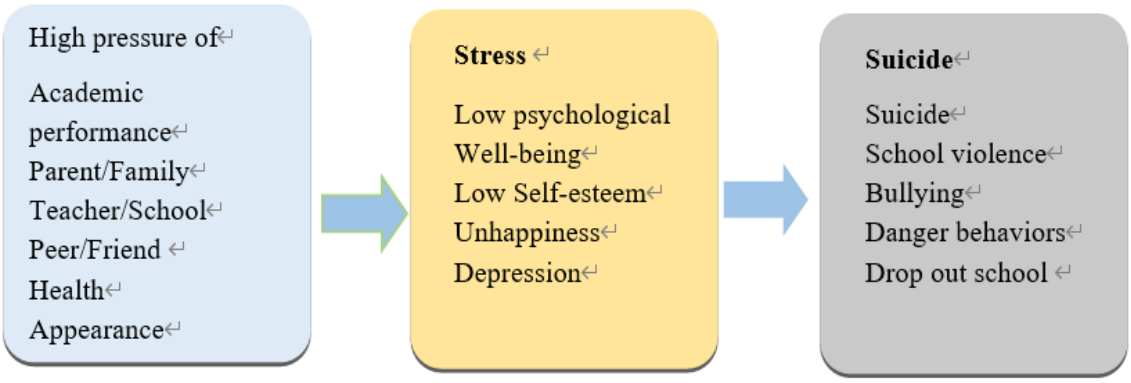


Figure 1-3. Flow Chart of Impacts of Korean Middle School Students' Stress Factors. Source: Adapted from Jung and Kim (2016)

To aid and support youth in managing their daily pressures that lead to long-term effects, various forms of leisure activities should be considered as one of many solutions to help improve youth life quality, psychological well-being and happiness. Although, the Korean government is drawing up policies to help teachers and schools to encourage

students' participation in after-school sports activities, art activities, more understanding of the middle school student perspective for how their current leisure activity choices are helping to buffer the stress that they encounter.

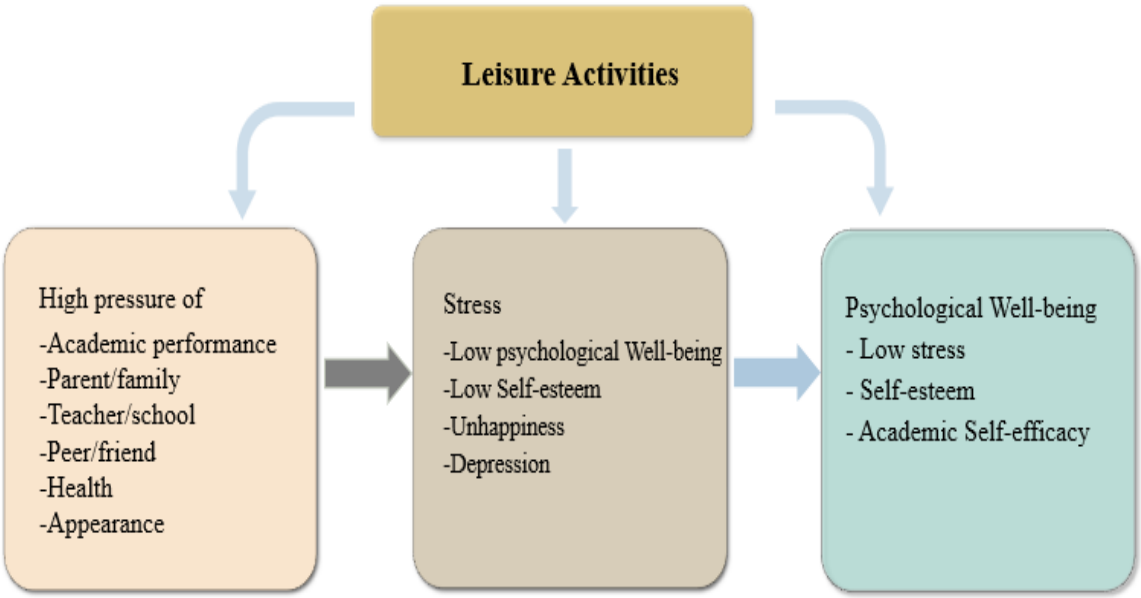


Figure 1-4. Flow Chart of Impacts of Korean Middle School Students' Leisure Activities

Source: Adapted from Caldwell (2005), Kim (2009) and Walker et al., (2015)

Adolescents and Leisure Activities

Adolescence is a transitional period of growth from a child to an adult. It is also a time of increasing social demands and expectations along with physical and psychological changes. In addition to drastic physiological and emotional changes, it is a time when teens

are concerned about their social status, their social role, and deepening their thoughts on the meaning of life.

Many studies have revealed the significant role of leisure activities within adolescents' life quality. Over the past 20 years, leisure participation has been positively linked to psychological well-being and physical health (Caldwell, 2005; Kim, 2007). The more adolescents are involved, feel comfortable, and are satisfied with their leisure activities (Kim, 2009; Walker et al., 2015), contribute to their psychological well-being (Shin, & You, 2013), social development with peers, family, and other social groups (Adams et al., 2010), and their academic achievement (Bartko & Eccles, 2003). Shin and You (2013) researched adolescent preferred leisure and psychological well-being within three primary types of leisure (i.e., sedentary leisure, social leisure, and physical activity).

Shin and You's (2013) longitudinal research focused on adolescent students and the leisure type classification, identified that boy's well-being and stress reduction was mediated by physical activity, with no significant effect from neither sedentary nor social leisure. Lee et al., (2016) found that girl students are less likely to participate in physical activities than boy**.** In the case of Korean students, only 3.1% of girls participate in physical activities (boys: 16.4%), and in Japan only 4.6% of girl students participated in physical activities (boys: 11.7%). Lee et al. (2016) concluded that sedentary leisure activities (i.e., passive leisure) and social leisure (i.e., spending time with friends) hurts the adolescents' leisure satisfaction. Holder et al. (2009) research also found that certain passive leisure is associated with negative physical and psychological health impacts.

Contrary to Shin and You (2013) and Holder et al. (2009), Spiers and Walker (2009) provide conflicting outcomes and conclusions from their research. Spiers and Walker (2009) claim that passive leisure activities have health benefits particularly for, East Asian students. Passive leisure activities such as reading and listening to music did provide a positive impact on reducing participants ‘stress and mental health but to the same degree as physical and social activities.

Research studies are rare leisure activities type and the direct effect of academic achievement. Nevertheless, a few studies that can be reviewed to provide initial insight into specific leisure activity benefits. Physical activities through team sport have been shown to have positively impact adolescents' academic achievement (Donnelly at al. 2016; Wilson et al., 2009), yet Broh (2002) found that playing sports in high school has no significant effect on grades. Even though the research about adolescents' preferred leisure activities and academic achievement are limited, there is much research that examined the relationship between physical activities and cognitive performance (Cooper et al., 2015; Hillman et al., 2014; Wu et al., 2011), brain structure/function (Davis et al., 2011; Raine et al., 2013; Wu & Hillman, 2013), and academic achievement (Van Dusen et al., 2011; Wittberg et al., 2009, 2012)

Research is needed to clarify the relationship between specific adolescents' leisure activities and their direct impact on academic achievement and as student well-being. Korean middle school students face severe stress from the academic competition and typical adolescent development. There are efforts to support Korean teenagers, yet the effects are unclear. The three nominal categorizes of leisure activities types from previous

research may be too broad to inform the difference among the array of adolescent leisure activities. Therefore, this study is designed to find the relationship between 10 types of leisure activities and their psychological well-being, stress, and self-esteem. The 10 types are as follows:

- Organized Team Sports - football, netball, soccer, basketball, futsal, rowing, etc.
- Organized Individual Sports- Aerobics, athletics, running, swimming, gymnastics, cycling, martial arts, horse-riding, etc.
- Unorganized Physical Activities- skating, jogging, cycling, golf, surfing, shooting goals, etc.
- Organized Social activities- Youth groups, scouts, guides, religious group, etc
- Unorganized Social Activities- doing something with friend 'Hanging out', parties, talking on the phone, movies, card/board games, shopping with friends
- Organized Group Creative Activities- Attending band, orchestra, drama, Musical choir, debating, etc.
- Organized Individual Creative Activities- Music lessons, cooking classes, drawing/ art classes, singing lessons, etc.
- Unorganized Creative Activities- writing, reading, cooking, designing web pages, training dog, practicing instrument, photography, hobbies, painting, playing instruments, etc.

- Individual Passive Activities- Dreaming, watching sports, listening to radio/music and NOT doing anything else, television/DVD/Videos Computer/Internet, Game Boy/X-Box etc.
- Volunteer – assisting an animal shelter, nursing homes or hospitals, disaster relief efforts.

Significant and Purpose of the Research

The primary intent of this study is to identify the impact of middle school students' leisure activities on four psychological components to build the theoretical evidence to suggest the need of appropriate leisure activities and life balance for middle school Korean students. The target audience for this research is to inform parents, teachers, and the Korean Education Ministry in hopes of making a small contribution towards reducing the prevalent social issue related to adolescent depression, stress, and suicide. This study aims to identify the impact of leisure activity types on the psychological well-being, stress, self-esteem, and academic performance among Korean middle school students.

Research Question and Hypotheses

Hypotheses and Research Questions. To achieve the purpose of this research, the following research questions are set.

1. Does leisure activity types have an effect on students' psychological well-being?

H0: There is no relation between students' leisure activities and psychological well-being.

H1: Specific leisure activities influence psychological well-being.

2. Does leisure activity types have an effect on students' stress?

H0: There is no relation between students' leisure activities and students' stress.

H1: Specific leisure activities influence students' stress

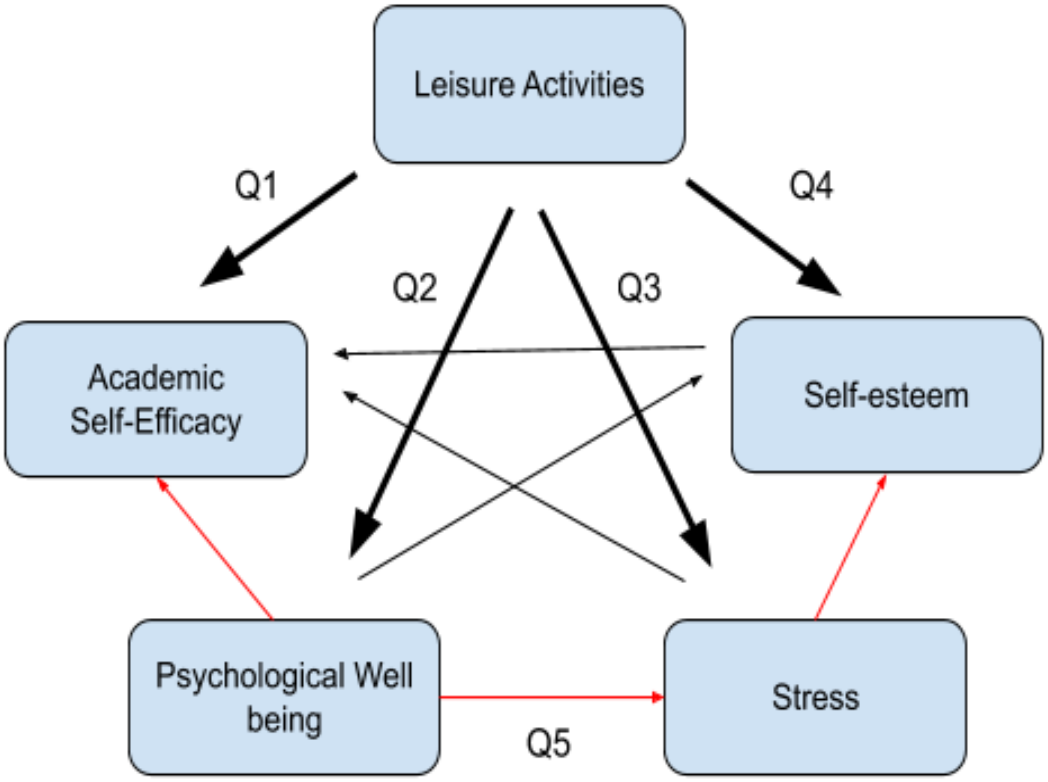


Figure 1-5. Research Questions Frame

3. Does leisure activity types have an effect on students' self-esteem?

H0: There is no relation between students' leisure activities and students' self-esteem.

H1: Specific leisure activities influence students' self-esteem

4. Does leisure activity types influence students' academic self-efficacy?

H0: There is no relation between students' leisure activities and students' academic self-efficacy.

H1: Specific leisure activities influence students' academic self-efficacy.

5. Is there a correlation between psychological well-being, self-esteem, stress, academic self-efficacy?

H0: There is no correlation between psychological well-being, self-esteem, stress, academic self-efficacy.

H1: Psychological well-being, self-esteem, stress, academic self-efficacy and Stress have influenced each other's.

Delimitation and Limitation

Delimitation

To conduct this research two middle school were selected. School number 1 is located in a rural area of Korea and 300 students from grades 7, 8, & 9 will complete the

study surveys. School Number 2 is in an urban setting and an additional 300 students from grades 7, 8, & 9 will complete the same study surveys.

To encourage the accuracy of answers, students will complete the survey within their classroom setting. Students may ask their teacher clarification questions to obtain well represented answers.

Limitation

This research is based on the survey of which results depend on the students' clear understanding of the survey content to obtain accurate responses. In addition, the activity types might not represent all of the leisure activities that today's Korean student participate.

Definitions of Key Terms

Leisure Activity Types

Leisure activities can be categorized according to the character of activities, intention, and leisure behavior pattern of people (Hofer et al., 2010). In this research, the suggested leisure activity types have consisted of 10 types. The subject of leisure activities can include following organized team sports, organized individual sports, unorganized physical sports, organized social activity, unorganized social activity, organized group creative activity, organized individual creative activity, unorganized creative activity, individual passive activity, and volunteer.

Psychological Well-being

Psychological well-being is a state in which people might accept themselves as they are, maintain a positive relationship, and control their behavior independently

(Diener, 1994; Ryff, 1989). Also, this term represents the students' psychological satisfaction which are fulfilled by having control over life themselves, setting a purpose of life, and motivating to realize students' potential. Psychological well-being consist of six dimensions, Self-Acceptance, Environmental Mastery, Positive Relations with Others, Purpose in Life, Personal Growth, and Autonomy.

Self-Esteem

This is a psychological term to understand personal value and worth. Self-esteem is involved to increase the level of achievement for oneself and give people an ability to cope with problems in the event of failure (Smith & Mackie, 2007). Therefore, self-respect can be seen as the key to leading a healthy life, playing a pivotal role in the development of human life. Self-esteem is a comprehensive and holistic concept that student believes they will be successful, competent and valuable. In this research self-esteem is defined as a comprehensive term to represent students' psychological confidence considered belief, appearance, behaviors, and emotions by themselves.

Stress

According to the Shiel (2018), stress is defined that medical or biological context stress is a physical, mental, or emotional factor that causes bodily or mental tension. Stresses can be external (from the environment, psychological, or social situations) or internal (illness, or from a medical procedure)." Stress is tension or stimuli came from inside and outside of the body. Stress might break the body's homeostasis and is well known as a significant factor making problems mentally and physically. In this study,

stress is considered psychological pressure feeling that influence students' psychological well-being.

Academic Self-Efficacy

Academic self-efficacy is the ability to learn or perform a given learning task successfully. Academic self-efficacy is students' subjective belief that they can achieve academic goals and learning purposes (Bong & Skaalvik, 2003; Schunk, 1989, 1991). This term consists of two factors;

5a) Self-Efficacy for Learning: This dimension measures subjective beliefs about whether students can understand, analyze, and remember learning to acquire new learning knowledge and skills (Schunk, 1996).

5b) Self-Efficacy for Performance: This dimension measures subjective beliefs about whether students can perform their academic performance in a particular subject to the required level (Bandura, 1977; Schunk, 1996)

CHAPTER II

LITERATURE REVIEW

Korean Youth and School Environment

The Korean school environment is considered very important for child development and is emphasized more than other life domains of Korean youth. The institution of school serves as a venue for fostering the individual child's psychological, social, and cognitive potential, including fostering the ability to adapt harmoniously to changing social environments by forming correct values, positive self-concept, and smooth interpersonal interactions between peers. In school, students acquire basic knowledge, develop intellectual skills, cultivate citizenship through compliance with school rules and develop their ability to adapt well to the social environment by establishing a mature self.

However, because of severe competition and excessive stress Korean students for academic advancement beginning in middle school, academic classroom activities and pressure may affect overall youth well-being. Korean department of education is aware of the stress effect on youth and now suggests that teachers adopt learning theories and provide individual teaching methods and learning opportunities based on a student's ability and incorporate increased student choice on independent study autonomy and extracurricular activities. Yet, the adverse effects of academic pressures continue for Korean youth. More research is necessary to understand the effect of extracurricular and leisure activity types on academic self-efficacy, psychological well-being, self-esteem, and stress, but also, indirect impact of each construct.

Leisure Activities of Korean Youth

As a common term used by the general public, leisure may be indiscriminate and used to indicate one's various activities and experiences. For example, a person may select a particular activity for the outcome of pleasure. Another may engage in an activity for relaxation. In addition, it is common for individuals to associate 'free time' with their choice of leisure activities to separate pleasurable activities from regular working hours such as schooling and vocation.

From a holistic perspective, leisure relates directly to human life experience. As stated by Dattilo (2015), leisure is

> ….an experience that results from being intrinsically motivated to participate in what is perceived to be freely chosen meaningful activity that when engaged in competently is a form of self-expression, contributes to a sense of identity and connectedness, and results in positive emotions such as enjoyment (p.151).

A key component of leisure is the perspective that it can be intrinsically motivating. Intrinsically motivated individuals will seek opportunities that challenge their competency. Intrinsic motivation is an individual's natural direction towards mastery, spontaneous interest and exploration that represents a principal source of enjoyment (Csikszentmihalyi & Rathunde, 1993) and therefore, more likely to learn, adapt and develop competencies that contribute to wellbeing (Dattilo et al., 1998). In addition, individuals are more likely to repeat a task in which they feel competent (Bandura, 2004).

Leisure activities of teenagers can have positive effects on school life and personal life. Unfortunately, Korean youth's leisure activities are very sedentary. According to Lee

et al., (2016) Korean adolescents' main activity in which they spend their free time is internet surfing. Table 2-1 shows the most preferred and least preferred activities from three Asia countries (N = 6,157). Korean adolescents 58.2% (boys) and 36.4% (girls) prefer internet surfing as a leisure activity. Conversely, Korean girls indicated their least preferred leisure activity type as physical activity.

Additional research reinforces Korean youth's sedentary activity. Kim et al. (2014) surveyed 2221 students from 24 Korean middle schools finding that Korean students spends their spare time on the internet playing computer games (46.2%), watching TV (40.0 %), or resting (35.7%). An overwhelming number of male students (63.0%) play computer games for leisure activities, while only 33.6% of boys prefer physical activities such as sports. Female students were the most likely to watch TV (50.1%) or be at rest (42.9%) followed by rest. For female students, physical activity was the least preferred leisure activity (8.9%).

Table 2-1

Asia Countries Adolescents' Leisure Activities.

	Most preferred activity	**Least preferred activity**
Korea (n = 2,140)	Boy: internet surfing 58.2%; Girl: internet surfing 36.4%	Boy: watching TV 1.4%, Girl: Physical Activity 3.1%
China (n = 2,011)	Boy: Physical Activity 27%, Girl: watching TV 24.9%	Boy: Sleeping 7.3% Girl: Physical Activity 9.6%
Japan (n = 2,006)	Boy: watching TV 43.3% Girl: watching TV 54.9%	Boy: watching movie 4% Girl: Physical Activity : 4.6%

Source: Adapted from Lee et al. (2016)

Kim et al. (2014) results indicate that both male and female Korean students are not engaged in cultural, artistic, or social activities. This may indicate that Korean students spend an enormous amount of time in structure academic learning with limited time for variation in chosen leisure activities. The accessible choice of computer games, TV viewing and rest indicate of the need for the youth to disengage to meet academic demands. Unfortunately, these sedentary activities that focus on computer games and TV viewing do little to provide the necessary cognitive rest for youth in the same manner that physical activity and other types of leisure pursuits may offer.

Table 2-2

Korea Middle School Students' Leisure Activity

	Gender		Total	Grades		
	Boy (n=1132)	Girl (n=1089)	(n=2221)	7th (n=771)	8th (n=733)	9th (n=717)
TV /DVD	322(28.4)	546(50.1)	**868(40.0)**	280(36.3)	286(39.0)	302(42.1)
PA/Sports	280(33.6)	97(8.9)	477(21.5)	174(22.6)	132(18.0)	171(23.8)
PC/Internet Game	713(63.0)	312(28.7)	**1025(46.2)**	320(41.5)	323(44.1)	382(53.2)
Movie/Art/Theatre	58(5.1)	71(6.5)	129(5.8)	29(3.8)	41(5.6)	59(8.2)
Travel	94(8.3)	103(9.5)	197(8.9)	79(10.2)	54(7.4)	64(8.9)
Social Activity	70(6.2)	107(9.8)	177(8.0)	34(4.4)	75(10.2)	68(9.5)
Rest	325(28.7)	467(42.9)	**792(35.7)**	270(35.0)	245(33.4)	277(38.6)
Other.	103(9.1)	217(19.9)	320(14.4)	122(15.8)	116(15.8)	82(11.4)

Source: Kim et al. (2014)

Leisure Activity Types.

Various researchers have investigated impacts of leisure activity (Trainor et al., 2010; Shin & You, 2013; Lee et al., 2016) by categorizing types of leisure activities. Shin and You (2013) suggested 3 types of leisure activities (physical activities, social activities, sedentary/passive activities). Iwasaki et al. (2005) classified leisure activities with four basic activities (Physical activities, Social activities, Cultural activities, and Relaxing activities). Trainor et al. (2010) expanded these categories to suggest ten leisure activity types in order to find an association between enjoyable leisure activities and physical well-being (see Table 2-3). Unfortunately, Trainor et al.'s (2010) categories are not mutually exclusive to use in impactful research on how specific leisure types affect student academic self-efficacy or youth well-being.

Table 2-3

Pittsburgh Enjoyable Activities Test's Ten Types of Activities.

1. Spending quiet time alone *(passive)*	2. Club, fellowship, and religious group participation (social)
3. Spending time unwinding at the end of the day *(passive)*	4. Going away on holiday (social)
5. Visiting friends and /or relatives (social)	6. Being in outdoor settings such as gardens, parks, countryside (physical).
7. Going out for meals with friends and/or relatives (social)	8. Actively engaging in sports (physical)
9. Doing fun things with others (social).	10. Involvement in hobbies

Source: Leisure activities and adolescent psychological well-being (Trainor et al., 2010)

Researchers have provided 3-, 4-, 6- leisure type classification structure in an attempt to study the impact of leisure on human life experiences (see table 2-4 p.21). However, there are limitation in many of these categorizations due to unclear criteria and leisure's multifaceted construct depending on an individual's experience. Winefield et al. (1993) suggested criteria based on two dimensions (social vs. more solitary, structured vs. unstructured) to categorize leisure activities. Physical activities, social, and creative activities are significant factors to consider as criteria for categorizing the leisure activities. However most important is the need to classify whether a leisure activity type is *organized* or *un-organized*. For example, playing on a sports team could be considered an organized activity, whereas playing a pick-up game in the school yard would be categorized as unorganized. Organized or unorganized can also be called *structured* or *unstructured*.

This is important dichotomy criteria to clearly defined and mutually exclusive categories. To clearly understand the impact of various activities such as creative, endeavors, science, art, music, there is the need to incorporate the organized or unorganized criterion to create ten mutually exclusive leisure types between activities of sport or simple physical activities, social activity, and creative activities: (a) Organized Team Sports; (b) Organized Individual Sports, (c) Unorganized Physical Activities, (d) Organized Social activities, (e) Unorganized Social Activities, (f) Organized Group Creative Activities, (g) Organized Individual Creative Activities, (h) Unorganized Creative Activities, (i) Individual Passive Activities, and (j) Volunteer.

Table 2-4

Leisure Classification Structure

Researcher	Criterion	Types
Kaplan	Value Orientation	Social activity, Group activity, Game, Arts, Transport activity, non-Transport activity
Lutzin	Motivation and Expression	Physical activity, Social activity, Cultural activity, Nature activity, Spiritual activity
Eppreson	Participation	Viewing activity, Outdoor activity/ recreation, Sports activity, Resting
Gold	Experience	Tour, watching, Sports, Competition activity, recreation, hobby, trying to get Certificate,
KBS(Korean Broadcast System)	Participation	Sports, Hobby/creation activity, Recreation, Tour
Jo & Ahn	Leisure Attitude	Cognitive activity, Physical activity, Emotional activity,
Shin & Park	Lifestyle	Outdoor activity, Cultural activity, Sport activity, Social activity, Hobby, Recreation, Creative/art activity
Seo & Cha	Participation	Recreation, Social activity, Watching. Sports, Tour, Hobby, Volunteer
Joo	Adolescents participation type	Recreation, Hobby, Social activity, Resting, Participation
Shin & You	Adolescents participation type	Active activities, Passive activities, Social activities
Bandura et al.	Participation types	Team sports, Individual sports, art school, Youth organization, Leisure center of after-school clubs, Church meeting/singing
Winefield et al.	Participation types	Social activities, Solitary activities, Structure activities, Unstructured activities
Fawcett et al.	Participation types	Physical activities, Cognitive activities, Emotional activities, Creative activities
Bradley & Inglis	Participation types	Structure activities, Social activities, Effort activities

Psychological Well-Being and Leisure Activities.

Psychological Well-Being

Psychological well-being can be defined as the overall satisfaction of a person's life whether the person's life is totally enjoyable and happy, or whether the person is satisfied with his or her life (Diener, 1994). Psychological well-being is distinguished from subjective well-being, which has meaning as an overall assessment of life in that it emphasizes existential meanings and challenges in human development and life. Ryff (1989) also argued that subjective well-being is weak in the theoretical framework and problematic in measuring methods. Scholars insist on the importance of maintaining a positive interpersonal relationship to maintain psychological well-being (Kim et al., 2001).

Psychological well-being in adolescence is more important because it acts as a significant indicator of positive development, affecting mental health and life satisfaction (Park, 2004). Research on psychological well-being is diverse, but in general, it can be divided into three structures: positive emotion, negative emotion, and life satisfaction (Lee & Lee, 2008). Ryff (1989), a representative researcher of psychological well-being, presents a multidimensional well-being model composed of six practical psychological functions to measure psychological well-being based on various psychology theories. The six dimensions (See Table 2-5. p.23) of the factors are self-acceptance (SA), positive relations with others (PR), autonomy (AU), environmental control (EM), purpose of life: (PL), and personal growth (PG).

Table 2-5

The Psychological Well-Being Dimensions' Definition.

Psychological Well-being Dimensions	Definition
Self-acceptance	Emphasis on acceptance of the self of one's past life
Positive relations with other	Having strong feelings of empathy and affection for all human beings and as being capable of greater love, deeper friendship, and more complete identification with others and warm relating to others.
Autonomy	Expressions of internal locus of evaluation, thus not looking to others for approval but evaluating oneself by personal standards.
Environmental control	The individual's ability to choose or create environments suitable to his or her psychic conditions.
Purpose of life	Having goals, intentions, and a sense of direction, all of which contribute to the feeling that life is meaningful.
Personal growth	Emphasis to continued growth and the confronting of new challenges or tasks at different periods of life.

Source: Ryff (1989)

First, autonomy is a self-deterministic, independent character that can resist social pressures to think and act in a particular way, to control behavior internally, and self-reference rather than others' criteria. *Evaluate*. People with low autonomy are sensitive to the expectations and evaluations of others, rely on others' judgments to make important decisions, and align with social pressures to think and act in certain ways.

Second, environmental mastery means a sense of domination and management of the environment, the ability to control complex action plans that are listed in a complex manner and effectively use the opportunities given to them and suit individual needs or values. This means that you are choosing the environment or changing it to the right one. A person who lacks environmental control has difficulty dealing with everyday tasks. In other words, they feel that they cannot change or improve their surroundings, they don't recognize the opportunities they are given, and the outside world is consistently pushing them.

Third, personal growth is the degree to which people feel themselves self-developing continuously, feeling grown and developed, and open to new experiences. Also, personal growth is investing time to realize full potential, experience activities and behavior, improve over time, and change to better understand and use themselves. A lacking personal growth person is prone to personal stagnation and difficult to experience growth or development over time.

Fourth, positive relationships with other means having a warm, satisfying, and trusting relationships. Understand the interactions of human relationships, while those who lack positive interpersonal relationships find it difficult to establish a close and trusting relationship with others and to show a genuine concern for others. Never try to compromise to maintain relationships with others.

Fifth, purpose in life means having a sense of purpose and direction in life, feeling past and present life meaningful, and having *your* own answer about why *you* live. There

is little sense of direction of life, no sense of past life, no belief or attitude to give meaning to life in the future.

Sixth, self-acceptance refers to the degree to which one has a positive attitude toward oneself, recognizes and accepts various aspects of the self, including positive and negative points, and feels past life positively. I am not satisfied with myself; I am disappointed with my past work, don't trust myself, and want to be different than from now.

In short, high psychological well-being has the ability to accept oneself, maintain positive relationships, control their behavior independently and voluntarily, set goals for life, and develop their potential. In addition, psychological well-being is a subjective evaluation of each individual in the psychological aspects that are thought to affect the subjective quality of life of the individual, and the personality characteristics of each individual (Ryff, 1989).

A study of high school students by Aspinwall and Taylor (1993) also reported that adolescents with high self-esteem and positive emotions could cope with stress better and to be better at academic and psychological adaptation. In other words, the higher the psychological well-being, the more positive the development will be in the academic and psychological areas as well as the reality adaptation. In Korea, which is exposed to various stresses, adolescents' psychological well-being of adolescents is a variable to pay attention to and to prevent negative emotions and behaviors of adolescents and to promote happiness (Park, & Choi, 2014).

Table 2-6

Ryff's Psychological Well-Being Six Dimensions and Meaning of Score

Dimension	High Score	Low score
Autonomy	It is self-determining and independent; able to resist social pressures to think and act in certain ways; regulates behavior from within; evaluates self by personal standards.	It is concerned about the expectations and important decisions; conforms to social pressures to think and act based on evaluations of others; relies on judgements of others.
Environmental Mastery	Is has a sense of mastery and competence in managing the environment; controls complex array of external activities; makes effective use of surrounding opportunities; able to choose or create contexts suitable to personal needs and values.	It has difficulty managing everyday affairs; fells unable to change or improve surrounding context; is unaware of surrounding opportunities; lacks sense of control over external world.
Personal Growth	It has a feeling of continued development; sees self as growing and expanding; has sense of realizing one's potential; sees improvement in self and behavior over time; is changing in ways that reflect more self-knowledge and effectiveness.	It has a sense of personal stagnation; lacks sense of improvement or expansion over time; feels bored and uninterested with life; feels unable to develop new attitudes or behaviors.
Positive Relations with Others	It has warm satisfying, trusting relationships with others; is concerned about the welfare of others; capable of strong empathy. Affection, and intimacy; understands give and take of human relationship.	It has few close, trusting relationships with others; finds it difficult to be warm, open, and concerned about others; is isolated and frustrated in interpersonal relationship; not willing to make compromises to sustain important

(table continues)

Purpose in Life	It has goals in life and a sense of direction; feels there is meaning to present and past life; holds beliefs that give life purpose; has aims and objectives for living	It lacks a sense of meaning in life; has few goals of aims, lacks sense of direction; does not see purpose of past life; has no outlook or beliefs that give life meaning.
Self-Acceptance	It possesses a positive attitude toward the self; acknowledges and accepts multiple aspects of self, including good and bad qualities; feels positive about past life.	It feels dissatisfied with self; is disappointed with what has occurred in past life; is troubled about certain personal qualities; wishes to be different than what one is.

Source: Ryff (1989)

Leisure Activity and its Effect on Psychological Well-Being

There are many reasons to understand how important it is for adolescents to integrate leisure activities into their school routines for stable psychological well-being development. Through regular participation in a variety of leisure activities improves the psychological well-being of adolescents by increasing life satisfaction and reducing chronic stress, helping to have a better life, building their inner psychological well-being (Bartko & Eccles, 2003), and constructing a healthy self-identity (Garst et al., 2001; Palen & Coatsworth, 2007).

Studies have revealed that leisure participation contributes positively to higher levels of adolescents' wellbeing (Kang, 2004; Kim, 2003; Sacker & Cable, 2005) relating to higher levels of wellbeing (Csikszentmihalyi & Hunter, 2003; Kang, 2004; Kim, 2003; Holder et al., 2009; Onishi et al., 2006; Sacker & Cable, 2005; Trainor et al., 2010; Shin & You, 2013; Lee et al., 2016). Others have indicated that it has negative associations (Csikszentmihalyi & Hunter, 2003; Shaw & Gant, 2002), particularly that passive activities negatively correlate with wellbeing.

Various studies are designed to investigate the relationship between adolescents' preferred leisure types and their psychological well-being, and the research results show different conclusions. A few of these outcomes include happiness, self-efficacy, competence, self-worth, and mental health benefits. Csikszentmihalyi and Hunter (2003) realized that teenagers' happiness varied across different types of leisure activities. Levels of happiness tends to increase when participating in active leisure, such as sports activities, while teenage happiness decreases when they were reading alone (i.e., passive leisure). Passmore (2003) divided leisure activities into three categorical types: active (goal-oriented leisure; e.g., sports), social (e.g., meeting friends) and time-out leisure (e.g., watching TV) to study the benefits such as self-efficacy, competence, self-worth, and mental health from different leisure activities finding that the crucial role of goal-oriented and social leisure in enhancing youth's mental health.

On the other hand, research finds that if youth spend a large amount of time with low impact, passive activities, there is negative psychological well-being effect (Walker et al., 2015). Ussher and colleagues (2007) conducted a cross-sectional study with a sample of 2,623 adolescents aged 13 to 16 years. They found that lower levels of physical activity and higher levels of sedentary behavior (TV/computer/video usage) resulted in significant associations with a lower psychological wellbeing level. It is important to note that structured leisure activity (sports, playing music with others) have more impact on adolescents' psychological well-being than un-structure leisure activity types (watching TV) (Trainor et al., 2010).

Table 2-7

Teenagers' Internet Use Frequent and Time

Year	Internet Use time per one week	Frequent of Internet Use		
		Over 1 time per one day	Over 1 time per one week	Over 1 time per one month
2016	15.4 hours	93.9(%)	5.6(%)	0.3(%)
2017	16.9 hours	98.1(%)	0.9(%)	1.0(%)
2018	17.8 hours	98.1(%)	1.2(%)	0.7(%)

Source: South Korea Government's Ministry of Science and ICT (2019)

The inverse association between passive leisure and psychological well-being may potentially explain Korean adolescents deteriorating mental health and well-being among, since 98.1% of Korean adolescent students use the internet as their primary activity outside of school, preferring internet surfing, videos and computer gaming (Kim & Kim, 2015; Korea Internet & Security Agency [KISA], 2019; Lee et al., 2016; Park, 2014; Shin & You, 2013).

Leisure Activities and Academic Achievement

The study between physical activities and academic achievement has grown exponentially in recent years, with over 230 published articles addressing related topics among school-aged children (Donnelly et al., 2016). These studies range from leisure activities and academic achievement in middle and high school students that focus upon leisure motivation or leisure as an intermediating variable to find impacts of leisure activities on academic achievement. Also, there are some studies that support extracurricular and physical activities that have a positive influence on adolescents'

academic achievement and cognitive function (i.e., multiple mental abilities including learning, thinking, reasoning, remembering, problem-solving, decision making, and attention) that encourage students' practical skill and knowledge in their academic performance.

Over time, researchers considered and added specific activities such as art and music, and various outdoor recreation and environmental activities as additional study variables beyond physical activity. However, most researchers continue to group leisure activity types within broad and limited categories. Furthermore, most published studies use physical activities (PA), sport activities, and sport programs as the primary variable to examine the relationship between the leisure activities and participants' academic outcomes or GPA (grades point average). However, it is not easy to find published studies about the relationship between adolescents' preferred leisure activities and academic outcome.

Physical Activity and Academic Achievement: Many research revealed a significant relationship between adolescents' activities and their academic outcomes/achievement/performance, (Bergin, 1992; Fox et al., 2010). The research (Fox, et al., 2010) about the relationship between physical activity, sports team participation, and academic outcomes among middle and high school students states that middle and high school male students' sports team participation was associated with a higher GPA. High school students' extracurricular activities have shown positive correlations with school achievement. Extracurricular activities related to the sport have been shown to correlate positively but weakly with achievement (Bergin, 1992).

Also, Bergin (1992) found is some evidence that boys whose only extracurricular activity is sports have lower achievement than standardized test scores, while boys who are active in both athletic and service have a higher score than others. This research showed that there is different result of activity participation according to students' academic group.

Another research shows the difference of gender. Among middle school students who consistently participate in sports activities, male students improved their academic achievement levels compared to female students. Students in the low academic achievement improved their academic performance more than those in high academic achievement by academic achievement level, and in the group of low academic achievement, boys increased their academic performance more than girls (Jung & Kim, 2016).

Contrary, some research shows that physical activities that have a negative impact or no significant influence on adolescents' academic achievement (Knifsend & Graham, 2011; Asltonen et al., 2016). Asltonen et al. (2016) assume that academic performance in adolescence predicts more frequent physical activity in late adolescence and this study showed that physical activities do not influence on all age groups of adolescents. The sports activities as an extracurricular activity correlate positively but weakly with academic achievement. According to Knifsend and Graham (2011), there is a weak relationship between participants who participate in more three extra-curriculum and academic achievement and high school male students' participation in team sports activities has a negative impact on their academic performance achievement.

The factors that affect the academic outcomes, GPA, and academic achievement are gender, age(grades), academic level, and leisure activity types. In a study by Bergin (1992) focused on leisure activity, motivation, and academic achievement in high school students, academic leisure activities were only slightly stronger predictors of GPA than all leisure activities. Also, in the research about the impact of leisure activities in academic achievement (Pestana et al., 2016), adolescents who collaborate with family in household activities show better academic performance. However, leisure activities like computer use, watching videos and playing games on computers or game consoles have a negative impact, when they occupy more than one hour per day.

Another study (Knifsend & Graham, 2011) indicates a negative relationship between the total number of activities participation and the sense of belonging at school, academic engagement, and grade point average. This suggests that appropriate participation in sports activities positively affects the students' academic engagement and grades. But at the same time, this research revealed a negative impact on sports activities on the students' academic achievement. So, this point highlights the need for necessary research having specific and various activity types to reveal the relationship between students' activities and their academic performance.

According to the previous research, participating in extracurricular activities becomes increasingly important during adolescence, and these activities contribute to adolescents' academic achievement and cognitive function. Leisure activities encourage students to learn or practice content related to school activity participation has a significant relationship with a sense of belonging at school, and grade point average. But,

the empirical and theoretical relationships between school activity and students' leisure activities are issues that have not been well described or discussed. It is necessary to find a specific leisure activity that increases cognitive function and gives a positive relationship with school achievement. And, the search request more specific criteria to research and need a more controlled variable for research.

Academic Self-Efficacy

Academic self-efficacy is a student's confidence and belief that they can accomplish their academic assignments by understanding and using different educational strategies that meet the behaviors and expectations required by the school system. This *academic self-efficacy* term came from Bandura's work on self-efficacy, which he defined as one's confidence in their ability and capacity to solve problems successfully (Bandura, 1977). Academic self-efficacy as a research variable is a popular model used to assess students' confidence in academic achievement. This variable is also studied in relation to other variables such as relationships with teachers, and academic satisfaction in school life.

According to Verešová and Foglová (2018), academic self-efficacy is based on a *deep* and *surface approach* to learning and the relationship between the differences. (See Figure 2-1 p.34). Deep approach to learning is students' attitude and strategy to understand comprehensive academic knowledge and integrate learned information from school assignments. A surface approach to learning is a static, knowledge approach characterized by students focusing on memorizing factual content to supply for an assignment or exam (Verešová & Foglová, 2018).

A second component to measuring a student's evaluation of academic self-efficacy includes two juxtaposed yet interacting concepts: heteronomous evaluation and autonomous evaluation. Heteronomous evaluation is an external criterion made by a teacher, an official standard, such as grades and, testing scores. Autonomous evaluation is the student's own internal and subjective criteria to meet the intended objectives, values, and goals of the educational system in which the student attends (Verešová & Foglová, 2018). Furthermore, academic self-efficacy is also considered a meditating variable to find students' challenges for certain academic content where the students may be having a learning difficulty.

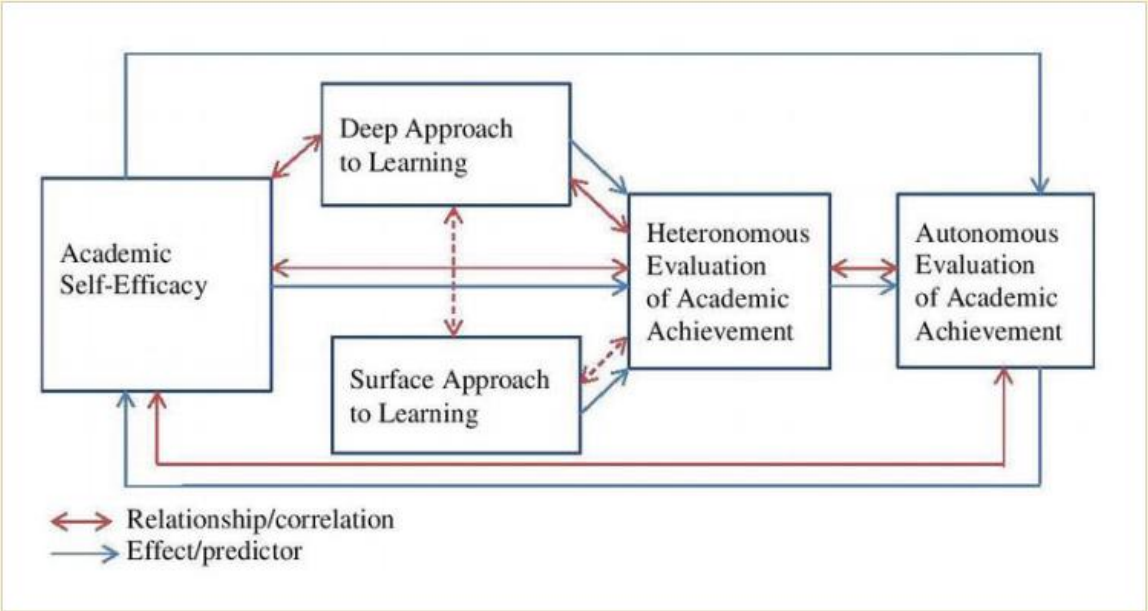


Figure 2-1. Model of Impact of Academic Self-Efficacy, Approach to Learning.

Source: Verešová and Foglová (2018)

Research findings using the impact for academic self-efficacy model: There is a handful of research that has explicitly used Verešová and Foglová's academic self-efficacy model (Jung & Kim, 2016; Kim, 2000; Roh et al., 2007; Schunk, 2003). First, Schunk (2003) investigated students who have high academic self-efficacy make a greater effort to try challenging tasks and subjects in academic situations. These students endeavored to improve their academic achievement than students scoring low on academic self-efficacy measures.

Academic self-efficacy is an important variable in determining academic ability and performance. Second, academic self-efficacy has also guided studies aimed at reducing the academic stress caused by heavy academic demands and ultimately academic self-efficacy decreases the possibility of students' academic burnout experiences (Jung & Kim, 2016). These researchers revealed that academic self-efficacy is partially mediating variable between the excessive academic task and students' academic burn out. Third, Roh et al. (2007) found that Korean students with higher academic self-efficacy performed positively, and successfully illustrating school social expectations and behaviors compared to Korean students with low academic self-efficacy who find it more difficult adjusting to school life criteria and expectations.

Students having higher academic self-efficacy are evaluated on their level of acquired knowledge, skills and competencies. Even though both deep and surface learning approaches are important, a deep learning approach has a greater impact on students' academic achievement than surface learning focusing solely on skills and motivation (Han et al., 2007).

Finally, Kim (2000) studied the higher the academic self-efficacy, the higher the school adaptation and the higher the teacher relationship. These findings indicate that the higher the expectation and the better the efficacy, the better the lessons and the better the relationship with the teacher. The relationship between self-regulation ability and school life adaptation, which is a subordinate factor of academic self-efficacy, was significantly related (Kim, 2000). Roh et al. (2007) also found that adolescents with better teacher relationships also illustrated high self-regulatory efficacy showed higher adaptability to school classes, and best adherence to school rules.

Although the Verešová and Foglová's (2018) academic self-efficacy model is well-respected, it may not be the best model for measuring Korean school life. Within the Korean education curriculum is challenging to expect positive adaptation to school life without self-confidence in one's learning, that is, *academic efficacy*, due to the entrance examination and competitive educational evaluation beginning during elementary school.

Expanding upon Verešová and Foglová's (2018) impact of academic self-efficacy model: To research the relation between the Korean middle school students' leisure activities and academic performance, it is necessary to review academic self-efficacy as defined by Korea University's Brain & Motivation Research Institution. This group of researchers explain that academic self-efficacy consists of two dimensions: a) self-efficacy for learning and b) self-efficacy for performance (see Figure 2-2).

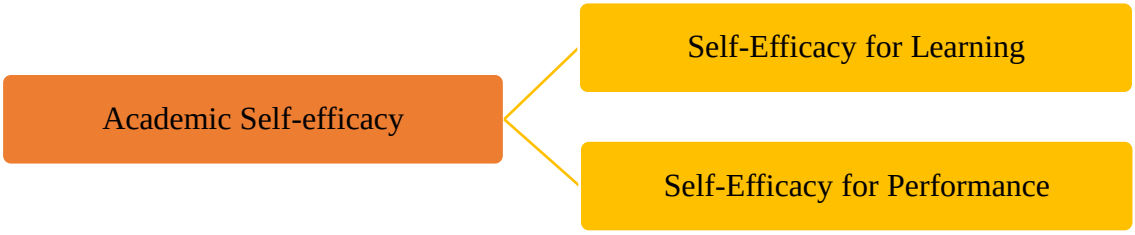


Figure 2-2. Academic Self-Efficacy.
Source: The Brain & Motivation Research Institution (2012)

Self-Efficacy for Learning is a dimension of subjective beliefs about whether students can understand, analyze, and remember learning to successfully acquire and build upon new knowledge and skills (Schunk, 1996). *Self-Efficacy for Performance* is a dimension of subjective beliefs about whether students can execute their academic performance in a particular subject to the required level (Bandura, 1977; Schunk, 1996).

Stress and Leisure Activity

Korean Students and their Stress

Stress is the human psychological experience and behavior that one feels when one's stable condition is threatened. This demand requires using of one's psychological resources that may or may not exceed one's abilities to manage on a continual basis (Lazarus & Folkman, 1984). According to Park et al. (2018), the major factor of Korean middle school students' stress is brought by academic performance demands. Over 73% of middle and high school students in Korea experience stress in their lives; and 65.2% of students specifically self-report that studying and academic performance are main reason for their stress. Other stressful factors in Korean middle school students lives include:

teachers, student heath, peers, physical appearance, and parent/ family member relationship. Parent/family relations are the second stress factor in a Korean students after academic pressures (see Figure 2-3).

Because of the educational environment of excessive competition causing excessive academic stress in the school life of Korean teenager students, 27.3% of students have reported suicidal impulses and since 2015, over 7% of Korean students commit suicide annually due to their school grades (Park et al., 2018). Academic stress is the product of academic requirements imposed beyond the adaptive resources available to individuals (Wilks, 2008). Students who have low confidence and happiness in their studies experience persistent academic stress and academic exhaustion. Academic stress is related to grades, classes, study, etc. It affects real life through abnormal behavior, the mental state of anxiety due to loss of control over learning, and the pressure of parents and teachers' expectations. Too much academic pressure, parents' expectations, and the burden of academic performance are the causes of emotional exhaustion, lack of academic motivation, loss of academic achievement, frequent absenteeism and suspension of school life (Kim et al., 2010)

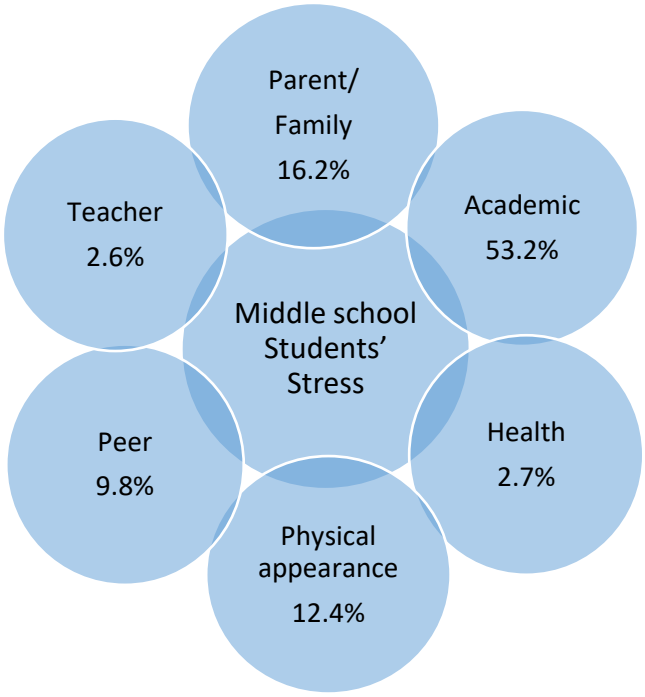


Figure 2-3. The Factors of Korean Middle School Students' Stress

Source: Park et al. (2018).

The more stress teenagers feel in their home environment and in their friendship, the more suicide plans increase by 1.17 times compared to those who do not have excessive home and friendship stress. Studies also show that family problems, feuds with friends, academic exhaustion and academic burden, teacher relationships, and school environment stress statistically have implications for adolescents' thoughts of suicide. These home and friendships problems, compounds the already existing academic stress by additional 1.08 times, thus increasing suicide plans by teenagers due to the stress they receive in combination with other Korean teenage stress factors.

Stressed in various of relationships, such as family, friends, and teachers, these stresses mean that teenagers can lead to extreme accidents or actions such as suicidal thoughts and suicide plans. However, these thoughts and actions show that people are less affected by stress when dealing with problems-oriented or social support-seeking methods than emotional or positive thinking. This point implies that various experiences of adolescent, including positive leisure activities may play a valuable role in reducing Korean students' stress and depression.

Leisure Activity and Stress

Leisure participation can help Korean students. The experience of positive social relations network formation and individual autonomy development found in leisure activity participation are valuable experiences for developing the ability to effectively cope with the stress (Coleman & Iso-Ahola, 1993). Iwasaki and Mannel (2000) and other researchers stated that the leisure activities, experiences of social relationship and self-determination, help leisure participants reduce the stress factors and reinforce their life satisfaction with improved mental and physical health (Park, 2007; Yoon et al., 2009; Kang, 2010; Ji & Jo, 2012). According to Zawadzki et al. (2015), leisure participation positively impacts the participants' mood and stress level, also revealing that leisure participant improved their health and well-being including lower heart rates and less stress, and lower cortisol levels. In addition, leisure and sport participation has been found to reduce test stress (Kang, 2004; Lee & Lee, 2008).

Research studies have yet to show that leisure activities directly reduce stress. The social support and self-determination gained in these activities build coping skills to

maintain physical and mental health (see Figure 2-4). The youth's positive experiences in leisure activities, along with their ability to cope with crises when individual teenagers are in difficult situations, are known to help them improve their problem-solving skills and adapt to the problem situation in everyday life (Iwasaki & Mannell, 2000; Kleiber et al., 2002; Hutchinson et al., 2003; Lee & Kim, 2005; Lee & Yi, 2006).

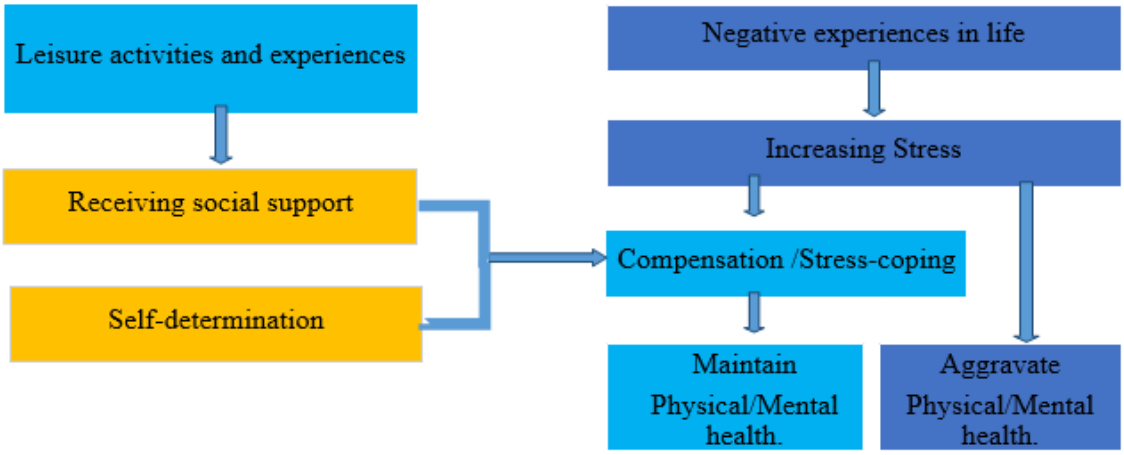


Figure 2-4. The Model of the Impact of Leisure Activities Coping with Stress
Source: Coleman and Iso-Ahola (1993)

In order to reduce teenagers' suicidal thoughts, it is necessary to guide them to develop their ability to deal with stressful situations or social support methods to feel less stress in the home or school environment. Participation in leisure activities provide an opportunity to develop and strengthen individual autonomy and helps participants make positive social relationships.

Iwasaki et al. (2005) revealed that the specific leisure activity types, relaxing leisure (e.g., watching TV and movie, listening to music) are strong positive factors to cope with stress and culture leisure type (e.g., going to museum) related in the mental or physical health. Even though previous research (Iwasaki et al., 2005; Kleiber et al., 2002; Lee & Kim, 2005; Lee & Yi, 2006) tried to classify several factors, it has limitation to find the specific leisure activities. This study provides ten types of leisure activities to help identify which leisure activity types best help with Korean students cope with daily life stress.

Self-Esteem and Leisure Activity

Self-Esteem

Self-esteem is an individual’s subjective competence and encompasses beliefs that are determined by a thought, emotion, and the thinking mind. Smith and Mackie (2007) defined self-esteem by saying "The self-concept is what we think about the self; self-esteem, is the positive or negative evaluations of the self, as in how we feel about it” (p.107). Self-esteem also includes self-awareness, perception, and judgment for one's self-worth (i,e., I am a valuable person). It is important to distinguish self-esteem from self-efficacy. Self-efficacy is considering the self-assessment and confidence in one’s capacity and ability in specific situations, assignments, or tasks (i.e. I can success 5 times in free throw basketball).

So, self-esteem is a more comprehensive, global perception of the self; self-efficacy is the specific abilities one perceives themselves to be capable of. Self-esteem is known to have a positive relationship to academic outcome, psychological well-being and life satisfaction. Yet, it is necessary to understand what leisure activities affect this process.

The development of self-esteem is considered one of adolescence's most important developmental processes (Sirin & Rogers-Sirin, 2004). Gender differences influences self-esteem in adolescents. In the case of males, independence and autonomy are important factors that affects male students' self-esteem development. For females, independence and sensitivity are more important factors in their self-esteem development (Cross & Slater, 1995). Cross and Slater (1995) concluded that gender differences should be considered to encourage their self-esteem development, allowing youth to choose their preferred leisure activities.

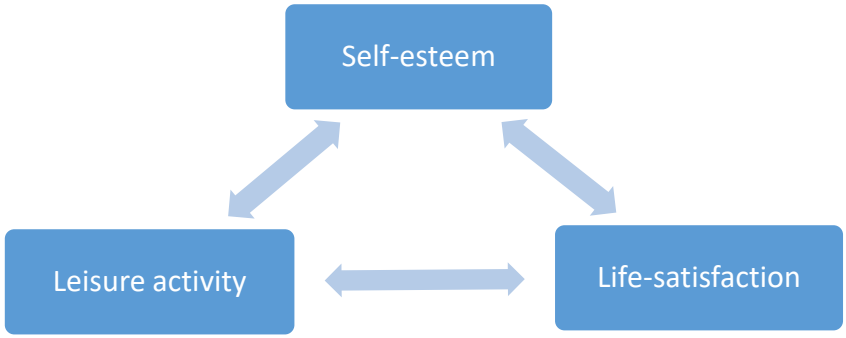


Figure 2-5. The Impact of Self-Esteem and Leisure Activity on the Life Satisfaction. Source: Cross and Slater (1995)

According to Rubie et al. (2004) increasing students' self-esteem, student achievement is developed. Fathi-Ashtiani et al. (2007) also revealed that students' level of self-esteem is a significant determinant in their academic achievement. Walter (2003) stated that as students develop higher levels of self-esteem, they exhibit higher academic achievement.

Leisure Activities and Self-Esteem

The impact of leisure involving social interaction is generally favorable, with positive effects on self-esteem (Trainor et al., 2010). Ji and Jo (2012) sampled 244 middle school students and found that student leisure activities positively affect life satisfaction, quality of life, and self-esteem. Self-esteem also played a role in increasing students' perceived quality of life. The researchers focused on the participants in the line dance activity (Jeon et al., 2015). Participants attending the activity has significant positive impact on the self-esteem and life satisfaction.

However, previous research focused on self-esteem as a one-dimensional concept. But Du et al. (2012) suggests that self-esteem includes three dimensions: personal self-esteem (PSE), collective self-esteem (CSE), relational self-esteem (RSE) *PSE (personal self-esteem)* is similar to the one-dimensional concept of self-esteem that focuses on individual self, including personal attributes such as abilities and talents (Rosenberg, 1965).

The additional dimensions are CSE and RSE and based on social and community relationships. Specifically, *RSE (relational self-esteem)* is representative of relationships with significant others such as parents, family members, teachers, friends, and someone who had influence (Du et al., 2012; Harter et al., 1998). *CSE (collective self-esteem)* is

formed by relationships with larger groups such as school, community, and society (Crocker & Luhtanen, 1990; Du et al., 2012; Luhtanen & Crocker, 1992).

This tri-dimensional view of self-esteem provides opportunities to view self-esteem from various intersections of individual emotional state, social relation, and community connections. A tri-dimensional view may be more efficient to link adolescents' specific activity participation and each self-esteem dimension to encourage self-esteem. It is important to understand if the characteristics of specific leisure activity types reinforce one or more dimensions of self-esteem. Therefore, this study is designed to have ten variables of leisure types to search the relationship between Korean middle school students' leisure activity and their self-esteem, psychological well-being, stress, and academic self-efficacy.

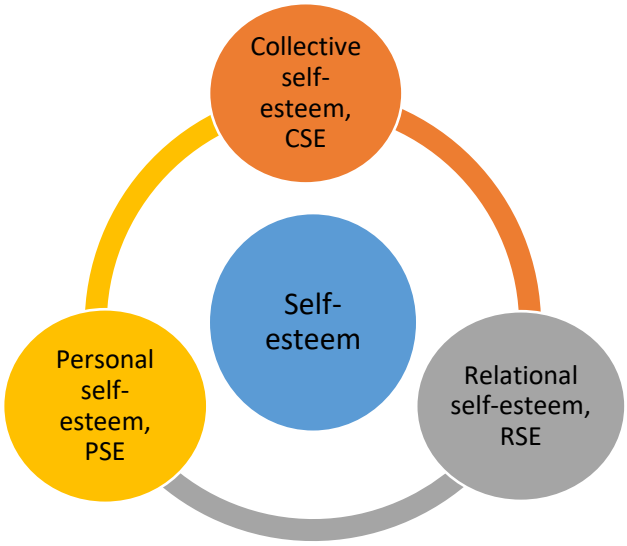


Figure 2-6. Three Dimensions of Self-Esteems

Source: Hongfei et al. (2017)

CHAPTER III

RESEARCH METHOD

The purpose of this study is to reveal the impact of adolescents' preferred leisure activities on their academic self-efficacy, psychological well-being, stress, and self-esteem. This study focuses specifically middle school students of Korea aged 13 to 15 years old (7, 8, and 9th grade). Statistical Package for the Social Sciences (SPSS) and AMOS 24.0 statistical software package for Windows will be used to analyze data with statistical tools such as Cronbach's Alpha, Factor analysis, Descriptive Statistics, T-test, One-way ANOVA, Pearson Correlation Analysis, Multiple Regression analysis, SEM (Structural Equation Model), including checking reliability, validity of questionnaire, and correlation and regression between leisure activity types and each variable.

Research Design

Quantitative research is useful for reaching a large sample size and collecting information to identify trends, issues, and phenomena within a population. Using questionnaire data to gather information has advantages to reduce spending time and cost to get the desired information. Also, the questionnaire research method can prevent unintended researcher intervention and subjective bias. But because this study's survey is based on self-reporting by the respondent, can be concern data error due to lack of participants' lack of understanding of the questions, or fidelity and honesty when they complete the questions. To prevent this possible problem for this research project, trained teachers are given instruction for implementing the survey and students respond to the questionnaire while the teachers are present.

The validity and reliability of collected data from each questionnaire section are analyzed with statistical tools such as Cronbach's Alpha Factor analysis and then compare to previous research conclusion. The accumulated numeric data are analysis with statistical tools contribute to the understanding of students' leisure participation phenomenon and tendency. The statistically analyzed data provides objectivity for the students' respond of psychological well-being, academic self-efficacy, self-esteem, and stress.

Population

Four hundred to six hundred secondary school 7th to 9th grades students from two different middle schools will be sampled. Of the two schools, one middle school is located in a rural setting and the other in a urban location. The rural school (Bong-seo Middle School) is located in a smaller city having 0.1 million (population density is 117/㎢). The urban school, named An-il Middle School is located at Pyeongtaek-si having 0.5 million (population density is 1,112/㎢) and this city is seeing rapid growth due to a USA military base development with this city beginning 2017 years.

A. Urban School: An-il Middle School 844-1 Hyeonhwa-ri, Anjung-eup, Pyeongtaek-si, Gyeonggi-do (Figure 3-1),

B. South Korea Rural School: Bong-Seo Middle School 857-2 Dunsan-ri, Bongdong-eup, Wanju-gun, Jeollabuk-do(Figure 3-2), South Korea

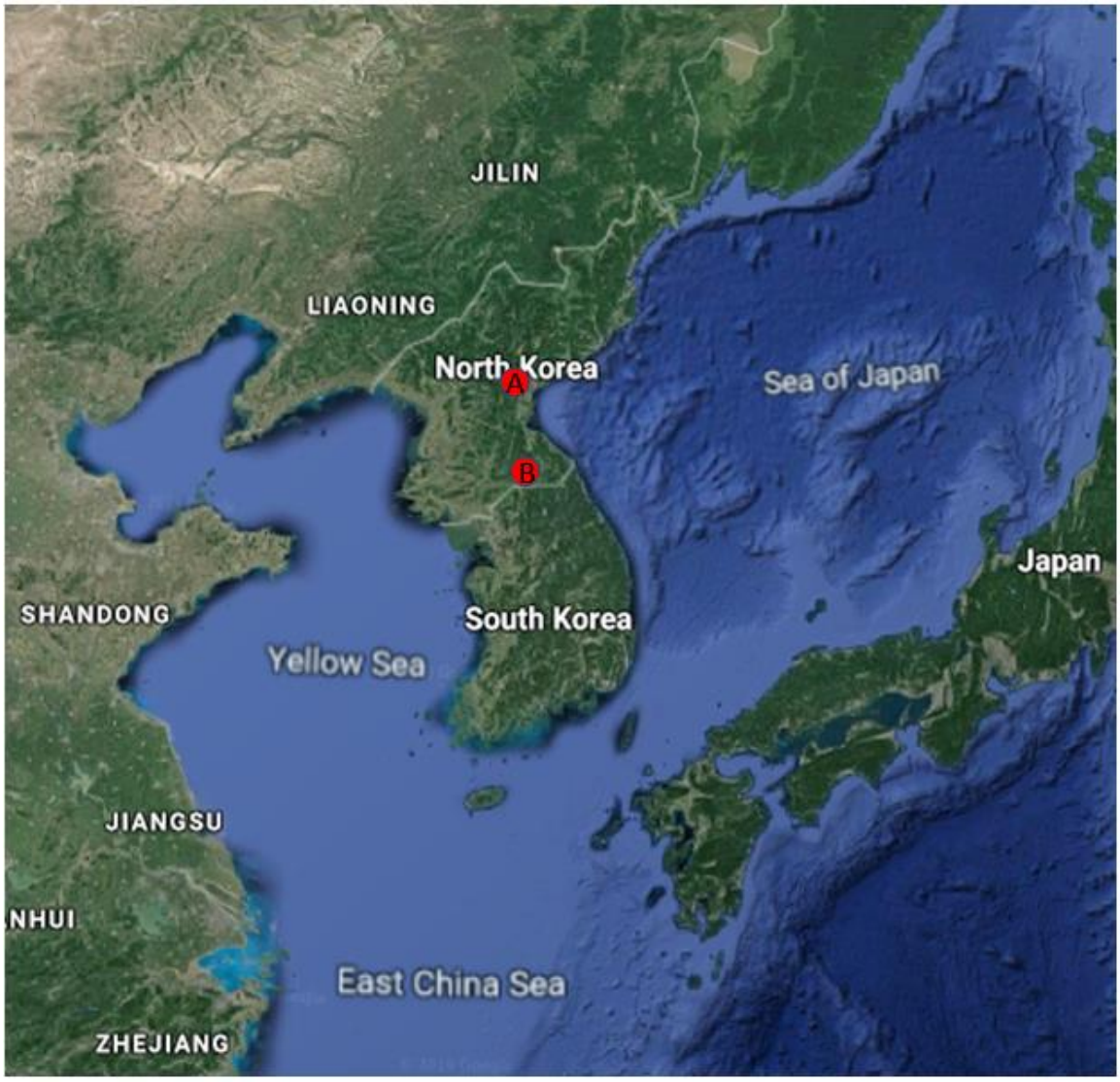


Figure 3-1. East North Asia Map and the Location of the Schools.

Sample size for this research is 600 students with three hundred middle school students selected from each school. To analyze 7th, 8th, and 9th grade differences, one hundred students for each grade level at each school will be sampled

Figure 3-2. South Korea Map and the Location of the Schools

Survey Collection Procedure

A survey questionnaire containing the constructs of leisure activity types, psychological well-being, academic self-efficacy, self-esteem, and stress was distributed to students by using an online survey program. The questionnaire was translated from English to Korean. After data analysis, the result of survey was translated back into English.

Pre-consent forms will send to the superintendent of each school district, principal of each school, and to the parents of all eligible students, including the students. Training for administering the questionnaire will occur by providing the instructions and precautions factors to the school teacher who will be in charge of watching and helping with computer use during the students respond to the questionnaire. Training was provided teachers with an understanding of the purpose of this research, their responsibility for collecting the data, and trying to increase participants' engagement to collect authentic responded.

After receiving consent from all parties and the teachers were trained on administering the questionnaire, the survey was implemented to students. The teachers explained access to the website to find the survey questionnaire and all information was provided to students. The student responses were saved online as an Excel file and then converted to SPSS for the statistical analysis.

Questionaire Description

The questionnaire includes six specific sections related to respondents' leisure activity preferences, psychological well-being, academic self-efficacy, stress, and self-efficacy, including demographics. The demographic section asks for information on the student's school, grade level, and gender. Leisure Activities Types questionnaire include 10 types activities for respondents to reflect on their involvement over the past 7 days. The Psychological Well-being questionnaire has 18 items representing 6 dimensions (Autonomy, Positive relations with other, Purpose in Life, Personal growth, Self-acceptance, Environmental mastery). Academic Self-efficacy questionnaire has 8 items of 2 dimensions of learning and performance, Self-esteem has 10 items, and finally, Perceived Stress Scale has 10 scale items. (see table 3.1)

Leisure Activity Types of Participants. This section of the research questionnaire is based on the *School's Out* survey to find adolescents leisure activities engagement (Fawcett, 2007). This questionnaire includes 10 mutually exclusive categories of students' leisure activities, organized team sports, organized individual sports, unorganized physical sports, organized social activity, unorganized social activity, organized group creative activity, organized individual creative activity, unorganized creative activity, individual passive activity, and volunteer. The questionnaire asks students to indicate their time spent for each activity including frequency during a seven day period. It also important to know if the student could self-select their own leisure activity or if the leisure choice was influenced by other such as peer, teacher or parent.

Table 3-1

Independent Variable and Dependent Variable

Independent Variable	Dependent Variable			
Leisure activity Types	Self-Esteem	Stress	Academic Self-Efficacy	Psychological Well-being
- Original Team Sports - Original Individual Sports - Unorganized Physical Sports - Organized Social Activity - Unorganized Social Activity - Organized Group Creative Activity - Organized individual Creative Activity - Unorganized Creative Activity - Individual Passive Activity - Volunteer	(10 items, 4-point Likert scale)	(10 items, 5-point Likert scale)	- Self-Efficacy for learning - Self-Efficacy for Performance (8 items, 7-point Likert scale	-Autonomy -Environmental mastery -Personal growth -Purpose in life -Self Acceptance -Positive relation with other (18 items, 5-point Likert scale)

Psychological Well-being. Ryff's (1989) original Psychological Well-being Scale consisted of 6 dimensions (Autonomy, Positive relations with other, Purpose in Life, Personal growth, Self-acceptance, Environmental mastery) that includes 54 items. However, after many tested versions of this scale Ryff and Keyes (1995) recommends a 18 question version with a Cronbach's Alpha of 0.7-0.89. Each dimension has 3

questions: Autonomy (question *1, 2, 3), Environmental mastery (4, *5, 6), Personal growth (7, 8, *9), Positive relation with other (*10, 11, *12), Purpose in life (*13, 14, 15) Self-Acceptance (question 16, 17, *18). The questions marked * are reverse scoring question using a 5-point Likert scale (Strongly Disagree:1, Disagree: 2, Neutral: 3, Agree: 4, Strongly Agree:5).

Academic Self-Efficacy. This survey was developed by Brain & Motivation Research Institute of Korea University and consisted of two parts. The first section includes Self-Efficacy for learning (Cronbach alpha is 0.87 for five questions. Self-Efficacy for Learning has 5 items (*I am confident in remembering what I learn in class. I can understand well even if the teacher presents complex materials in class. I am confident in solving problems with what I have learned in class. I can distinguish what is important in the class. I can easily understand what I am learning in class*). The second section, Self-Efficacy for Performance (Cronbach alpha is 0.89) has 3 items (*I am confident to improve my skills and knowledge in class. I am confident to take the test well; I believe I can get good grades*). This questionnaire is based upon a 7-point Likert scale (Strongly Disagree:1, Disagree: 2, More or less Disagree: 3, Neutral: 4, More or less Agree: 5, Agree: 6, Strongly Agree:7)

Self-Esteem. Rosenberg Self Esteem Scale's online version (https://openpsychometrics.org/tests/RSE.php) consists of 10 items. (I feel that I am a person of worth, at least on an equal with others. I feel that I have a number of good qualities. All in all, I am inclined to feel that I am a failure. I am able to do things as well as most other people. I feel I do not have much to be proud of. I take a positive attitude

toward myself. On the whole, I am satisfied with myself. I wish I could have more respect for myself. I certainly feel useless at times. At times I think I am no good at all.). Each question has a 4-point Likert scale (Strongly disagree: 1, Disagree:2, Agree:3, Strongly agree:4). The total score range is from 10 to 40 and higher score means the higher self-esteem. Questions, 1, 2, 4, 6, 7 are described to ask about positive state and 3, 5, 8, 9, 10 are questions to ask negative feeling. The negative items are reversed score (Strongly disagree: 4, Disagree:3, Agree:2, Strongly agree:1). Self-esteem score rating from 25 - 35 are normal range and 10 - 25 are low self-esteem.

Stress. The Perceived Stress Scale (Cohen et al., 1983) is used in much psychological research and is well designed for participants with at least a junior high school education (Cohen, 1988). Perceived Stress Scale includes 10 items and has 5-point Likert scale (Never = 0, Almost Never = 1, Sometimes = 2, Fairly Often = 3, Very Often = 4). A higher overall score means that the respondents feel higher stress than others who responded with a lower score. Questions 4, 5, 7, and 8 are positively stated questions. So, these questions score is calculated with reverse score (Never = 4, Almost Never = 3, Sometimes = 2, Fairly Often = 1, Very Often = 0). Perceived stress scores ranging from 0-13 would be considered low stress, from14-26 would be considered moderate stress, and from 27-40 would be considered high perceived stress.

Data Analysis

Data validity of will be assessed applying Cronbach's Alpha Coefficient to each scale. Descriptive analysis of the participant responses will be assessed by using frequencies, percentages, SD (standard deviation), mean, and median scores. Independent

sample t-tests will be utilized to examine the difference and similarity of leisure activities type of male students and female students. One-way ANOVA will be conducted to analyze the academic outcome (four factors) according to the leisure activity types and psychological well-being (six dimensions) according to the leisure activity types.

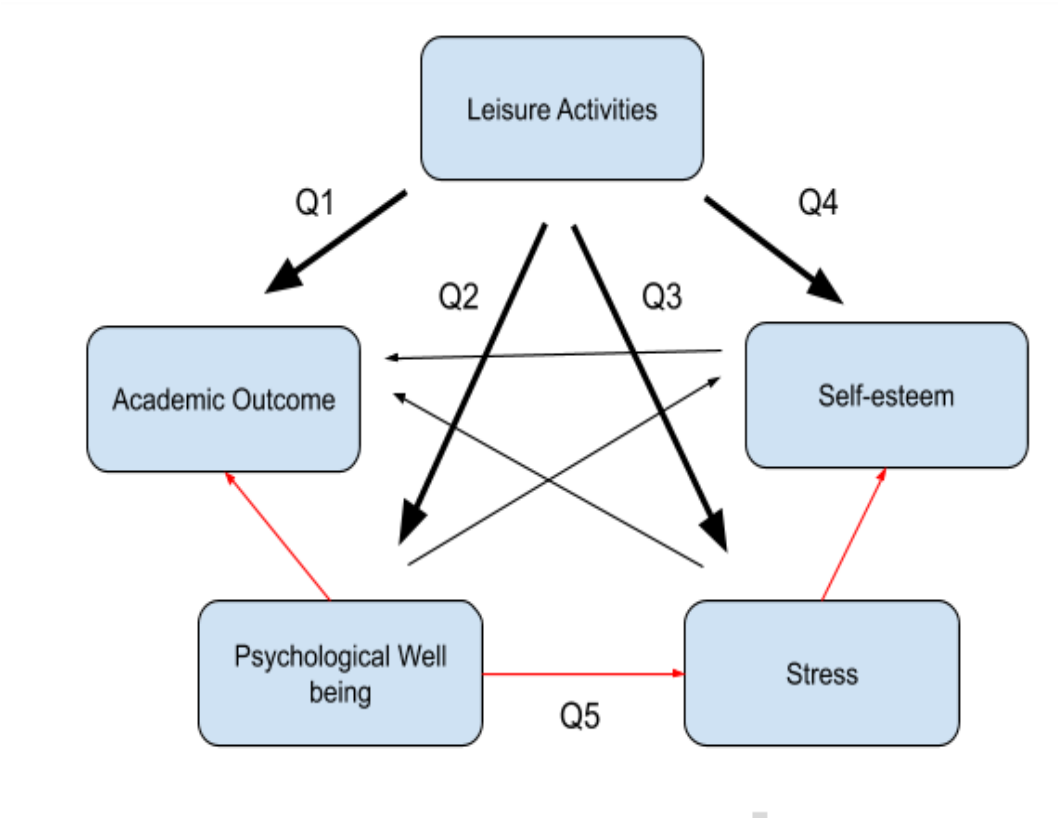


Figure 3-3. Research Questions Frame

In this statistical analysis, the independent variable is the students' is leisure activity types, and the dependent variables include psychological well-being, academic self-

efficacy, self-esteem, and stress. The next step in the analysis is correlations between leisure activities types and academic outcome, leisure activity types and psychological well-being, and psychological well-being and academic outcome. Finally, Multiple Regression Analysis, Structural Equation Model Analysis will assess the interaction between each variable. The Model's goodness of fit is used to prove the Structural Equation Model analysis's appropriateness. This study uses Non-normed Fit Index (NNFI), Comparative Fit Index (CFI), and Root mean square error of approximation (RMSEA) for the Model's goodness of fit (see Table 3-2).

Table 3-2

Analytic Steps

Statistical tools	Analysis Contents
Cronbach's Alpha	To check the reliability
Factor analysis	To check the validity
Descriptive Statistics	SD (standard deviation), mean, and median scores
T-test	To compare between male and female's leisure activity types
One-way ANOVA	To compare the gap of mean of variable between groups To analyze that there is significant difference among variable or not
Pearson Correlation Analysis	To analyze the relation (positive relationship or negative relationship or there is no relation) between leisure activity types and psychological well-being, academic self-efficacy, stress, and self-esteem
Multiple Regression analysis	To analyze whether there is "cause and effect" between independent and dependent variables.

1. Cronbach's Alpha: To check the reliability of Psychological Well-being, Academic Self-efficacy, Self-esteem, and Stress.

2. Factor analysis: To check the validity of Psychological Well-being, Academic Self-efficacy, Self-esteem, and Stress.

3. Descriptive Statistics: SD (standard deviation), mean, and median scores

4. T-test: To compare between male and female's leisure activity types. Independent Variables are Gender and Age, and dependent variables are 'Leisure Activities types'

5. One-way ANOVA

    1) To compare the gap of mean of variable between groups

    2) To analyze that there is significant difference among variable or not

        - Local and each grade students' participation in Leisure activities types

        - Local and each grade students' Psychological well-being, Academic efficacy, Self-esteem, and Perceived Stress

6. Pearson Correlation Analysis: To analyze the relation (positive relationship or negative relationship or there is no relation) between leisure activity types and psychological well-being, academic self-efficacy, stress, and self-esteem.

    - Leisure activity types (10 types), Academic efficacy (2 factors)

    - Leisure activity types (10 types) and Psychological well-being (6 dimensions)

7. Simple and Multiple linear Regression analysis: To analyze whether there is “cause and effect” between variables. After correlation statistical analysis, which means is to check that there is a relation between variables of each section, multiple regression statistical analysis. This statistical analysis is for research question 1, 2, 3, and 4.

- Dependent variable: Academic Self-efficacy (2 factors), Psychological well-being (6 dimension), Perceived Stress, Self-esteem.

- Independent variable: Leisure Activity types (10 types)

CHAPTER IV

DATA ANALYSIS AND FINDINGS

This study aimed the relationship between specific leisure activities types and Psychological Well-being, Academic Self-efficacy, Self-esteem, and Perceived Stress of Korean middle school students. Two schools were selected from rural (Wanju) and urban (Pyungtaek) area to fulfil the research goals.

The survey based on online was collected from 606 students (Rural: 298 / 49.2% students, Urban: 308 / 50.8% students). It was planned to get 600 participants, collecting 300 surveys from area (each grade has 100 students) to compare between two regions, gender, and each grade. T same within this study consisted of 275(45.6%) male students and 331 (54.6%) female students. (See table 4-0.1)

Table 4-0.1

Participants Number of Area and Gender

Area	Frequency	Gender	
		Male	Female
Rural	298 (49.2%)	153 (26.2%)	145 (23.9%)
Urban	308 (50.8%)	122 (20.1%)	186 (30.7%)
Total	606 (100%)	275 (45.4%)	331 (54.6%)

Among the participants 253(42%) 1st grade (7^{th} grade in USA) students responded, 195 (32%) 2nd grade (8^{th} grade in USA) students respond, and 158(26%) 3rd

grad (9th grade in USA)e students responded this research questionnaire. (See *Figure 4-1. P.59)*

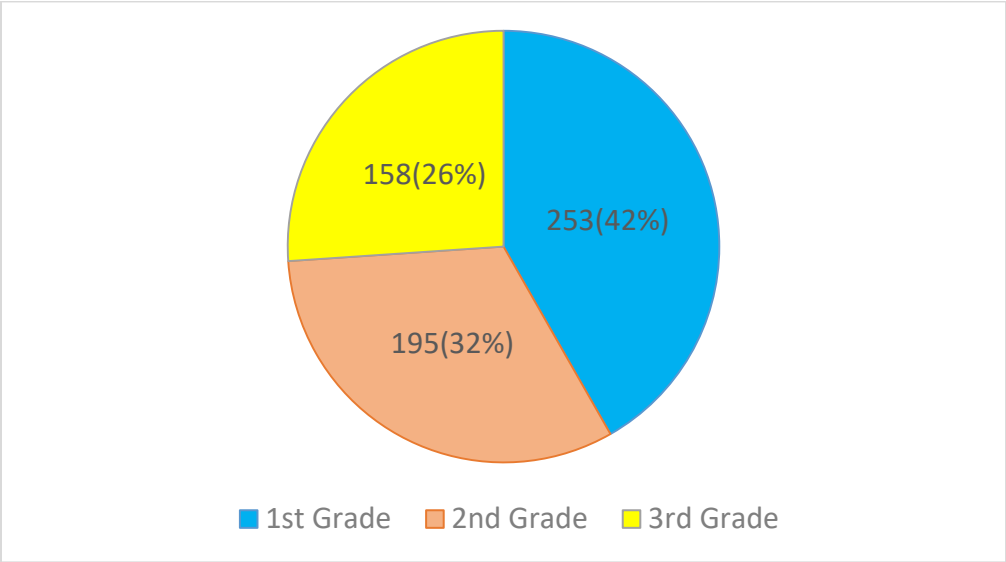


Figure 4.1. Participants Number of Grade

The urban area 2nd grade's female student response rate 4.3% (26 students) was lowest. The highest response rate was 16.8% (102 Urban area 1st grade Female students). Urban area 2nd grade students 63 (10.1%).

Table 4-0.2

Participants Number of Area, Grade, and Gender

	1st grade (253) (7th grade in USA0)		2nd grade (195) (8th grade in USA)		3rd grade (158) (9th grade in USA)	
	Male	Female	Male	Female	Male	Female
Rural	40(6.6%	46(7.6%)	71(11.7%)	61(10.1%)	42(6.9%)	38(6.3%)
Urban	65(10.7%)	***102(16.8%)***	***26(4.3)***	37(6.1%)	31(5.1%)	47(7.8%)
Total	105(17.3%)	148(24.4%)	97(16%)	98(17.2%)	73(12%)	85(14.1%)

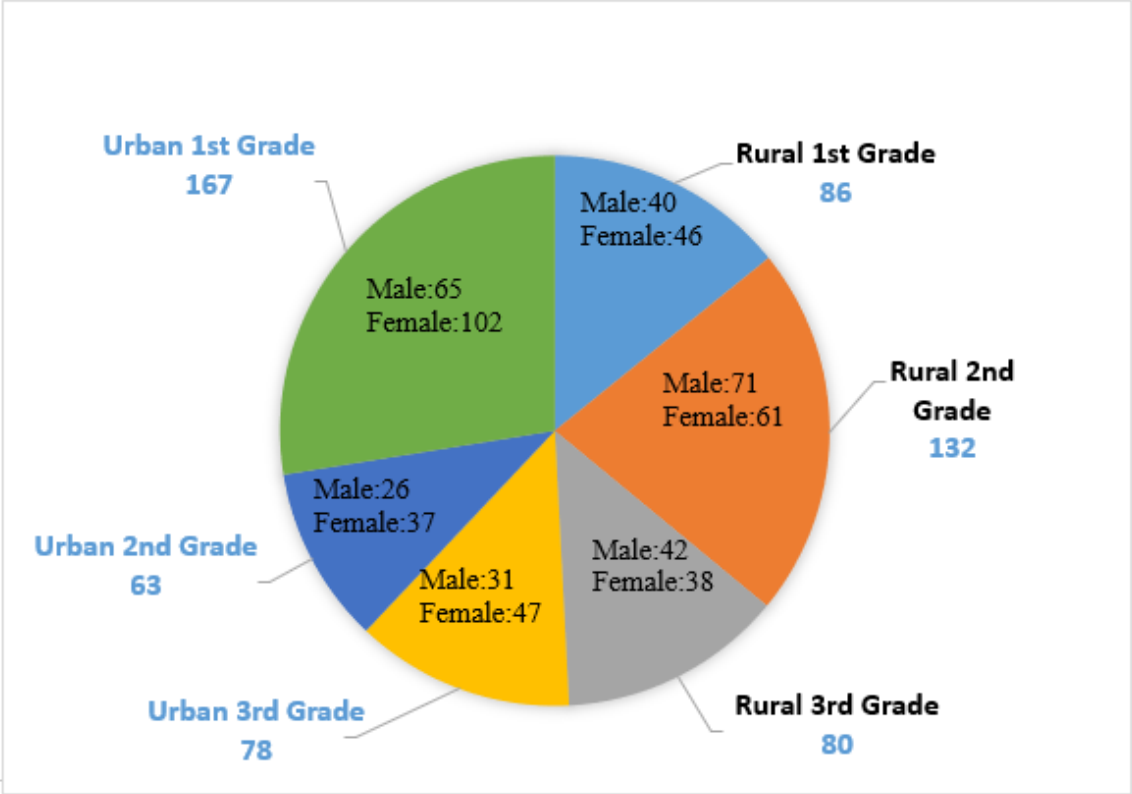


Figure 4-2. Participants Number of Area, Grade, and Gender

1. Reliability Test.

To examine the internal consistency reliability this study conducted Cronbach's alpha Test to Psychological Well-being (18 items), Academic Self-efficacy (8 items), Self-esteem (10 items), and Perceived Stress (10 items). The above 0.7 of the Cronbach's alpha score is considered as acceptable internal consistency (Salkind, 2015).

Table 4-1.1

Score of Cronbach's Alpha and Internal Consistency

Cronbach's alpha	Internal consistency
$\alpha \geq 0.9$	Excellent
$0.9 \geq \alpha \geq 0.8$	Good
$0.8 \geq \alpha \geq 0.7$	Acceptable
$0.7 \geq \alpha \geq 0.6$	Questionable
$0.6 \geq \alpha \geq 0.5$	Poor
$0.5 \geq \alpha$	Unacceptable

Psychological Well-being

Psychological Well-being is consisted of 18 questions and six dimensions. Each dimension has three questions. As a result of Cronbach's alpha test, the score was .726. The 18 questions of Psychological Well-being assured the high internal consistency reliability. But Corrected Item-Total Correlation of question number 1 and 15 is .062 and .076. the question 1 and 15 had low correlation with other questions in Psychological Well-being. (See Table 4.1.2)

Table 4-1.2

Reliability of Psychological Well-Being

Questions	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1.I tend to be influenced by people with strong opinions.	60.35	44.482	.062	.740
2. I have confidence in my own opinions, even if they are different from the way most other people think.	60.89	43.697	.154	.728
3.I judge myself by what I think is important, not by the values of what others think is important.	60.45	42.020	.250	.720
4.In general, I feel I am in charge of the situation in which I live.	60.69	41.609	.284	.717
5. The demands of everyday life often gets me down	59.87	44.439	.149	.726
6. I am good at managing the responsibilities of daily life.	60.31	40.300	.450	.700
7. I think it is important to have new experiences that challenge how I think about myself and the world.	59.97	40.207	.442	.701
8. For me, life has been a continuous process of learning, changing, and growth.	59.97	39.880	.506	.695
9. I gave up trying to make big improvements or changes in my life a long time ago.	59.76	42.766	.339	.712
10. Maintaining close relationships has been difficult and frustrating for me	59.53	42.230	.358	.710
11.People would describe me as a giving person, willing to share my time with others	60.43	42.533	.281	.716
12. I have not experienced many warm and trusting relationships with others.	59.43	42.050	.384	.708
13. I live life one day at a time and don't really think about the future.	59.49	42.915	.290	.716
14. Some people wander aimlessly through life, but I am not one of them.	60.20	39.917	.386	.706
15. I sometimes feel as if I've done all there is to do in life.	59.95	45.304	.076	.731
16. When I look at the story of my life, I am pleased with how things have turned out so far.	60.02	38.618	.490	.694
17. I like most parts of my personality.	60.73	39.469	.435	.700
18. In many ways I feel disappointed about my achievements in life.	59.80	44.823	.107	.729
*Cronbach's Alpha	.726			

Academic Self-efficacy

Academic Self-efficacy has 8 items and 2 dimensions such as Academic Self-efficacy for learning (5 items) and Academic Self-efficacy for performance (3 items). The Cronbach's alpha of Academic Self-efficacy was .948. Cronbach's alpha analysis showed very high internal consistency between each item. the Cronbach's alpha of Academic Self-efficacy for learning was .905 (5 items) and Academic Self-efficacy was .908 (3 items). (See Table 4.1.3)

Table 4-1.3

Reliability of Academic Self-Efficacy

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1. I am confident in remembering what I learn in class.	31.38	79.890	.826	.939
2. I can understand well even if the teacher presents complex materials in class.	31.79	81.617	.786	.942
3. I am confident in solving problems with what I have learned in class.	31.18	80.996	.812	.940
4. I can distinguish what is important in the class.	30.97	84.184	.729	.945
5. I can easily understand what I am learning in class	31.22	79.740	.775	.943
6. I am confident to improve my skills and knowledge in class.	31.34	79.908	.861	.937
7. I am confident to take the test well.	31.25	81.212	.835	.939
8. I believe I can get good grades.	31.38	80.014	.844	.938
*Cronbach's Alpha	.948			

Self-esteem

Self-esteem has 10 items. The Cronbach's alpha of Self-esteem was .842. There is high internal consistency reliability. But question number 8's Corrected Item-Total Correlation was -.042. It showed very low correlation with other questions. If this survey for Self-esteem removes question number 8, the internal consistency reliability of Self-esteem will grow to .842 from 0.878. (See Table 4.1.4)

Table 4-1.4

Reliability of Self-Esteem

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1. I feel that I am a person of worth, at least on an equal plane with others.	26.99	22.926	.694	.812
2. I feel that I have a number of good qualities.	27.28	23.334	.631	.818
3. All in all, I am inclined to feel that I am a failure.	26.29	24.827	.618	.823
4. I am able to do things as well as most other people.	26.33	26.208	.398	.839
5. I feel I do not have much to be proud of.	26.71	23.614	.621	.820
6. I take a positive attitude toward myself	27.21	23.171	.634	.818
7. On the whole, I am satisfied with myself.	27.20	22.308	.674	.813
8. I wish I could have more respect for myself.	27.45	29.157	-.042	.878
9. I certainly feel useless at times.	26.55	23.927	.615	.821
10. At times I think I am no good at all.	26.77	23.769	.607	.821
*Cronbach's Alpha	.842			

Perceived Stress

The survey of Perceived Stress has 10 items. The Cronbach's alpha of Self-esteem was 0.829. There is high internal consistency reliability. However, question 5 Corrected item-total Correlation was 0.174. If this survey for Perceived Stress removes question number 5, the internal consistency reliability of Perceived Stress will grow to .844 from 0.829. (See table 4.1.5)

Table 4-1.5

Reliability of Perceived Stress

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1. In the last month, how often have you been upset because of something that happened unexpectedly?	16.14	32.608	.646	.800
2. In the last month, how often have you felt that you were unable to control the important things in your life?	16.60	33.493	.634	.802
3. In the last month, how often have you felt nervous and "stressed"?	16.18	31.575	.690	.794
4. In the last month, how often have you been able to control irritations in your life?	16.20	32.150	.675	.797
5. In the last month, how often have you felt that things were going your way?	15.91	38.793	.174	.844
6. In the last month, how often have you felt confident about your ability to handle your personal problems?	15.83	36.807	.346	.829
7. In the last month, how often have you felt that you were on top of things?	15.83	36.251	.387	.826
8. In the last month, how often have you found that you could not cope with all the things that you have to do?	15.92	35.863	.457	.820
9. In the last month, how often have you been angered because of things that were outside of your control?	16.25	33.850	.562	.809
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	16.57	33.154	.576	.808
*Cronbach's Alpha	.844			

2. Factor Analysis

To analyze the construct validity of Psychological Well-being, Academic Self-efficacy, Self-esteem, and Perceived Stress this study conducted Exploratory Factor Analysis. Psychological Well-being has 18 questions and consisted of 6 dimensions. Academic Self-efficacy consisted of 8 questions and 2 dimensions. Self-esteem and Perceived Stress.

Table 4-2.1

KMO's Value and Interpretation.

KMO's value	Interpretation
$1.0 \geq \alpha \geq 0.9$	Marvelous
$0.89 \geq \alpha \geq 0.80$	Meritorious
$0.79 \geq \alpha \geq 0.70$	Middling
$0.69 \geq \alpha \geq 0.60$	Mediocre
$0.59 \geq \alpha \geq 0.50$	Miserable
$0.49 \geq \alpha \geq 0.00$	Unacceptable

As the methods of Factor Analysis to analyze the Psychological Well-being, Academic Self-efficacy, Self-esteem, and Perceived Stress this study used the Kaiser-Meyer-Olkin (KMO) and Bartlett's test result which were conducted KMO values between 0.8 and 1 is considered that the valuables are adequate. But the KMO value is lesser than 0.6 is considered the samplings are not adequate. (Glen, 2021). Bartlett's test is indicated that variables are not related and unsuitable for factor analysis. The Bartlett's test value lesser than .005 indicates that the variables is appropriate for factor analysis.

Psychological Well-being.

Result of Exploratory Factor Analysis of Psychological Well-being shows that the Kaiser-Meyer-Olkin (KMO)'s value was .778. The questions to survey the Psychological Well-being are comparatively appropriative. As the result of Bartlett's test value, p value was .000 and Chi-Square (x^2) was 2197.177. So, the questions are appropriate for factor analysis. (see table 4-2.2)

Table 4-2.2

KMO and Bartlett's Test of Psychological Well-Being

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.778**
Bartlett's Test of Sphericity	Approx. Chi-Square	2197.177
	df	153
	Sig.	.000

The result of Communalities shows that question number 5 (The demands of everyday life often get me down: .302), 14 (Some people wander aimlessly through life, but I am not one of them: .331), 15 (I sometimes feel as if I've done all there is to do in life: .319) was low communality comparing with other questions. (see table 4-2.3)

Table 4-2.3

Communalities of Psychological Well-Being

Questions for Psychological Well-being	Initial	Extraction
1. I tend to be influenced by people with strong opinions.	1.00	.497
2. I have confidence in my own opinions, even if they are different from the way most other people think.	1.00	.592
3. I judge myself by what I think is important, not by the values of what others think is important.	1.00	.621
4. In general, I feel I am in charge of the situation in which I live.	1.00	.521
5. The demand of everyday life often gets me down	1.00	.302
6. I am good at managing the responsibilities of daily life.	1.00	.555
7. I think it is important to have new experiences that challenge how I think about myself and the world.	1.00	.540
8. For me, life has been a continuous process of learning, changing, and growth.	1.00	.580
9. I gave up trying to make big improvements or changes in my life a long time ago.	1.00	.482
10. Maintaining close relationships has been difficult and frustrating for me	1.00	.565
11. People would describe me as a giving person, willing to share my time with others	1.00	.387
12. I have not experienced many warm and trusting relationships with others.	1.00	.512
13. I live life one day at a time and don't really think about the future.	1.00	.403
14. Some people wander aimlessly through life, but I am not one of them.	1.00	.331
15. I sometimes feel as if I've done all there is to do in life.	1.00	.319
16. When I look at the story of my life, I am pleased with how things have turned out so far.	1.00	.639
17. I like most parts of my personality.	1.00	.580
18. In many ways I feel disappointed about my achievements in life.	1.00	.469

Extraction Method: Principal Component Analysis

Academic Self-efficacy

Result of Exploratory Factor Analysis of Academic Self-efficacy shows that the Kaiser-Meyer-Olkin (KMO)'s value was .930. (See Table 4-2.4) The questions to survey the Academic Self-efficacy are very appropriative. Bartlett's test value, p value was .000 and Chi-Square (x^2) was 4360.644. The result of Communalities shows that all questions of Academic Self-efficacy had comparatively high communality other questions. . (See Table 4-2.5)

Table 4-2.4

KMO and Bartlett's Test of Academic Self-Efficacy

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.930**
Bartlett's Test of Sphericity	Approx. Chi-Square	4360.644
	df	28
	Sig.	.000

Table 4-2.5

Communalities of Academic Self-Efficacy

Questions for Academic Self-efficacy	Initial	Extraction
1. I am confident in remembering what I learn in class.	1.00	.760
2. I can understand well even if the teacher presents complex materials in class.	1.00	.703
3. I am confident in solving problems with what I have learned in class.	1.00	.737
4. I can distinguish what is important in the class.	1.00	.624
5. I can easily understand what I am learning in class	1.00	.688
6. I am confident to improve my skills and knowledge in class.	1.00	.807
7. I am confident to take the test well	1.00	.770
8. I believe I can get good grades	1.00	.780

Extraction Method: Principal Component Analysis

Self-Esteem.

Result of Exploratory Factor Analysis of Academic Self-efficacy shows that the Kaiser-Meyer-Olkin (KMO)'s value was .873. . (See Table 4-2.6) The questions to survey the Academic Self-efficacy are very appropriative. Bartlett's test value, p value was .000 and Chi-Square (x^2) was 2572.644.

Table 4-2.6

KMO and Bartlett's Test of Self-Esteem

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.873**
Bartlett's Test of Sphericity	Approx. Chi-Square	2572.452
	df	45
	Sig.	.000

The result of Communalities shows that question 8 (I wish I could have more respect for myself: .342) was low communality comparing with other questions.

Table 4-2.7

Communalities of Self-Esteem

Questions for Self-esteem	Initial	Extraction
1. I feel that I am a person of worth, at least on an equal plane with others.	1.000	.713
2. I feel that I have a number of good qualities.	1.000	.637
3. All in all, I am inclined to feel that I am a failure.	1.000	.590
4. I am able to do things as well as most other people	1.000	.440
5. I feel I do not have much to be proud of.	1.000	.530
6. I take a positive attitude toward myself	1.000	.707
7. On the whole, I am satisfied with myself.	1.000	.754
8. I wish I could have more respect for myself	1.000	.342
9. I certainly feel useless at times	1.000	.622
10. At times I think I am no good at all.	1.000	.598

Extraction Method: Principal Component Analysis

Perceived Stress.

Result of Exploratory Factor Analysis of Academic Self-efficacy shows that the Kaiser-Meyer-Olkin (KMO)'s value was .875. The questions to survey the Academic Self-efficacy are very appropriative. Bartlett's test value, p value was .000 and Chi-Square (x^2) was 3563.190.

Table 4-2.8

KMO and Bartlett's Test of Perceived Stress.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		**.875**
Bartlett's Test of Sphericity	Approx. Chi-Square	3563.190
	df	45
	Sig.	.000

Table 4-2.9

Communalities of Perceived Stress

Question for Self-esteem	Initial	Extraction
1. In the last month, how often have you been upset because of something that happened unexpectedly?	1.000	.748
2. In the last month, how often have you felt that you were unable to control the important things in your life?	1.000	.610
3. In the last month, how often have you felt nervous and “stressed”?	1.000	.800
4. In the last month, how often have you been able to control irritations in your life?	1.000	.772
5. In the last month, how often have you felt that things were going your way?	1.000	.682
6. In the last month, how often have you felt confident about your ability to handle your personal problems?	1.000	.736
7. In the last month, how often have you felt that you were on top of things?	1.000	.716
8. In the last month, how often have you found that you could not cope with all the things that you have to do?	1.000	.732
9. In the last month, how often have you been angered because of things that were outside of your control?	1.000	.688
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	1.000	.580

Extraction Method: Principal Component Analysis.

The lowest communality among the questions was question number 10 (In the last month, how often have you felt difficulties were piling up so high that you could not overcome them? .580). But the result of Communalities shows that all questions of Academic Self-efficacy had comparatively high communality other questions

3. Description

1) Leisure Activity Types

This study surveyed to examine the Korean middle school students’ participation time in leisure activities. The total leisure participation time (see Appendix B table 1 and figure 4.3.1) per one month of Korean middle school students was calculated with

students' usage time per one time (see Appendix B table 2) and the students' leisure participation frequency per one month (see Appendix B table 3). Korean middles school students use their leisure time in the Individual Social Activities type and Individual Freely Activities type more often than the other eight types of leisure activity.

Leisure time of Students classified by Area, Gender, and Grades

Generally, male students of each grade spent more leisure time in the three physical activity types, Team Sports, Individual Sports, Individual Physical Activities, than female students. Students have a lesser leisure time in Social Activity type and three creative activity types, Group Creative Activity, Systematic Creative Activity, Individual Creative Activity. Female students have more leisure time in the creative activity types than male students.

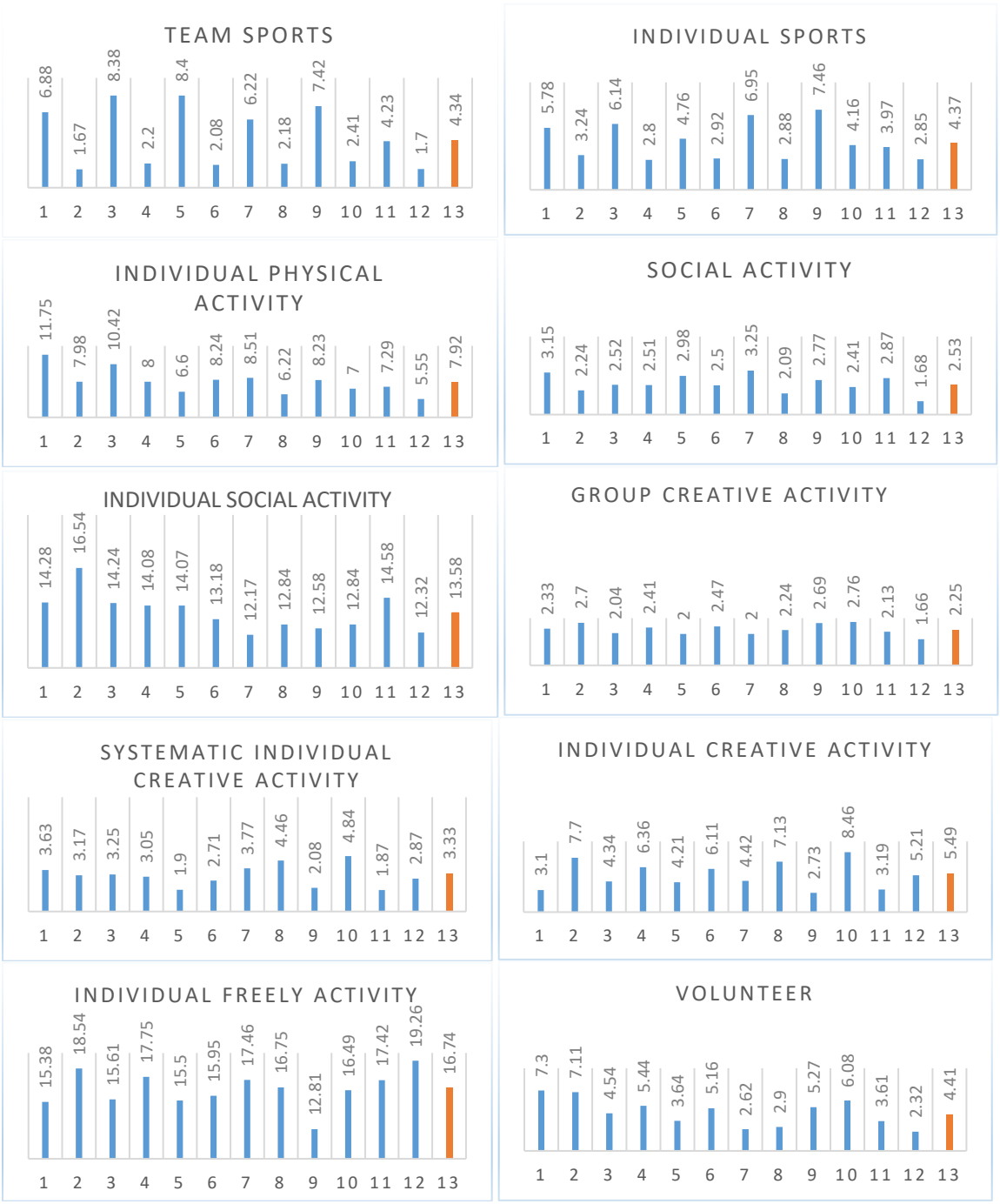
Rural 1st (7th grade in USA) grade male student spent 73.55 ± 33.618 hours, Rural 1st grade female students group use 70.89 ± 26.87 hours, and Rural 2nd (8th grade in USA) male students group use 71.48 ± 27.757 hours. Urban 3rd (9th grade in USA) female students group use 47.0 ± 23.248 hours.

In the team sports type, Rural 3rd male spent 8.40 ± 6.145 hours for team sport type and Rural 2nd male student spent 8.28 ± 7.689 hours. But urban 3rd female student use 1.70 ± 2.126 hours for their leisure and rural 1st female student have 1.67 ± 1.910 hours for team sports leisure type. Urban 3rd female students participate in team sports type for 1.7 ± 2.216 hours/month and spend their leisure time in social activity for 1.68 ± 2.237 hours per one month.

Urban 1st grade male student's total leisure participation time is 67.35 ± 33.623 and Urban 1st grade female students' total time for leisure activities is 59.68 ± 29.293.

The average of students' usage time for Systematic individual creative activity is 3.33hours per one month and the average time for volunteer is 4.41 hours per one month. (*See figure 4.3.1 p. 74*)

For Systematic individual creative activity Rural 3rd male students use 1.90 ± 2.293 hours, and Urban 2nd male students use 1.87 ± 2.306 hours. The average time for social activities and group creative leisure type is 2.53 hours per one month and 2.23 hours per one month. *(See figure 4-3.1.*)



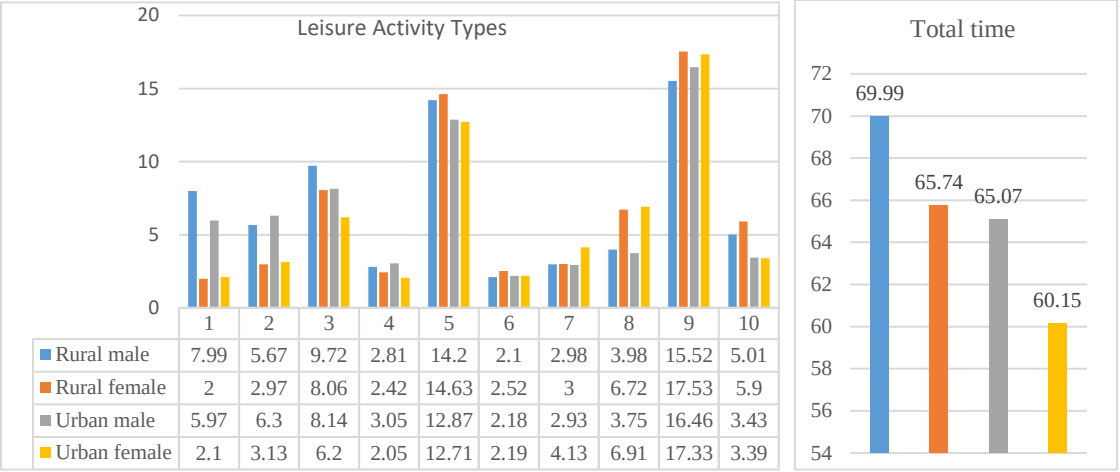
1: Rural 1st (7th grades in USA)Male Students, 2: Rural 1st Female Students, 3: Rural 2nd (8th grades in USA)Male Students, 4: Rural 2nd Female Students, 5: Rural 3rd (9th grades in USA)Male Students, 6: Rural 3rd Female Students, 7: Urban 1st Male Students, 8: Urban 1st Female Students, 9: Urban 2nd Male Students, 10: Urban 2nd Female Students, 11: Urban 3rd Male Students, 12: Urban 3Rd Female Students, 13: Average (see the data table in Appendix B Middle school students' total leisure time per 1month)

Figure 4-3.1. Middle School Students' Total Leisure Time per 1 Month

Leisure Time of Students Classified by Area and Gender

Rural area male students have more spending time for their leisure activity than other groups. Individual Social Activity type and Individual Feely Activity type are most common leisure activity types in Korean middles school students. Both area students have lesser leisure time in the social activity and Group creative activity than other leisure types.

Rural male students' total leisure time is 69.99 68 ± 28.054 h/1 month and female students' total leisure time 65.74 68 ± 25.441 h/1month. Urban male students have 65.07 68 ± 25.441 hours per one month and urban female students have 60.15 68 ± 27.707 hours per one month. Rural area female student and urban area female student have 3.00 ± 3.99 hours and 4.13 ± 4.878 hours per one month for Systematic individual creative activities. Rural area male student and unban are male students have 2.98 ± 4.463 and 2.93 ± 4.529 hours for Systematic individual creative activities. (See *figure 4.3.2*) Rural area female student and urban area female student have 6.72 ± 6.317 hours and 6.91 ± 6.054 hours per one month for Individual creative activity. (See Appendix B *figure 4.3.2*)



	1	2	3	4	5	6	7	8	9	10
Rural male	7.99	5.67	9.72	2.81	14.2	2.1	2.98	3.98	15.52	5.01
Rural female	2	2.97	8.06	2.42	14.63	2.52	3	6.72	17.53	5.9
Urban male	5.97	6.3	8.14	3.05	12.87	2.18	2.93	3.75	16.46	3.43
Urban female	2.1	3.13	6.2	2.05	12.71	2.19	4.13	6.91	17.33	3.39

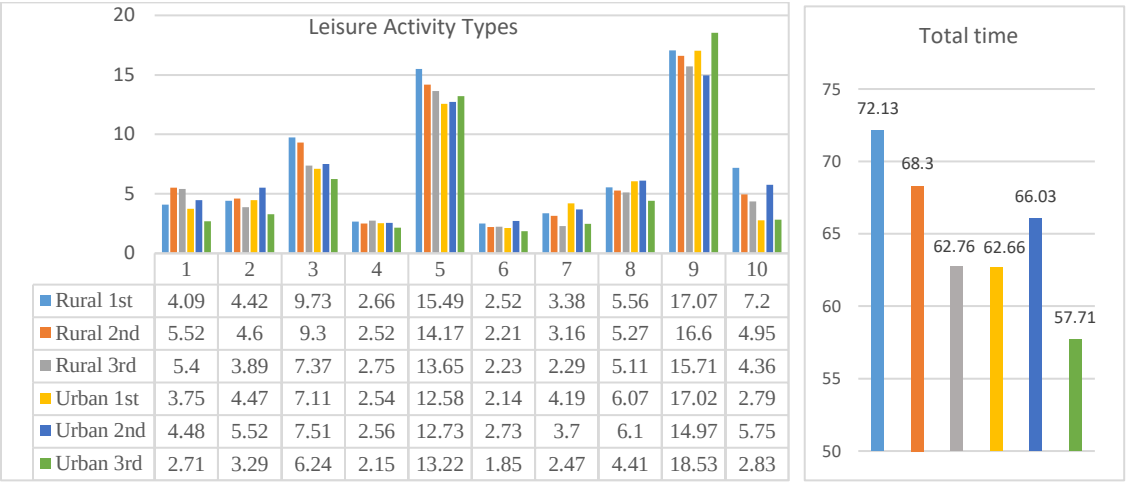
Figure 4-3.2. Middle School Students' (Area, Gender) Leisure Time per 1 Month

Leisure Time of Students Classified by Area and Grades

Rural area 1st (7th grades in the USA) grade students have more participating time for their leisure activity than other groups in the group of rural area. But in the urban areas, 2nd (8th grades in the USA) grade students have more leisure time than 1st, 3rd grade students. Comparing the other groups in the two regions, urban third-year students have the least amount of leisure time.

Urban area 1st grade students have 62.66 ± 31.177 hours, but rural area 1st grade students have 72.13 ± 29.675 hours per one month. Urban area 2nd grade students have 5.75 ±5.159 hours for volunteer but urban area 1st and 3rd grade student have 2.79 ± 4.111 and 2.83 ± 3.979 hours per one month for volunteer. Rural area 1st grade students have 7.20 ±6.572 hours, 2nd grade students have 4.95 ± 5.421, 3rd grade students have 4.36 ± 4.612 hours per one month for volunteer. (See Appendix B and *figure 4.3.3*)

Urban area 3rd students' leisure time for sports activities is 2.71 ± 3.092 hours and Individual sports is 3.29 ± 4.80 hours and Individual psychical activities are 6.27 ± 4.849 hours per one month. (See Appendix B and *figure 4.3.3*)



	1	2	3	4	5	6	7	8	9	10
Rural 1st	4.09	4.42	9.73	2.66	15.49	2.52	3.38	5.56	17.07	7.2
Rural 2nd	5.52	4.6	9.3	2.52	14.17	2.21	3.16	5.27	16.6	4.95
Rural 3rd	5.4	3.89	7.37	2.75	13.65	2.23	2.29	5.11	15.71	4.36
Urban 1st	3.75	4.47	7.11	2.54	12.58	2.14	4.19	6.07	17.02	2.79
Urban 2nd	4.48	5.52	7.51	2.56	12.73	2.73	3.7	6.1	14.97	5.75
Urban 3rd	2.71	3.29	6.24	2.15	13.22	1.85	2.47	4.41	18.53	2.83

Figure 4-3.3. Middle School Students' (Area, Grades) Leisure Time per 1 Month

Leisure Time of Students Classified by Gender

Male students spent more leisure time in physical activity types than female students. Male and female students have lesser leisure time in social activity type and group creative activity type. Even though the difference of leisure time between male and female students, female students spend more time in the creative leisure activity types.

Male students use 7.09 hours per one month to participate in team sports and female student attend in the team sports for 2.6 hours per one month. Female students participate in Individual social activities and individual freely activity types for 13.55 hours and 17.42 hours per one month. Male students' total leisure activity time per one

month is 67.81 hours and female students' total leisure activity time per one month is 62.6 hours. (*See figure 4-3.4*)

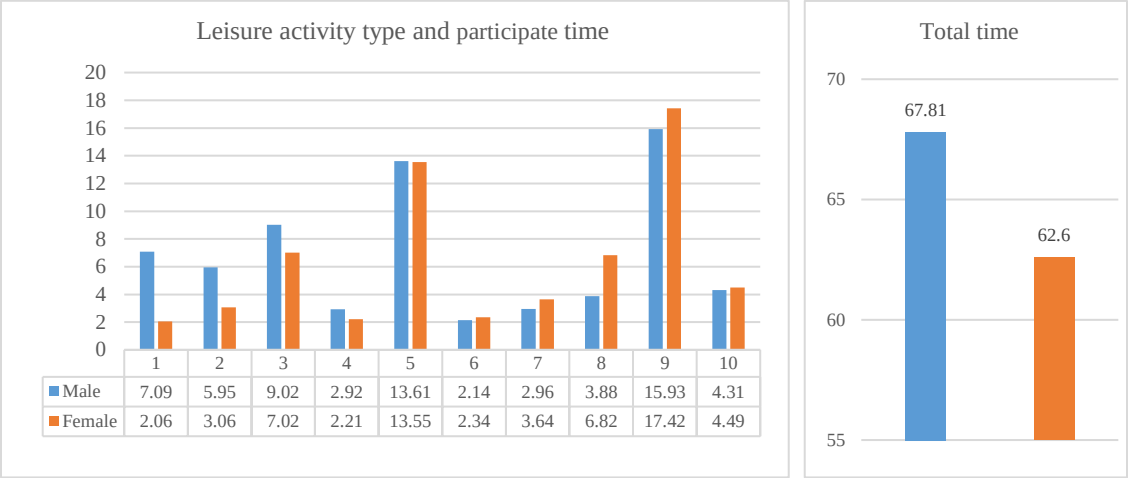


Figure 4-3.4. Middle School Students' (Gender) Leisure Time per 1 Month

Leisure Time of Students Classified by Area

Rural area students have more leisure time than urban area students. While rural area students spent more leisure time in physical activity types than urban area students, urban area students have more leisure time in the creative activity types than rural area students. Both area students have lesser leisure time in the social activity type and group creative activity type than other leisure activity types.

Rural area students have 67.92 hours per one month for their leisure activities and urban area students have 32.1 hours per one month for their leisure activities. Individual freely activities type is leisure type that both areas students mostly spent time for their leisure activities. Rural area student use 16.5 hours and urban area students use

16.98 hours per one month in Individual freely activities type. Rural area students use 2.62 hours per one month for social activities type and urban area students use 2.44 hours per one month. Rural area students use 5.44 hours per one month for their leisure time in the volunteer activities. But urban students use 3.41 hours per one month for their leisure time in the volunteer activities. (*See figure 4-3.5*)

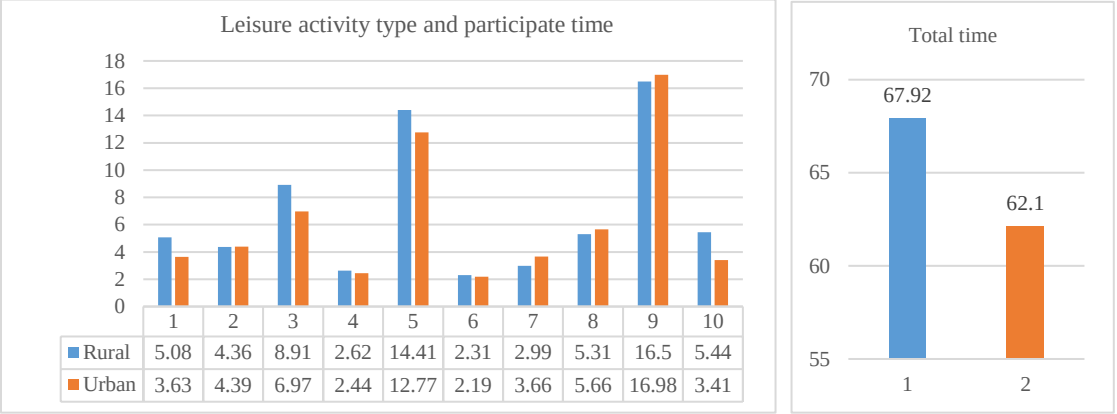


Figure 4-3.5 Middle School Students' (Area) Leisure Time per 1 Month

2) Psychological Well-being, Academic Self-efficacy, Self-esteem, and Perceived Stress

<u>Psychological Well-being, Academic Self-efficacy, Self-esteem, and Perceived Stress Score of Students</u>

This study surveyed to examine the score of Korean middle school students' Psychological Well-being, Academic Self-efficacy, Self-esteem, and Perceived Stress.

Relatively, urban area 1st grade male students' Psychological Well-being and Self-esteem scores are higher than other groups. Rural area 3rd grade male and female students' Psychological Well-being and Self-esteem score are lower than other groups. The urban area 1st grade male students' Perceived stress score is lowest, and rural area 3rd grade male and female students' Perceived stress are higher than other groups. Urban area 1st grade male students' Psychological Well-being score is 65.65 ± 6.667, Academic Self-efficacy is 39.97 ± 9.369, Self-esteem is 31.83 ± 5.358, and Perceived Stress is 14.32 ± 6.260. *(See figure 4-3.6 p.80*)

Rural area 3rd grade female students' Psychological Well-being score is 61.00 ± 5.438, Academic Self-efficacy is 34.42 ± 9.371, Self-esteem is 27.95 ± 4.139, and Perceived Stress is 20.53 ± 4.012. (*See figure 4-3.6 p.82*) Rural area 3rd grade male students' Psychological Well-being score is 62.05 ± 7.892, Academic Self-efficacy is 35.10 ± 10.009, Self-esteem is 28.45 ± 5.752, and Perceived Stress is 19.88 ± 5.756. (*See figure 4-3.6 p.80*)

Self-esteem score rating from:

25 - 35 are normal range

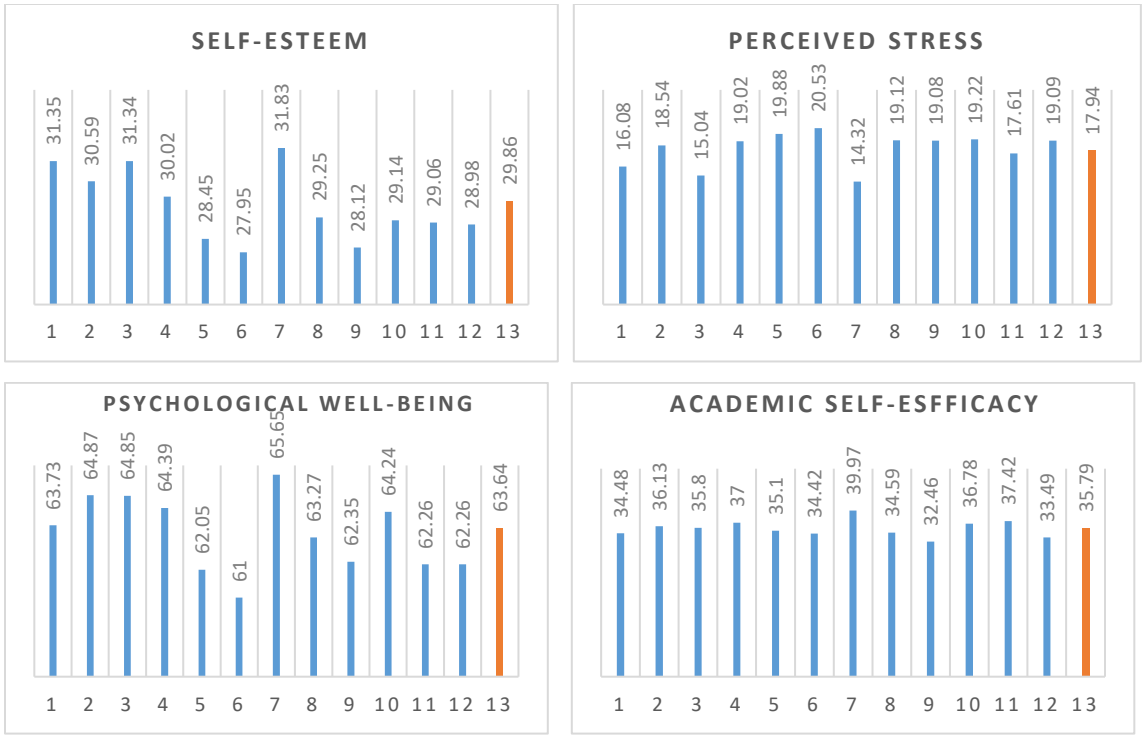
10 - 25 are low self-esteem.

Perceived stress scores ranging from:

0-13 would be considered low stress.

14-26 would be considered moderate stress.

27-40 would be considered high perceived stress.

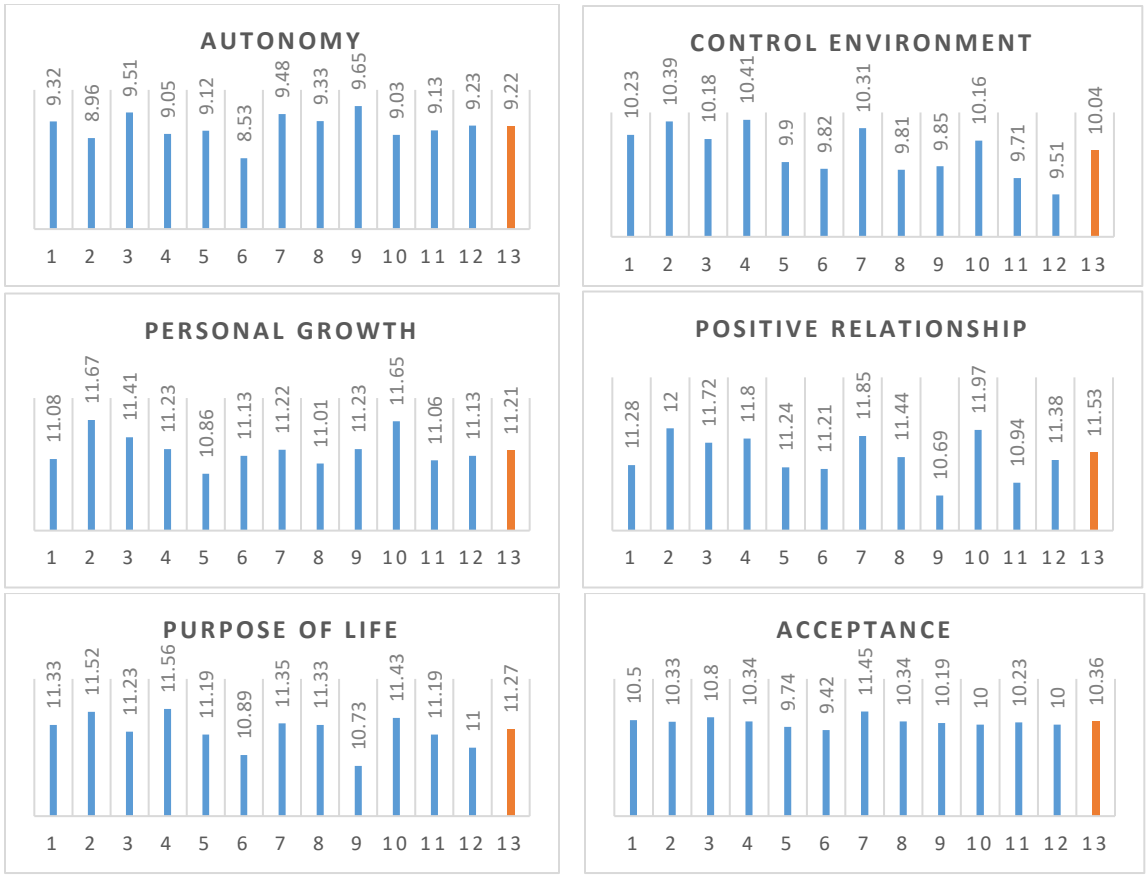


1: Rural 1st Male Students, 2: Rural 1st Female Students, 3: Rural 2nd Male Students, 4: Rural 2nd Female Students, 5: Rural 3rd Male Students, 6: Rural 3rd Female Students, 7: Urban 1st Male Students, 8: Urban 1st Female Students, 9: Urban 2nd Male Students, 10: Urban 2nd Female Students, 11: Urban 3rd Male Students, 12: Urban 3Rd Female Students, 13: Average,

Figure 4-3.6 Middle School Students' Score of Psychological Well-Being, Academic Self-Efficacy, Self-Esteem, and Perceived Stress.

Score of Psychological Well-Being's Six Dimensions

In the score of Psychological Well-being's sub factors (see *figure 4.3.7*), Rural area 3rd grade female students' Autonomy score is 8.53 ± 1.484, Urban area 3rd grade female students' Control Environment score is 9.51 ± 1.613, Rural area 3rd male students' Personal Growth score is 10.86 ± 2.226, Urban area 2nd male students' Positive relationship score is 10.69 ± 1.463. Urban area 2nd male students' Purpose of Life score is 10.73 ± 1.002. and Rural 3rd female students' Acceptance score is 9.42 ± 1.388. (*See figure 4-3.7*)



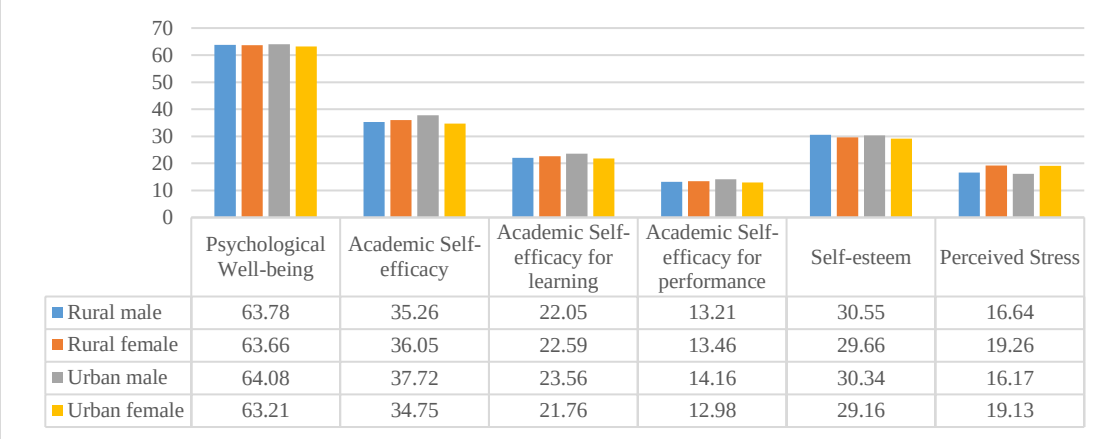
1: Rural 1st Male Students, 2: Rural 1st Female Students, 3: Rural 2nd Male Students, 4: Rural 2nd Female Students, 5: Rural 3rd Male Students, 6: Rural 3rd Female Students, 7: Urban 1st Male Students, 8: Urban 1st Female Students, 9: Urban 2nd Male Students, 10: Urban 2nd Female Students, 11: Urban 3rd Male Students, 12: Urban 3Rd Female Students, 13: Average,

Figure 4-3.7. Middle School Students' Score of Psychological Well-Being' Sub Factor

Score of Students Classified by Area and Gender

Urban area male students' Psychological Well-being score is 64.08 ± 6.520 and urban area female students' score is 63.21 ± 6.852. Rural area male students' Psychological Well-being score is 63.78 ± 7.313 and urban area female students' score is 63.66 ± 6.488. The sub factor of Psychological Well-being, Autonomy score of Rural area female is 8.88 ± 1.614 and Control Environment score of urban area female is 9.81 ± 1.704. (*See table figure 4-3.8*)

Urban area male students' Academic Self-efficacy score is 37.72 ± 10.096 and urban area female students' score is 34.75 ± 10.727. Rural area male students' Academic Self-efficacy score is 35.26 ± 10.350 and urban area female students' score is 36.05 ± 9.455. Rural area female students' Self-esteem score is 30.55 ± 5.102 and urban area female students' Self-esteem score is 29.16 ± 5.776. And rural area female students' Perceived Stress score is 19.26 ± 6.148 and urban area female students' Perceived Stress score is 19.13 ± 6.542. (*See table figure 4-3.8*)



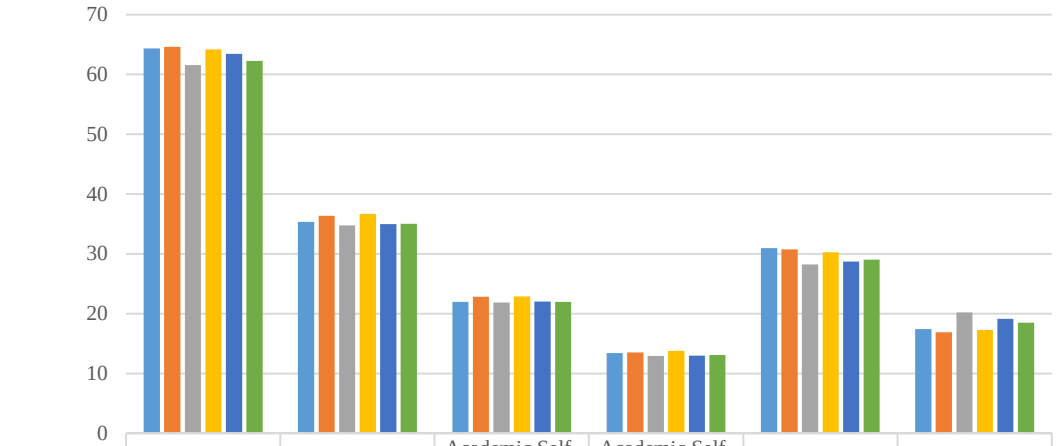
	Psychological Well-being	Academic Self-efficacy	Academic Self-efficacy for learning	Academic Self-efficacy for performance	Self-esteem	Perceived Stress
Rural male	63.78	35.26	22.05	13.21	30.55	16.64
Rural female	63.66	36.05	22.59	13.46	29.66	19.26
Urban male	64.08	37.72	23.56	14.16	30.34	16.17
Urban female	63.21	34.75	21.76	12.98	29.16	19.13

Figure 4-3.8. Score of Academic Self-Efficacy, Self-Esteem, and Perceived Stress by Areas and Gender

Score of Students Classified by Area and Grades

Rural area 3rd grade students' Psychological Well-being score is 61.55 ± 6.816 and urban area 3rd students' Psychological Well-being score is 62.26 ± 6.346. (*See figure 4-3.9*) Academic Self-efficacy score of rural area 2nd grade students is 36.36 ± 9.761 and urban area 1st grade students' score is 36.68 ± 10.252. Rural area 1st grade students and

2nd grade students' Self-esteem score is 30.94 ± 5.021 and 30.73 ± 5.063. Rural area 3rd grade students' Perceived Stress score is 20.19 ±4.984 and urban area 1st grade students' Perceived Stress score is 17.25 ± 6.796. (*See figure 4-3.9*)

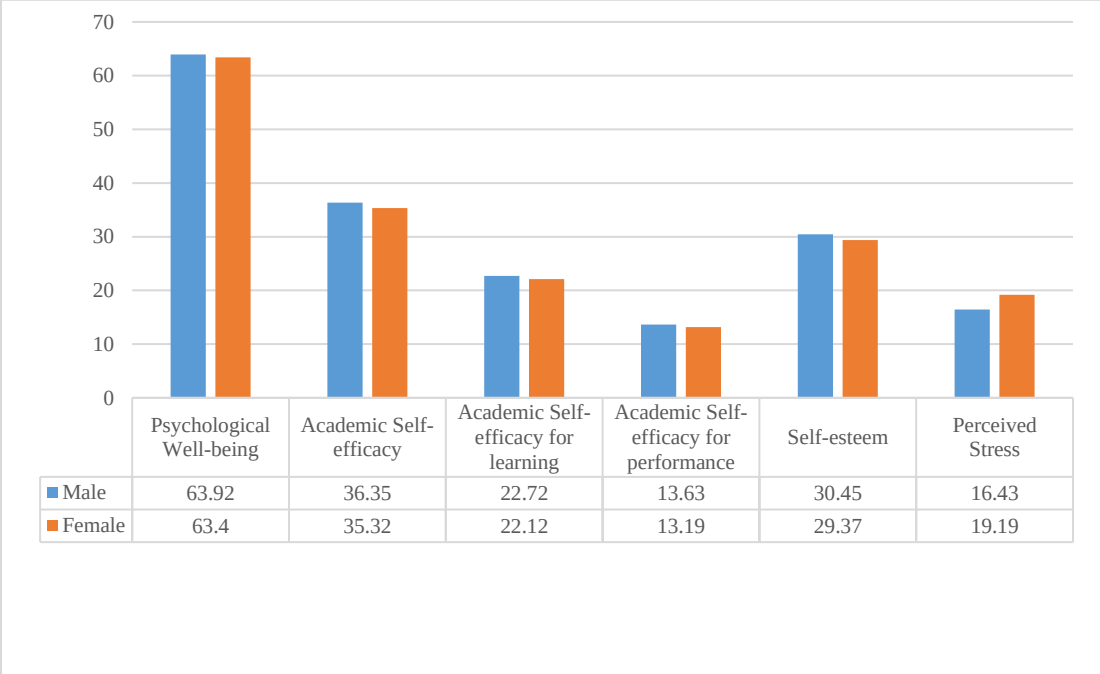


	Psychological Well-being	Academic Self-efficacy	Academic Self-efficacy for learning	Academic Self-efficacy for performance	Self-esteem	Perceived Stress
Rural 1st	64.34	35.36	21.95	13.41	30.94	17.4
Rural 2nd	64.64	36.36	22.83	13.53	30.73	16.88
Rural 3rd	61.55	34.78	21.85	12.92	28.21	20.19
Urban 1st	64.2	36.68	22.89	13.8	30.25	17.25
Urban 2nd	63.46	35	22.03	12.97	28.71	19.16
Urban 3rd	62.26	35.05	21.95	13.1	29.01	18.5

Figure 4-3.9. Score of Academic Self-Efficacy, Self-Esteem, and Perceived Stress by Areas and Grades

Score of Students Classified by Gender

Male students' Psychological Well-being score is 63.92 and Female students score of Psychological Well-being is 63.4 Academic Self-efficacy score of male students is 36.35 and female' score is 35.32. Self-esteem score of male students is 30.45 and female students' score is 29.37. Perceived Stress score of male students' score is 16.43 and female students is 19.19.(see *Figure 4.3.10)*

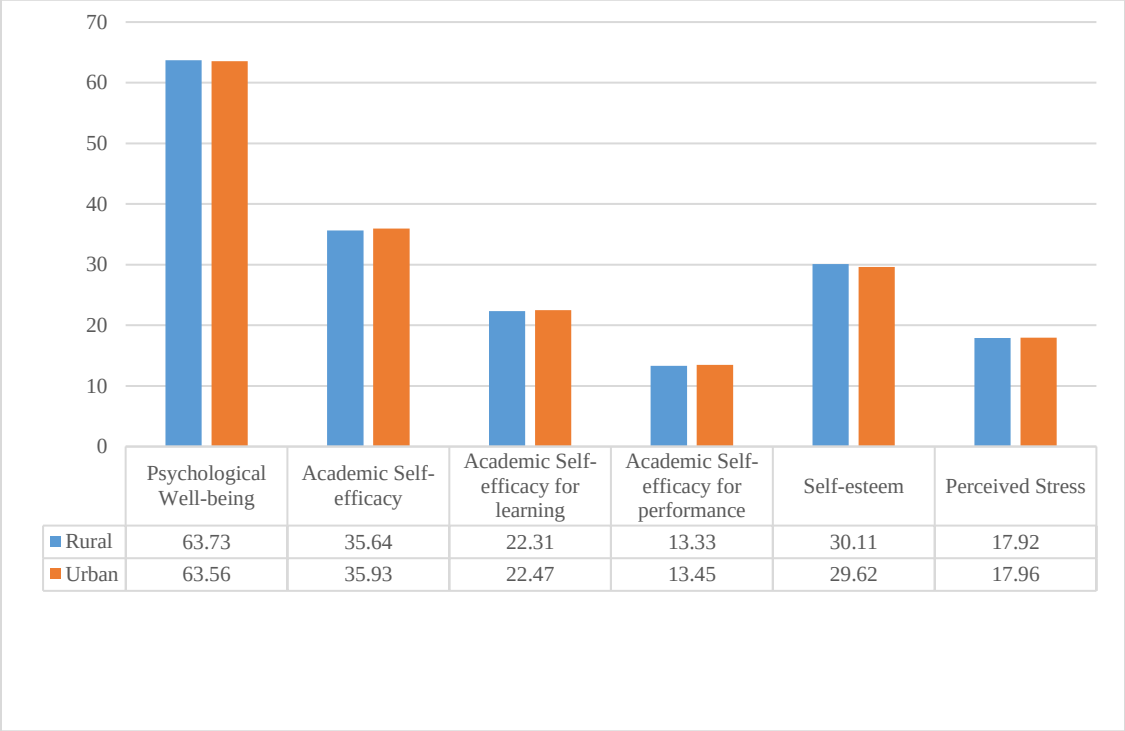


	Psychological Well-being	Academic Self-efficacy	Academic Self-efficacy for learning	Academic Self-efficacy for performance	Self-esteem	Perceived Stress
Male	63.92	36.35	22.72	13.63	30.45	16.43
Female	63.4	35.32	22.12	13.19	29.37	19.19

Figure 4-3.10. Score of Academic Self-Efficacy, Self-Esteem, and Perceived Stress by Gender

Score of Students Classified by Area

Rural area students' Psychological Well-being score is 63.73 and urbans area students' score is 63.56. And Academic Self-efficacy score of rural area students is 35.64 and urban area students' score is 35.93. Self-esteem score of rural area students is 30.11 and urban area students is 29.62 and Perceives stress score of rural area students is 17.92 and urban area students is 17.96 (see *Figure 4-3.11*).



	Psychological Well-being	Academic Self-efficacy	Academic Self-efficacy for learning	Academic Self-efficacy for performance	Self-esteem	Perceived Stress
Rural	63.73	35.64	22.31	13.33	30.11	17.92
Urban	63.56	35.93	22.47	13.45	29.62	17.96

Figure 4-3.11. Score of Academic Self-Efficacy, Self-Esteem, and Perceived Stress by Area

4. Independent T-test

This study conducted an “independent T-test” to find that there is an average difference between male and female, and between students’ rural and urban area. Independent T-test was applied in the 10 leisure activity types, Psychological Well-being, Academic Self-efficacy, Self-esteem, and Perceived stress.

1) Gender

Leisure Activity Type

There is statistical different between male and female student in the “Team Sports”, “Individual Sports”, “Individual Physical Activities”, “Social Activities”, “Individual Creative Activities”, “Individual Activities”, and “Total leisure time.”

Male students have more leisure time than female students in the “Team Sports”, “Individual Sports”, “Individual Physical Activities”, and “Social Activities.” While Female students spend leisure time in the “Individual Creative Activities”, “Individual Activities.” (See Table 4-4.1.1 p.90)

This study found that male students’ participation time in “Team Sport” leisure activity type (7.09±6.908 hours) was statistically significantly higher than female students’ participation time in team sports leisure activity type (2.06 ± 2.532 hours), $t(604)=12.310$, $p=0.000$.

Male students’ participation time in “Individual Sports” leisure activity type (5.95±6.824 hours) was statistically significantly higher than female students’ participation time in Individual Sports leisure activity type (3.06 ± 4.184 hours), $t(604)=6.391$, $p=0.000$.

“Individual Physical Activities” leisure activity types, male students’ participation time (9.02±6.616 hours) was statistically significantly higher than female students’ participation time in Individual Physical Activities leisure activity types (7.02 ± 5.824 hours), t(604)=3.961, p=0.000.

Male students’ participation time in “Social Activities” leisure activity type (2.92 ± 4.291 hours) was statistically significantly higher than female students’ participation time in “Social Activities” leisure activity type (2.21 ± 2.853 hours), t(604)=2.330, p=0.020.

“Individual Creative Activities” leisure activity types, male students’ participation time (3.88 ± 5.155 hours) was statistically significantly lower than female students’ participation time in “Individual Creative Activities” leisure activity types (6.82 ± 6.413 hours), t(604)=-6.143, p=0.000.

Male students’ participation time in “Individual Activities” leisure activity type (15.93 ± 7.944 hours) was statistically significantly lower than female students’ participation time in “Individual Activities” leisure activity type (17.42 ± 7.462 hours), t(604)=-2.364, p=0.018.

Male students’ participation total time (67.81 ± 29.454 hours) was statistically significantly higher than female students’ leisure participation total time (62.60 ± 26.844 hours), t(604)=-2.277, p=0.023.

Table 4-4.1.1.

Independent T-Test Analysis of Leisure Activities in Gender.

Leisure Activities	Area	N	Mean	Std. Deviation	t (p value)
1. Team Sports	Male	275	7.09	6.908	***12.310(0.000)***
	Female	331	2.06	2.532	
2. Individual Sports	Male	275	5.95	6.824	***6.391(0.000)***
	Female	331	3.06	4.184	
3. Individual Physical Activities	Male	275	9.02	6.616	***3.961(0.000)***
	Female	331	7.02	5.827	
4. Social Activities	Male	275	2.92	4.291	***2.330(0.020)***
	Female	331	2.21	2.853	
5. Individual Social Activities	Male	275	13.61	8.389	0.092(0.926)
	Female	331	13.55	7.733	
6. Group Creative Activities	Male	275	2.14	2.591	-0.820(0.412)
	Female	331	2.34	3.211	
7. Systematic Individual Creative Activities	Male	275	2.96	4.484	-1.851(0.065)
	Female	331	3.64	4.539	
8. Individual Creative Activities	Male	275	3.88	5.155	***-6.149(0.000)***
	Female	331	6.82	6.413	
9. Individual Activities	Male	275	15.93	7.944	***-2.364(0.018)***
	Female	331	17.42	7.462	
10. Volunteer	Male	275	4.31	5.364	-0.409(0.682)
	Female	331	4.49	5.057	
Total Time	Male	275	67.81	29.454	***2.277(0.023)***
	Female	331	62.60	26.844	

Psychological Well-Being

Male students have statistically significant higher score than female students in the Acceptance and Autonomy among the six dimensions of Psychological Well-being.

This study found that male students' score of Autonomy of Psychological Well-being factors (9.39±1.875) was statistically significantly higher than female students' score (9.09 ± 1.750), t (604) = 2.019 p=0.044 < 0.05. Male students' score of Acceptance of Psychological Well-being factors (10.63±1.949) was statistically significantly higher than female students' score (10.15 ± 1.972), t (604) = 2.983 p=0.003 < 0.05.

Table 4-4.1.2.

Independent T-Test Analysis Psychological Well-Being, Perceived Stress, Academic Self-Efficacy, Self-Esteem, and Perceived Stress in Gender.

	Gender	N	Mean	Std. Deviation	t(p)
Psychological Well-being	Male	275	63.92	6.962	0.920(0.358)
	Female	331	63.40	6.689	
1) Autonomy	Male	275	9.39	1.875	***2.019(0.044)***
	Female	331	9.09	1.750	
2) Control Environment	Male	275	10.09	1.572	0.694(0.488)
	Female	331	10.00	1.633	
3) Personal Growth	Male	275	11.17	2.073	-0.443 (0.658)
	Female	331	11.24	1.768	
4) Positive Relationship	Male	275	11.43	1.643	-1.400(0.162)
	Female	331	11.61	1.598	
5) Purpose of life	Male	275	11.21	1.648	***-0.731(0.0465)***
	Female	331	11.31	1.691	
6) Acceptance	Male	275	10.63	1.949	***2.983(0.0.003)***
	Female	331	10.15	1.972	

Academic Self-Efficacy

There was no significant statistical difference between male students and female student in the Academic Self-efficacy (p=0.216 > 0.05).

Table 4-4.1.3.

Independent T-Test Analysis Academic Self-Efficacy in Gender.

	Gender	N	Mean	Std. Deviation	t(p)
Academic Self Efficacy	Male	275	36.35	10.293	1.239(0.216)
	Female	331	35.32	10.195	
1) Academic Self Efficacy for Learning	Male	275	22.72	6.430	1.137(0.256)
	Female	331	22.12	6.418	
2) Academic Self Efficacy for Performance	Male	275	13.63	4.090	1.325(0.186)
	Female	331	13.19	4.044	

Self-Esteem

Male students' score of Self-esteem (30.45±5.260) was statistically significantly higher than female students' score (29.37 ± 5.532), t (604) = 2.446 p=0.015 < 0.05.

Table 4-4.1.4.

Independent T-Test Analysis. Self-Esteem in Gender

	Gender.	N	Mean	Std. Deviation	t(p)
Self-esteem	Male	275	30.45	5.260	***2.446(0.015)***
	Female	331	29.37	5.532	

Perceived Stress

Female students' score of Perceived Stress (19.19±6.363) was statistically significantly higher than male students' score (16.43 ± 6.265), t (604) = -5.343 p=0.000 < 0.05.

Table 4-4.1.5.

Independent T-Test Analysis. Perceived Stress in Gender.

	Gender.	N	Mean	Std. Deviation	t(p)
Perceived Stress.	Male	275	16.43	6.265	***-5.343(0.000)***
	Female	331	19.19	6.363	

2) Area

As a result of Independent T-test in the 10 types of leisure activity according to the Area, there was significant statistical difference in four out of ten leisure activity types. Students living in rural area spend more time following leisure activity than students living in urban area. These leisure activities include Team Sports (p=0.002 <0.05, Individual Physical Activities (p=0.000 <0.05), Individual Creative Activities (p=0.012 <0.05), and Volunteer (p=0.000 <0.05). Also, there was significant statistical difference in the Total time of rural children spend time in leisure activity overall. (p=0.011 <0.05). (See Table 4-4.2.1)

Table 4-4.2.1.

Rural and Urban Area Leisure Activity / Hours per Month Spent in Leisure Activity

Leisure Activities	Area	N	Mean	Std. Deviation	t (p value)
1. Team Sports	Rural	298	5.08	5.969	***3.187(0.002)***
	Urban	308	3.63	5.138	
2. Individual Sports	Rural	298	4.36	5.401	-0.066(0.947)
	Urban	308	4.39	6.020	
3. Individual Physical Activities	Rural	298	8.91	6.653	***3.847(0.000)***
	Urban	308	6.97	5.731	
4. Social Activities	Rural	298	2.62	3.443	0.603(0.547)
	Urban	308	2.44	3.734	
5. Individual Social Activities	Rural	298	14.41	7.892	***2.519(0.012)***
	Urban	308	12.77	8.094	
6. Group Creative Activities	Rural	298	2.31	2.785	0.489(0.625)
	Urban	308	2.19	3.095	
7. Systematic Individual Creative Activities	Rural	298	2.99	4.232	-1.819(0.069)
	Urban	308	3.66	4.772	
8. Individual Creative Activities	Rural	298	5.31	5.940	-0.699(0.485)
	Urban	308	5.66	6.164	
9. Individual Activities	Rural	298	16.50	7.656	-0.777(0.437)
	Urban	308	16.98	7.773	
10. Volunteer	Rural	298	5.44	5.683	***4.898(0.000)***
	Urban	308	3.41	4.461	
Total Time	Rural	298	67.92	26.854	***2.557(0.011)***
	Urban	308	62.10	29.116	

Psychological Well-Being

Of six dimensions Psychological Well-being when compared to geographic area there is no significant difference except for Control environment. Rural students' score of "Control Environment" of Psychological Well-being factors (10.18±1.544) was statistically significantly higher than Rural students' score (9.91 ± 1.562), t (604) = 2.118 p=0.034 < 0.05. (See Table 4-4.2.2)

Table 4-4.2.2.

Independent T-Test Analysis Psychological Well-Being in Geographic Area

	Area	N	Mean	Std. Deviation	t(p)
Psychological Well-being	Rural	298	22.31	6.278	0.300(0.764)
	Urban	308	22.47	6.573	
1) Autonomy	Rural	298	9.12	1.806	-1.318(0.188)
	Urban	308	9.32	1.816	
2) Control Environment	Rural	298	10.18	1.544	***2.118(0.034)***
	Urban	308	9.91	1.652	
3) Personal Growth	Rural	298	11.26	1.999	0.533(0.594)
	Urban	308	11.17	1.824	
4) Positive Relationship	Rural	298	11.59	1.682	0.910(0.363)
	Urban	308	11.47	1.557	
5) Purpose of life	Rural	298	11.31	1.661	0.527(0.598)
	Urban	308	11.23	1.683	
6) Acceptance	Rural	298	10.27	1.911	-1.180(0.238)
	Urban	308	10.46	2.033	

Academic Self-Efficacy

There was no significant statistical difference between Rural and Urban area in the Academic Self-efficacy (t (604) = -0.0337, p = 0.736 > 0.05), Academic Self-efficacy for Learning (t (604) = -0.310, p=0.757 > 0.05), and Academic Self-efficacy for Performance (t = (604) = -0.360, p=0.719>0.05). (See Table 4-4.2.3)

Table 4-4.2.3.

Independent T-Test Analysis Academic Self Efficacy in Area

	Area	N	Mean	Std. Deviation	t(p)
Academic Self Efficacy	Rural	298	35.64	9.916	-0.337(0.736)
	Urban	308	35.93	10.566	
1) Academic Self Efficacy for Learning	Rural	298	22.31	6.278	-0.310(0.757)
	Urban	308	22.47	6.573	
2) Academic Self Efficacy for Performance	Rural	298	13.33	3.905	-0.360(0.719)
	Urban	308	13.45	4.224	

Self-Esteem and Perceived Stress

There was no significant statistical difference between male Rural and Urban area in the Self-esteem (t(604)=1.114, p=.266)and Perceived Stress (t(604)=-0.079, p=.937 > 0.05). (See Table 4-4.2.4)

Table 4-4.2.4.

Independent T-Test Analysis Self-Esteem and Perceived Stress

	Area	N	Mean	Std. Deviation	t(p)
Self-esteem	Rural	298	30.11	5.164	1.114(0.266)
	Urban	308	29.62	5.678	
Perceived Stress.	Rural	298	17.92	6.325	-0.079(0.937)
	Urban	308	17.96	6.600	

5. One-way ANOVA

This research performed a one-way ANOVA to compare the average time of students' participation in each leisure type activity and to compare the score of students' Psychological Well-being, Academic Self-efficacy, Self-esteem, and Perceived Stress.

One-way ANOVA analysis was conducted with 12 groups that are classified students by the three factors, area, gender, and grades. The 12 groups are described as alphabet, from a to l.

And, for the pos hoc test, this research was used Scheffe which is preferred in the social science research area to analyze the result of One-way ANOVA.

1) Leisure Activity Types

There was a statistically significant difference between groups as determined by one-way ANOVA in the Team sports, (F (11,594) = 15.938, p = .0000), Individual Sports, (F (11,594) = 4.814, p = .0000) Individual Physical Activity (F (11,594) = 4.253, p = .0000), Systematic Individual Creative Activity (F (11,594) = 2.054 p = .022), Individual Creative Activity (F (11,594) = 4.530, p = .0000), Individual freely Activity (F (11,594) = 1.889, p = .038), Volunteer (F (11,594) = 5.745, p = .0000), and Total Leisure time. (F (11,594) = 1.902, p = .036). (See the Table 4.5.1) (See Table 4-5.1.0)

Table 4-5.1.0

Leisure Activity Types One-Way ANOVA Analysis

			Sum of Squares	df	Mean Square	F	Sig.
1.	Team Sports	Between Groups	4330.547	11	393.686	15.938	***.000***
2.	Individual Sports	Between Groups	1619.639	11	147.240	4.814	***.000***
3.	Individual Physical Activity	Between Groups	1737.598	11	157.963	4.253	***.000***
4.	Social Activity	Between Groups	120.496	11	10.954	.847	.593
5.	Individual social Activity	Between Groups	822.688	11	74.790	1.163	.310
6.	Group Creative Activity	Between Groups	54.010	11	4.910	.562	.860
7.	Systematic Individual Creative Activity	Between Groups	453.472	11	41.225	2.054	***.022***
8.	Individual Creative Activity	Between Groups	1715.309	11	155.937	4.530	***.000***
9.	Individual freely Activity	Between Groups	1216.610	11	110.601	1.889	***.038***
10.	Volunteer	Between Groups	1570.218	11	142.747	5.745	***.000***
	Total Time	Between Groups	16320.510	11	1483.683	1.902	***.036***

<u>Team Sports</u>

A Scheffe post hoc test revealed that there are significant differences between group a (Rural 1st Male, 6.88 hours) and b (Rural 1st Female, 2.20 hours) and between e (Rural 3rd Male, 8.40 hours) and b (Rural 1st Female, 2.20 hours), e (Rural 3rd Male, 8.40 hours) and h (Urban 1st Female students, 2.18 hours).

Table 4-5.1.1.

Team Sports One-Way ANOVA's Post Hoc Test

		Team Sports					
		N	Mean	Std. Deviation	F	Sig.	Scheffe
Area, Grades, and Gender	R,1st, M[a]	40	**6.88**	6.248	15.938	.000	b<a,
	R,1st, F[b]	46	**1.67**	1.910			b<e,
	R,2nd, M[c]	71	8.38	7.689			h<e
	R,2nd, F[d]	61	2.20	2.379			
	R,3rd, M[e]	42	**8.40**	6.145			
	R,3rd, F[f]	38	2.08	1.807			
	U,1st, M[g]	65	6.22	7.341			
	U,1st, F[h]	102	**2.18**	3.271			
	U,2nd, M[i]	26	7.42	7.767			
	U,2nd, F[j]	37	2.41	2.254			
	U,3rd, M[k]	31	4.23	3.694			
	U,3rd, F[l]	47	**1.70**	2.126			

R: Rural, U: Urban, M: Male, F: Female

Individual Sports

As a result of Scheffe post hoc test there is no significant difference between groups. But Group g (Urban 1st Male, 6.95 hours) and Group i (Urban 2nd Male 7.46 hours) have more participating in the Individual Sports type than group d (Rural 2nd Female, 2.80) group h (Urban 1st Female, 2.88 hours), and l (Urban 3rd Female, 2.85 hours).

Table 4-5.1. 2.

Individual Sports One-Way ANOVA's Post Hoc Test

		Individual Sports					
		N	Mean	Std. Deviation	F	Sig.	Scheffe
Area, Grades, and Gender	R,1st, M[a]	40	5.78	6.371	4.814	.000	n/a
	R,1st, F[b]	46	3.24	3.755			
	R,2nd, M[c]	71	6.14	6.914			
	R,2nd, F[d]	61	2.80	4.028			
	R,3rd, M[e]	42	4.76	5.065			
	R,3rd, F[f]	38	2.92	3.597			
	U,1st, M[g]	65	6.95	8.102			
	U,1st, F[h]	102	2.88	4.189			
	U,2nd, M[i]	26	7.46	7.517			
	U,2nd, F[j]	37	4.16	5.177			
	U,3rd, M[k]	31	3.97	5.338			
	U,3rd, F[l]	47	2.85	4.413			

R: Rural, U: Urban, M: Male, F: Female

Individual Physical Activity

A Scheffe post hoc test revealed that there is significant difference between group l (Urban 3rd female, 5.50 hours) and group a (Rural 1st male, 11.75 hours). Group a (11.75 ± 7.735) to participate the Individual Physical Activity of Leisure Activity Types was upper 6.197 than group l (5.55 ± 4.471, p = 0.024). Group h (Urban 1st female, 6.22 hours), and group e (Rural 3rd female, 6,60 hours) have lesser participating time in the Individual Physical Activity leisure type than other groups. (See. Table 4-5.1.3)

Table 4-5.1. 3.

Individual Physical Activity One-Way ANOVA's Post Hoc Test

		Individual Physical Activity					
		N	Mean	Std. Deviation	F	Sig.	Scheffe
Area, Grades, and Gender	R,1st, Ma	40	**11.75**	7.735	4.253	.000	l<a
	R,1st, Fb	46	7.98	6.372			
	R,2nd, Mc	71	10.42	6.907			
	R,2nd, Fd	61	8.00	5.927			
	R,3rd, Me	42	6.60	4.451			
	R,3rd, Ff	38	8.24	7.183			
	U,1st, Mg	65	8.51	6.736			
	U,1st, Fh	102	6.22	5.123			
	U,2nd, Mi	26	8.23	6.192			
	U,2nd, Fj	37	7.00	6.377			
	U,3rd, Mk	31	7.29	5.274			
	U,3rd, Fl	47	**5.55**	4.471			

R: Rural, U: Urban, M: Male, F: Female

Systematic Individual Creative Activity

The result of post hoc test, Scheffe test, of Systematic Individual Creative Activity showed that there is no significant difference between groups. (See. Table 4-5. 1. 4) Group j (Urban 2nd female, 4.84 hours) and group h (Urban 1st female, 4.46 hours) have more participating time in the Systematic Individual Creative Activity than group e (rural 3rd male, 1.90 hours). (See Table 4-5. 1. 4)

Table 4-5.1.4.

Systematic Individual Creative Activity One-Way ANOVA's Post Hoc Test

		Systematic Individual Creative Activity					
		N	Mean	Std. Deviation	F	Sig.	Scheffe
Area, Grades, and Gender	R,1st, M[a]	40	3.63	6.205	2.054	.022	n/a
	R,1st, F[b]	46	3.17	4.249			
	R,2nd, M[c]	71	3.25	4.208			
	R,2nd, F[d]	61	3.05	4.260			
	R,3rd, M[e]	42	1.90	2.293			
	R,3rd, F[f]	38	2.71	3.229			
	U,1st, M[g]	65	3.77	5.801			
	U,1st, F[h]	102	4.46	5.334			
	U,2nd, M[i]	26	2.08	1.671			
	U,2nd, F[j]	37	4.84	4.953			
	U,3rd, M[k]	31	1.87	2.306			
	U,3rd, F[l]	47	2.87	3.430			

R: Rural, U: Urban, M: Male, F: Female

Individual Creative Activity

A Scheffe post hoc test revealed that there are significant differences between groups between j (Urban 2nd female, 8.46 hours) and i (Urban 2nd male, 2.73 hours) (See Table 4-5. 1. 5)

Group b (Rural 1st female, 7.70 hours) and group h (Urban 1st female, 7.13 hours) have more participating time than group a (Rural 1st male, 3.10) and group g (Urban 1st male 4.42 hours).

Table 4-5. 1. 5.

Individual Creative Activity One-Way ANOVA's Post Hoc Test

		Individual Creative Activity					
		N	Mean	Std. Deviation	F	Sig.	Scheffe
Area, Grades, and Gender	R,1st, M[a]	40	3.10	4.803	4.530	.000	i<j
	R,1st, F[b]	46	7.70	6.739			
	R,2nd, M[c]	71	4.34	5.722			
	R,2nd, F[d]	61	6.36	6.421			
	R,3rd, M[e]	42	4.21	4.796			
	R,3rd, F[f]	38	6.11	5.603			
	U,1st, M[g]	65	4.42	5.720			
	U,1st, F[h]	102	7.13	6.054			
	U,2nd, M[i]	26	**2.73**	2.692			
	U,2nd, F[j]	37	**8.46**	7.430			
	U,3rd, M[k]	31	3.19	5.036			
	U,3rd, F[l]	47	5.21	6.440			

R: Rural, U: Urban, M: Male, F: Female

Individual Freely Activity

The result of post hoc test, Scheffe test, of Systematic Individual Creative Activity showed that there is no significant difference between groups. (See. Table 4-5. 1. 6). Group l (Urban 3nd female, 19.26 hours) and group b (Rural 1st female, 18.54 hours) have more participating time in the Individual freely Activity than other group (see Table 4-5. 1. 6)

Table 4-5. 1. 6.

Individual Freely Activity One-Way ANOVA's Post Hoc Test

		Individual freely Activity					
		N	Mean	Std. Deviation	F	Sig.	Scheffe
Area, Grades, and Gender	R,1st, M[a]	40	15.38	8.463	1.889	.038	n/a
	R,1st, F[b]	46	**18.54**	6.742			
	R,2nd, M[c]	71	15.61	7.745			
	R,2nd, F[d]	61	17.75	7.291			
	R,3rd, M[e]	42	15.50	7.491			
	R,3rd, F[f]	38	15.95	8.104			
	U,1st, M[g]	65	17.46	7.593			
	U,1st, F[h]	102	16.75	7.681			
	U,2nd, M[i]	26	**12.81**	9.139			
	U,2nd, F[j]	37	16.49	7.802			
	U,3rd, M[k]	31	17.42	7.566			
	U,3rd, F[l]	47	**19.26**	6.873			

R: Rural, U: Urban, M: Male, F: Female

Volunteer

A Scheffe post hoc test revealed that group a (Rural 1st male, 7.30 hours) to participate in the volunteer was statistically significantly upper 4.981 than group l (Urban 3rd female, 2.32 hours). (see Table 4-5. 1. 7) Also, group a (7.30 ± 7.522) was upper 4.685 hours than group g (Urban 1st male 2.62 hours), 4.398 than group h (Urban 3rd female, 2.32 ± 4.111, p = 0.023), (see Table 4-5. 1. 7)

Table 4-5. 1. 7.

Volunteer One-Way ANOVA's Post Hoc Test

		Volunteer					
		N	Mean	Std. Deviation	F	Sig.	Scheffe
Area, Grades, and Gender	R,1st, M[a]	40	**7.30**	7.522	5.745	.000	l<a
	R,1st, F[b]	46	7.11	5.705			
	R,2nd, M[c]	71	4.54	5.261			
	R,2nd, F[d]	61	5.44	5.605			
	R,3rd, M[e]	42	3.64	4.065			
	R,3rd, F[f]	38	5.16	5.086			
	U,1st, M[g]	65	2.62	4.137			
	U,1st, F[h]	102	2.90	4.111			
	U,2nd, M[i]	26	5.27	4.495			
	U,2nd, F[j]	37	6.08	5.614			
	U,3rd, M[k]	31	3.61	5.340			
	U,3rd, F[l]	47	**2.32**	2.687			

R: Rural, U: Urban, M: Male, F: Female

Total Leisure Time

The result of post hoc test, Scheffe test, of Total Leisure Time of students showed that there is no significant difference between groups. (See. Table 4-5. 1. 8).

But, Group a (Rural 1st male, 73.55 hours), and group c (Rural 2nd male, 71.48 hours) has more spending time than other area or grades students. Group l (Urban 3rd female, 53.43 hours) has the least time spending for leisure activity in the other groups. (See Table 4-5. 1. 8)

Table 4-5. 1. 8.

Total Leisure Activity Participating Time One-Way ANOVA's Post Hoc Test

		Total time					
		N	Mean	Std. Deviation	F	Sig.	Scheffe
Area, Grades, and Gender	R,1st, M[a]	40	**73.55**	33.618	1.902	.036	n/a
	R,1st, F[b]	46	70.89	26.087			
	R,2nd, M[c]	71	71.48	27.757			
	R,2nd, F[d]	61	64.61	22.546			
	R,3rd, M[e]	42	64.07	21.802			
	R,3rd, F[f]	38	61.32	28.494			
	U,1st, M[g]	65	67.35	33.623			
	U,1st, F[h]	102	59.68	29.293			
	U,2nd, M[i]	26	64.04	29.453			
	U,2nd, F[j]	37	67.43	26.509			
	U,3rd, M[k]	31	61.16	26.802			
	U,3rd, F[l]	47	**55.43**	24.248			

R: Rural, U: Urban, M: Male, F: Female

2) Psychological Well-being, Academic Self-efficacy, Self-esteem, and Perceived Stress.

There was a statistically significant difference between groups as determined by one-way ANOVA in the Psychological Well-being, (F (11,594) = 2.119, p = .0170), Academic Self-efficacy (F (11,594) = 1.933, p = .033), Self-esteem (F (11,594) = 2.993, p = .001), and Perceived Stress (F (11,594) = 5.633, p = .000). (see Table 4-5.2.0)

Table 4-5.2.0

Psychological, Academic Self-Efficacy, Self-Esteem, and Perceived Stress One Way ANOVA Analysis

		Sum of Squares	df	Mean Square	F	Sig.
Psychological Well-being	Between Groups	1060.439	11	96.404	2.119	***.017***
1) Autonomy	Between Groups	42.111	11	3.828	1.169	.305
2) Control environment	Between Groups	47.483	11	4.317	1.698	.070
3) Personal growth	Between Groups	31.101	11	2.827	.771	.669
4) Positive relationship	Between Groups	72.065	11	6.551	2.569	***.003***
5) Purpose of life	Between Groups	26.841	11	2.440	.872	.568
6) Acceptance	Between Groups	153.394	11	13.945	3.757	***.000***
Academic Self Efficacy	Between Groups	2193.556	11	199.414	1.933	***.033***
1) Academic Self Efficacy for Learning	Between Groups	833.848	11	75.804	1.865	***.041***
2) Academic Self Efficacy for Performance	Between Groups	333.599	11	30.327	1.862	***.042***
Self-esteem	Between Groups	937.643	11	85.240	2.993	***.001***
Perceived Stress.	Between Groups	2385.759	11	216.887	5.633	***.000***

Psychological Well-Being

A Scheffe post hoc test of One-way ANOVA in Psychological Well-being revealed that there is no significant statistical difference between each group. But the highest group is group g (Urban 1st grade female students: 65.65 ± 6.667) and lowest group is group f (Rural 3rd grade male student: 61.00 ± 5.438). (See Table 4-5.2.1)

Table 4-5.2.1.

Psychological Well-Being One-Way ANOVA's Post Hoc Test

		Psychological Well-being					
		N	Mean	Std. Deviation	F	Sig.	Scheffe
Area, Grades, and Gender	R,1st, M[a]	40	63.73	6.921	2.569	.003	n/a
	R,1st, F[b]	46	64.87	6.984			
	R,2nd, M[c]	71	64.85	7.072			
	R,2nd, F[d]	61	64.39	6.328			
	R,3rd, M[e]	42	62.05	7.892			
	R,3rd, F[f]	38	61.00	5.438			
	U,1st, M[g]	65	65.65	6.667			
	U,1st, F[h]	102	63.27	6.797			
	U,2nd, M[i]	26	62.35	5.946			
	U,2nd, F[j]	37	64.24	7.285			
	U,3rd, M[k]	31	62.26	5.983			
	U,3rd, F[l]	47	62.26	6.638			

R: Rural, U: Urban, M: Male, F: Female

Psychological Well-Being – Positive Relationship

The sub factor of Psychological Well-being, Positive Relationship's Scheffe post hoc test revealed that the highest group was group b (Rural 1st grade female 12.00 ± 1.594) and lowest group was group i (Urban 2nd grade male students: 10.69 ± 1.463). (See Table 4-5.2.2)

Table 4-5.2.2.

Positive Relationship One-Way ANOVA's Post Hoc Test

		Positive Relationship					
		N	Mean	Std. Deviation	F	Sig.	Scheffe
Area, Grades, and Gender	R,1st, M[a]	40	11.28	1.502	2.569	.003	n/a
	R,1st, F[b]	46	12.00	1.549			
	R,2nd, M[c]	71	11.72	1.774			
	R,2nd, F[d]	61	11.80	1.740			
	R,3rd, M[e]	42	11.24	1.750			
	R,3rd, F[f]	38	11.21	1.562			
	U,1st, M[g]	65	11.85	1.449			
	U,1st, F[h]	102	11.44	1.526			
	U,2nd, M[i]	26	10.69	1.463			
	U,2nd, F[j]	37	11.97	1.462			
	U,3rd, M[k]	31	10.94	1.590			
	U,3rd, F[l]	47	11.38	1.649			

R: Rural, U: Urban, M: Male, F: Female

Psychological Well-Being – Acceptance

There is statistically significant difference between group g (Urban 1st grades male, 11.45 ± 1.741) and group f (Rural 3rd grade female, 9.42 ± 1.388, p = 0.047) and group e (Rural 3rd male, 9.74 ± 1.926, p = 0.006). (See Table 4-5.2.3)

Table 4-5.2.3.

Acceptance One-Way ANOVA's Post Hoc Test

		Acceptance					
		N	Mean	Std. Deviation	F	Sig.	Scheffe
Area, Grades, and Gender	R,1st, M[a]	40	10.50	2.013	3.757	.000	e,f<g
	R,1st, F[b]	46	10.33	2.077			
	R,2nd, M[c]	71	10.80	1.770			
	R,2nd, F[d]	61	10.34	1.948			
	R,3rd, M[e]	42	**9.74**	1.926			
	R,3rd, F[f]	38	**9.42**	1.388			
	U,1st, M[g]	65	**11.45**	1.741			
	U,1st, F[h]	102	10.34	2.056			
	U,2nd, M[i]	26	10.19	1.980			
	U,2nd, F[j]	37	10.00	2.198			
	U,3rd, M[k]	31	10.23	2.077			
	U,3rd, F[l]	47	10.00	1.865			

R: Rural, U: Urban, M: Male, F: Female

Academic Self-Efficacy

In the Academic Self-efficacy, the group having highest score is group g (Urban 1st grade female students: 39.97 ± 9.369) and lowest group is group i (Urban 2nd grade male students: 32.46 ± 11.097). (See Table 4-5.2.4)

Table 4-5.2.4.

Academic Self-Efficacy One-Way ANOVA's Post Hoc Test

		Academic Self-efficacy					
		N	Mean	Std. Deviation	F	Sig.	Scheffe
Area, Grades, and Gender	R,1st, M[a]	40	34.48	11.133	1.933	.033	n/a
	R,1st, F[b]	46	36.13	9.806			
	R,2nd, M[c]	71	35.80	10.207			
	R,2nd, F[d]	61	37.00	9.256			
	R,3rd, M[e]	42	35.10	10.009			
	R,3rd, F[f]	38	34.42	9.371			
	U,1st, M[g]	65	**39.97**	9.369			
	U,1st, F[h]	102	34.59	10.282			
	U,2nd, M[i]	26	32.46	11.097			
	U,2nd, F[j]	37	36.78	12.461			
	U,3rd, M[k]	31	37.42	9.287			
	U,3rd, F[l]	47	33.49	10.204			

R: Rural, U: Urban, M: Male, F: Female

Self-Esteem

In the Self-esteem, the group having highest score is group g (Urban 1st grade female students: 31.83 ± 5.358) and lowest group is group f (Rural 3rd grade female students: 27.95 ± 4.139). (See Table 4-.5.2.5)

Table 4-5.2.5.

Self-Esteem One-Way ANOVA's Post Hoc Test

		Self-esteem					
		N	Mean	Std. Deviation	F	Sig.	Scheffe
Area, Grades, and Gender	R,1st, M[a]	40	31.35	4.475	2.993	.001	n/a
	R,1st, F[b]	46	30.59	5.528			
	R,2nd, M[c]	71	31.34	4.727			
	R,2nd, F[d]	61	30.02	5.380			
	R,3rd, M[e]	42	28.45	5.752			
	R,3rd, F[f]	38	27.95	4.139			
	U,1st, M[g]	65	**31.83**	5.358			
	U,1st, F[h]	102	29.25	5.453			
	U,2nd, M[i]	26	28.12	5.015			
	U,2nd, F[j]	37	29.14	7.447			
	U,3rd, M[k]	31	29.06	5.272			
	U,3rd, F[l]	47	28.98	5.045			

R: Rural, U: Urban, M: Male, F: Female

Perceived Stress

In the Perceived Stress there is statistically significant difference between group g (Urban 1st grade male students: 14.32 ± 6.260) and group e (Rural 3rd grade male student: 19.88 ± 5.756, p = 0.042), and group f (Rural 3rd grade female students: 20.53 ± 4.012, p = 0.014), and group h (Urban 1st grade female students: 19.12 ± 6.484 p = 0.015). (See Table 4.5.2.6)

Table 4-5.2.6

Perceived Stress One-Way ANOVA's Post Hoc Test

		Perceived Stress					
		N	Mean	Std. Deviation	F	Sig.	Scheffe
Area, Grades, and Gender	R,1st, M[a]	40	16.08	6.431	5.633	.000	g<f
	R,1st, F[b]	46	18.54	6.817			
	R,2nd, M[c]	71	15.04	5.758			
	R,2nd, F[d]	61	19.02	6.667			
	R,3rd, M[e]	42	19.88	5.756			
	R,3rd, F[f]	38	**20.53**	4.012			
	U,1st, M[g]	65	**14.32**	6.260			
	U,1st, F[h]	102	19.12	6.484			
	U,2nd, M[i]	26	19.08	5.803			
	U,2nd, F[j]	37	19.22	7.714			
	U,3rd, M[k]	31	17.61	5.649			
	U,3rd, F[l]	47	19.09	5.763			

R: Rural, U: Urban, M: Male, F: Female

6. Pearson Correlation Coefficient

A Pearson Correlation Coefficient analysis was conducted to determine the relationship between 10 Leisure activity types and Psychological Well-being, Academic Self-efficacy, Self-esteem, and Perceived Stress. Also, to find the relationship between each variable such as Psychological Well-being, Academic Self-efficacy, Self-esteem, and Perceived Stress, Pearson correlation coefficient analysis was conducted. The meaning of '-1', value of Pearson Correlation, is perfectly negative linear relationship

and ‘0’ is no relationship, and ‘+1’ is perfectly positive linear relationship. The strength can be assessed by these general guidelines:

Ten Types Leisure Activity

The result of Pearson correlation coefficient to determine the relationship between 10 types of leisure activity found that there was a strong positive correlation between Team Sports and Individual Sports *(r = .998, n = 606, p = .000).* Between Individual Creative Activities and Systematic Individual Creative Activates, there was statistically significant correlation *(r = .568, n = 606, p = .000).* (See Table 4-6.1 p.113)

Table 4-6.1

Pearson Correlations Coefficient Analysis of 10 Types of Leisure Activity

	TS	IS	IPA	SA	ISA	GCA	SICA	ICA	IFA	V	Total Time
1.Team Sports	1	**.998****	.287**	.225**	.230**	.165**	.008	-.073	.007	.105**	.443**
2. Individual Sports	*.998***	1	.236**	.247**	.058	.205**	.065	.025	-.031	.129**	.417**
3. Individual Physical Activity	.287**	.236**	1	.175**	*.316**	.119**	.153**	.173**	.197**	.165**	.599**
4. Social Activity	.225**	.247**	.175**	1	.092**	.308**	.187**	.147**	.019	.293**	.441**
5. Individual social Activity	.230**	.058	**.316****	.092**	1	.081**	.127**	.194**	.356**	.162**	*.623***
6.Group Creative Activity	.165**	.205**	.119**	**.308****	.081**	1	.326**	.261**	.021	.261**	.431**
7. Systematic Individual Creative Activity	.008	.065	.153**	.187**	.127**	**.326****	1	*.568**	.133**	.188**	.497**
8. Individual Creative Activity	-.073	.025	.173**	.147**	.194**	.261**	***.568****	1	.235**	.161**	.531**
9. Individual freely Activity	.007	-.031	.197**	.019	.356**	.021	.133**	.235**	1	.042	.499**
10. Volunteer	.105**	.129**	.165**	.293**	.162**	.261**	.188**	.161**	.042	1	.456**
Total Time	.443**	.417**	*.599**	.441**	*.623**	.431**	.497**	.531**	.499**	.456**	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Leisure Activity Types and Psychological Well-Being

Psychological Well-being has a weak positive correlation with

- Individual Sports (0.14)
- Individual Physical Activity (0.18)
- Individual Social Activity (*0.12*)
- Individual Creative Activity (0.152)

Individual Physical Activity had highest positive correlation with the sub factors of Psychological Well-being, Personal Growth ($r = .216$, $n = 606$, $p = .000$). Individual Creative Activity had positive correlation with Purpose of Life ($r = .208$, $n = 606$, $p = .000$). (See Table 4-6. 2)

Table 4-6.2

Pearson Correlations Coefficient Analysis of 10 Leisure Activity Types and Psychological Well-Being

	Psychological Well-being	Autonomy	Control Environment	Personal Growth	Positive Relationship	Purpose of Life	Acceptance
1.Team Sports	.076	.020	.045	.036	.088*	-.021	**.119****
2. Individual Sports	**.143****	.078	**.113****	**.137****	**.121****	.029	.076
3. Individual Physical Activity	**.184****	.065	**.148****	**.216****	**.151****	.048	.080*
4. Social Activity	.040	.041	.072	.006	-.020	.043	.016
5. Individual social Activity	**.121****	.012	.047	**.145****	**.215****	.015	.039
6.Group Creative Activity	.035	.064	.012	.022	-.014	.054	-.002
7. Systematic Individual Creative Activity	.057	.015	.050	.098*	-.004	.097*	-.031
8. Individual Creative Activity	**.152****	.039	**.095***	**.146****	**.107****	**.208****	.006
9. Individual freely Activity	.071	.023	.016	.125**	.058	.061	-.011
10. Volunteer	.026	-.022	.027	**.086***	.005	.041	-.037
Total Time	**.194****	.063	**.127****	**.225****	**.172****	**.112****	.057

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Leisure Activity Types and Academic Self-Efficacy, Self-Esteem, Perceived Stress

There were handful of leisure activity types that had a weak yet positively significant correlation with the cognitive and mental variable such as Psychological Well-being, Academic Self-efficacy. Perceived Stress had a negative correlation with three physical activity types and the Social Activity type variable. (See Table 4-6.3 p.116)

Academic Self-efficacy has a weak positive correlation with

- Individual Creative Activity (0.*203*)
- Individual Physical Activity (*0.198*)

- Individual Sports (*0.148*)
- Systematic Individual Creative Activity (*0.113*)

Self-esteem had weak positive correlation with

- Individual Sports (0.147)
- Individual Physical Activity (*0.145*)
- Team Sports (*0.135*)

Perceived Stress has negative correlation with

- Team Sports (- *0.135*)
- Individual Sports (*-0.125*)
- Individual Physical Activity (*-0.12*)

Table 4-6.3

Pearson Correlations Coefficient Analysis of Leisure Activity Types and Academic Self-Efficacy, Self-Esteem, and Perceived Stress.

	Academic Self Efficacy for Learning	Academic Self Efficacy for Performance	Total Academic Self Efficacy	Self-esteem	Perceived Stress.
1. Team Sports	.029	.020	.040	**.135****	**-.135****
2. Individual Sports	**.148****	**.154****	**.130****	**.147****	**-.125****
3. Individual Physical Activity	**.198****	**.193****	**.193****	**.145****	**-.120****
4. Social Activity	**.092***	**.084***	**.098***	**.110****	**-.102***
5. Individual social Activity	.071	.070	.068	**.098***	.014
6. Group Creative Activity	**.095***	**.082***	**.111****	**.098***	-.024
7. Systematic Individual Creative Activity	**.113****	**.103***	**.122****	.016	-.009
8. Individual Creative Activity	**.203****	**.211****	**.177****	.053	-.015
9. Individual freely Activity	**.092***	**.106****	.063	.001	.061
10. Volunteer	.018	.005	.038	.038	-.019
Total Time	**.212****	**.210****	**.203****	**.162****	**-.082***

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Psychological Well-Being and Academic Self-Efficacy, Self-Esteem, Perceived Stress

A Pearson correlation was conducted to determine the relationship between Psychological Well-being and six sub factors of Psychological Well-being.

Psychological Well-being had statistically significant strong correlation with the following sub factors:

- Personal Growth (*0.714*)
- Acceptance (*0.713*)
- Control environment (*0.701*)
- Positive Relationship (*0.65*)

Table 4-6.4

Pearson Correlations Coefficient Analysis of Psychological Well-Being

	Psychological Well-being	Autonomy	Control Environment	Personal Growth	Positive Relationship	Purpose of Life	Accept -ance
Psychological Well-being	1	.487**	.701**	.714**	.650**	.585**	.713**
Autonomy	.487**	1	.300**	.152**	.079	.088*	.232**
Control Environment	.701**	.300**	1	.449**	.373**	.267**	.365**
Personal Growth	.714**	.152**	.449**	1	.377**	.384**	.358**
Positive Relationship	.650**	.079	.373**	.377**	1	.274**	.451**
Purpose of life	.585**	.088*	.267**	.384**	.274**	1	.278**
Acceptance	.713**	.232**	.365**	.358**	.451**	.278**	1

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

A Pearson product-moment correlation was run to determine the relationship between Psychological Well-being and Academic Self-efficacy, Self-esteem, and Perceived Stress.

Psychological Well-being had statistically significant strong correlation with

- Academic Self-efficacy (*0.531*)
- Self-esteem (*.0545*)

Psychological Well-being had statistically significant negative correlation with

- Perceived Stress (*-0.433*)

Acceptance of Psychological Well-being's sub factor has highest negative correlation with Perceived Stress (*-0.527*), and highest positive correlation with Self-esteem (*0.618*). (See Table 4-6.5)

Table 4-6.5

Pearson Correlations Coefficient Analysis of Psychological Well-Being and Academic Self-Efficacy, Self-Esteem, and Perceived Stress.

	Academic Self-Efficacy	Academic Self Efficacy for Learning	Academic Self Efficacy for Performance	**Self-esteem**	**Perceived Stress.**
Psychological Well-being	**.531****	**.530****	**.500****	**.545****	**-.433****
Autonomy	.225**	.220**	.219**	.210**	-.213**
Control environment	.410**	.409**	.385**	.320**	-.225**
Personal growth	.439**	.442**	.407**	.282**	-.213**
Positive relationship	.318**	.315**	.305**	.450**	-.322**
Purpose of life	.302**	.311**	.269**	.197**	-.142**
Acceptance	.350**	.344**	.337**	**.618****	**-.527****

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Academic Self-Efficacy and Self-Esteem, Perceived Stress

Academic Self-efficacy had a statistically significant positive correlation with Self-esteem (*0.433*) and had negative correlation with Perceived Stress (*-0.371*). Perceived stress had statistically significant strong negative correlation with Self-esteem (*-0.67*). (See Table 4-6.6)

Table 4-6.6

Pearson Correlations Coefficient Analysis of Academic Self-Efficacy, Self-Esteem, and Perceived Stress

	Academic Self Efficacy	Academic Self Efficacy for Learning	Academic Self Efficacy for Performance	**Self-esteem**	Perceived Stress.
Academic Self Efficacy	1	.985**	.962**	**.433****	**-.371****
Academic Self Efficacy for Learning	.985**	1	.901**	.419**	-.353**
Academic Self Efficacy for Performance	.962**	.901**	1	.429**	-.376**
Self-esteem	.433**	.419**	.429**	1	-.670**
Perceived Stress.	-.371**	-.353**	-.376**	**-.670****	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

7. Regression

This study conducted a simple linear regression analysis and multiple linear regression. To examine the cause and effect between each leisure activity types and other variables, psychological well-being, Self-esteem, Academic Self-efficacy, and Perceived Stress, linear simple regression analysis was conducted. Multiple regression was conducted to examine the prediction of Academic Self-efficacy. Three predictors were simultaneously entered in the model: Psychological well-being, Self-esteem, and Perceived Stress.

1) Simple Linear Regression

A Simple linear regression analysis was conducted to examine the cause and effect between each Leisure Activity Type and Psychological well-being, Academic Self-efficacy, Self-esteem, and Perceived Stress.

Simple linear regression formula is:

$$Y = B_0 + B_1X + e$$

Y: the predicted value of the dependent variable

B_0: the intercept, the predicted value of y when the X is 0.

B_1: the regression coefficient

X: the independent variable (each leisure type influencing Y: dependent variable).

e: the error of the estimate, or how much variation there is in our estimate of the regression coefficient.

Team Sports

As a result of a simple linear regression analysis (See Table 4-7.1.1), Team Sports had minimal association with

- Positive Relation (0.8%)
- Acceptance (1.4%)
- Self-esteem (1.8%)
- Perceived Stress (1.8%)

Table 4-7.1.1

Team Sports of Leisure Activity Types and Other Variables Regression Analysis

Dependent Variable	Model Summary R Square	ANOVA	
		F	*p*
Psychological Well-being	0.006	3.549	0.060
Autonomy	0.000	0.241	0.624
Control Environment	0.002	1.241	0.266
Personal Growth	0.001	0.794	0.373
Positive Relationship	0.008	4.679	***0.031***
Purpose of Life	0.000	0.257	0.612
Acceptance	0.014	8.687	***0.003***
Academic Self-efficacy	0.001	0.493	0.483
ASE for Learning	0.000	0.252	0.616
ASE for Performance	0.000	0.953	0.329
Self-esteem	0.018	11.235	***0.001***
Perceived Stress	0.018	11.278	***0.001***

Dependent Variable(Y)	Independent Variable (X)	Unstandardized Coefficients		Standardized Coefficient Beta		
		B	Std. Error		t	Sig.(p)
Positive Relationship	(Constant)	11.416	.083		137.526	.000
	Team Sports	**.025**	.012	.088	2.163	.031
Acceptance	(Constant)	10.182	.101		100.955	.000
	Team Sports	**.042**	.014	.119	2.947	.003
Self-esteem	(Constant)	29.296	.277		105.782	.000
	Team Sports	**.131**	.039	.135	3.352	.001
Perceived Stress	(Constant)	18.615	.329		56.518	.000
	Team Sports	**-.156**	.046	-.135	-3.358	.001

Individual Sports

As a result of a simple linear regression analysis (See Table 4-7.1.2), Individual Sports significantly predicted

- Academic Self-efficacy (2.2%)
- Academic Self-efficacy for Learning (2.4%)
- Academic Self-efficacy for Performance (1.7%)
- Psychological Well-being (2.1%)
- Self-esteem (2.2%)
- Perceived Stress (1.6%)

Table 4-7.1.2

Individual Sports of Leisure Activity Types and Other Variables Regression Analysis

Dependent Variable	Model Summary R Square	ANOVA	
		F	*p*
Psychological Well-being	0.021	12.698	***0.000***
Autonomy	0.006	3.694	***0.055***
Control Environment	0.013	7.744	***0.006***
Personal Growth	0.019	11.506	***0.001***
Positive Relationship	0.015	9.040	***0.003***
Academic Self-efficacy	0.022	13.531	***0.000***
ASE for Learning	0.024	14.591	**0.000**
ASE for Performance	0.017	10.417	**0.001**
Self-esteem	0.022	13.372	***0.000***
Perceived Stress	0.016	9.562	***0.002***

Dependent Variable (Y)	Independent Variable(X)	Unstandardized Coefficients		Standardized Coefficient Beta	t	Sig.(p)
		B	Std. Error			
Psychological Well-being	(Constant)	62.890	.345		182.223	.000
	Individual Sports	**.171**	.048	.143	3.563	.000
Academic Self Efficacy	(Constant)	34.628	.519		66.776	.000
	Individual Sports	**.265**	.072	.148	3.678	.000
Academic Self Efficacy for Learning	(Constant)	21.640	.325		66.594	.000
	Individual Sports	.173	.045	.154	3.820	.000
Academic Self Efficacy for Performance	(Constant)	12.988	.206		62.914	.000
	Individual Sports	.093	.029	.130	3.227	.001
Self-esteem	(Constant)	29.254	.275		106.360	.000
	Individual Sports	**.140**	.038	.147	3.657	.000
Perceived Stress	(Constant)	18.554	.328		56.544	.000
	Individual Sports	**-.141**	.046	-.125	-3.092	.002

Individual Physical Activity

Individual Physical Activity predicted (See Table 4-7.1.3 p.124)

- Academic Self-efficacy (3.9%)
- Academic Self-efficacy for Learning (3.7%)
- Academic Self-efficacy for Performance (3.7%)
- Psychological Well-being (3.4%)
- Self-esteem (2.1%)
- Perceived Stress (1.4%)

The Individual Physical Activities leisure type was positively associated with Psychological Well-being ($\beta = .200$, $p = .000 < .05$), Academic Self-efficacy ($\beta = .323$, $p = .000 < .05$), and Self-esteem ($\beta = .125$, $p = .000 < .05$) but Individual Sports leisure type had negative association with Perceived Stress.

Table 4-7.1.3

Individual Physical Activity of Leisure Activity Types and Other Variables Regression Analysis

Dependent Variable	Model Summary R Square	ANOVA	
		F	*p*
Psychological Well-being	0.034	21.088	*0.000*
Autonomy	0.004	2.577	0.109
Control Environment	0.022	13.610	*0.000*
Personal Growth	0.047	29.459	*0.000*
Positive Relationship	0.023	14.100	*0.000*
Purpose of Life	0.002	1.377	0.241
Acceptance	0.006	3.922	0.048
Academic Self-efficacy	0.039	24.578	*0.000*
ASE for Learning	0.037	23.452	0.000
ASE for Performance	0.037	23.273	0.000
Self-esteem	0.021	12.882	*0.000*
Perceived Stress	0.014	8.873	*0.003*

Dependent Variable	Independent Variable	Unstandardized Coefficients		Standardized Coefficient Beta	t	Sig.(p)
		B	Std. Error			
Psychological Well-being	(Constant)	62.056	.439		141.377	.000
	Individual Physical Activity	**.200**	.043	.184	4.592	.000
Control Environment	(Constant)	9.740	.104		93.646	.000
	Individual Physical Activity	.038	.010	.148	3.689	.000
Personal Growth	(Constant)	10.692	.122		87.421	.000
	Individual Physical Activity	.066	.012	.216	5.428	.000
Positive Relationship	(Constant)	11.217	.105		106.896	.000
	Individual Physical Activity	.039	.010	.151	3.755	.000
Acceptance	(Constant)	10.164	.129		78.801	.000
	Individual Physical Activity	.025	.013	.080	1.980	.048
Academic Self Efficacy	(Constant)	33.228	.658		50.487	.000
	Individual Physical Activity	**.323**	.065	.198	4.958	.000
Academic Self Efficacy for Learning	(Constant)	20.825	.413		50.406	.000
	Individual Physical Activity	.198	.041	.193	4.843	.000
Academic Self Efficacy for Performance	(Constant)	12.403	.262		47.409	.000
	Individual Physical Activity	.125	.026	.193	4.824	.000
Self-esteem	(Constant)	28.873	.352		81.951	.000
	Individual Physical Activity	**.125**	.035	.145	3.589	.000
Perceived Stress	(Constant)	18.920	.420		45.005	.000
	Individual Physical Activity	**-.124**	.042	-.120	-2.979	.000

Social Activity

As a result of a simple linear regression analysis (See Table 4-7.1.4), Social Activity significantly predicted

- Self-esteem (1.2%)
- Perceived Stress (1.0%)
- Academic Self-efficacy (0.8%)
- Academic Self-efficacy for Learning (0.7%)
- Academic Self-efficacy for Performance (1.0%)

Social Activity had negative regression with Perceived Stress ($\beta = -.184$, $p = .000 < .05$)

Table 4-7.1.4

Social Activities of Leisure Activity Types and Other Variables Regression Analysis

Dependent Variable	Model Summary R Square	ANOVA	
		F	*p*
Psychological Well-being	0.002	0.967	0.326
Autonomy	0.002	1.027	0.311
Control Environment	0.025	3.139	0.077
Personal Growth	0.000	0.025	0.876
Positive Relationship	0.000	0.249	0.618
Purpose of Life	0.002	1.094	0.296
Acceptance	0.000	0.159	0.690
Academic Self-efficacy	0.008	5.149	*0.024*
ASE for Learning	0.007	4.316	0.038
ASE for Performance	0.010	5.916	0.015
Self-esteem	0.012	7.532	*0.007*
Perceived Stress	0.010	6.366	*0.012*

Dependent Variable	Independent Variable	Unstandardized Coefficients		Standardized Coefficient Beta	t	Sig.(p)
		B	Std. Error			
Academic Self Efficacy	(Constant)	35.123	.507		69.209	.000
	Social Activities	**.262**	.116	.092	2.269	.024
Academic Self Efficacy for Learning	(Constant)	22.013	.319		69.113	.000
	Social Activities	.151	.073	.084	2.078	.038
Academic Self Efficacy for Performance	(Constant)	13.110	.201		65.099	.000
	Social Activities	.112	.046	.098	2.432	.015
Self-esteem	(Constant)	29.445	.269		109.604	.000
	Social Activities	.166	.061	.110	2.711	.007
Perceived Stress	(Constant)	18.402	.320		57.549	.000
	Social Activities	**-.184**	.073	-.102	-2.523	.012

Individual Social Activities

As a result of a simple linear regression analysis (See Table 4-7.1.5), Individual Social Activity significantly predicted

- Psychological Well-being (1.5%)
- Self-esteem (1.0%)
- Personal Growth (2.1%)
- Positive Relationship (4.6%)

Table 4-7.1.5

Individual Social Activities of Leisure Activity Types and Other Variables Regression Analysis

Dependent Variable	Model Summary R Square	ANOVA	
		F	*p*
Psychological Well-being	0.015	8.974	0.003
Autonomy	0.000	0.081	0.766
Control Environment	0.002	1.345	0.247
Personal Growth	0.021	12.996	0.000
Positive Relationship	0.046	29.234	0.000
Purpose of Life	0.000	0.139	0.719
Acceptance	0.002	0.941	0.332
Academic Self-efficacy	0.005	3.048	0.081
ASE for Learning	0.005	2.985	0.085
ASE for Performance	0.005	2.779	0.096
Self-esteem	0.010	5.820	*0.016*
Perceived Stress	0.000	0.117	0.732

Dependent Variable	Independent Variable	Unstandardized Coefficients		Standardized Coefficient Beta		
		B	Std. Error		t	Sig.(p)
Psychological Well-being	(Constant)	62.243	.540		115.173	.000
	Individua Social Activities	.103	.034	.121	2.996	.003
Personal Growth	(Constant)	10.744	.151		71.106	.000
	Individua Social Activities	.035	.010	.145	3.605	.000
Positive Relationship	(Constant)	10.938	.126		86.532	.000
	Individua Social Activities	.043	.008	.215	5.407	.000
Self-esteem	(Constant)	28.967	.432		67.048	.000
	Individua Social Activities	.066	.027	.098	2.412	.016

Group Creative Activities

As a result of a simple linear regression analysis (see Table 4-7.1.6), Group Creative Activities significantly predicted

- Academic Self-efficacy for Performance (1.2%)
- Academic Self-efficacy (0.9%)

- Academic Self-efficacy for Learning (0.7%)
- Self-esteem (1.0%)

Also, Group Creative Activities type has an appropriate regression analysis with sub factor of Academic Self-efficacy, Academic Self-efficacy for learning *(p = .044 < .05)* and Academic Self-efficacy for performance *(p = .006 < .05).* (See Table 4-7.1.6)

Table 4-7.1.6

Group Creative Activities of Leisure Types and Other Variables Regression Analysis

Dependent Variable	Model Summary R Square	ANOVA	
		F	*p*
Psychological Well-being	0.001	0.759	0.384
Autonomy	0.004	2.464	0.117
Personal Growth	0.000	0.288	0.592
Positive Relationship	0.000	0.113	0.737
Purpose of Life	0.003	1.792	0.181
Academic Self-efficacy	0.009	5.545	*0.019*
ASE for Learning	0.007	4.077	*0.044*
ASE for Performance	0.012	7.517	*0.006*
Self-esteem	0.010	5.816	*0.016*
Perceived Stress	0.001	0.354	0.552

Dependent Variable	Independent Variable	Unstandardized Coefficients		Standardized Coefficient Beta	t	Sig.(p)
		B	Std. Error			
Academic Self Efficacy	(Constant)	35.042	.522		67.189	.000
	Group Creative Activities	**.332**	.141	.095	2.355	.019
Academic Self Efficacy for Learning	(Constant)	21.993	.327		67.156	.000
	Group Creative Activities	.179	.088	.082	2.019	.044
Academic Self Efficacy for Performance	(Constant)	13.049	.207		63.109	.000
	Group Creative Activities	.153	.056	.111	2.742	.006
Self-esteem	(Constant)	29.460	.277		106.537	.000
	Group Creative Activities	**.180**	.075	.098	2.412	.016

Systematic Individual Creative Activities

As a result of a simple linear regression analysis (See Table 4-7.1.7), Systematic Individual Creative Activities significantly predicted

- Academic Self-efficacy (1.3%)
- Academic Self-efficacy for Learning (1.1%)
- Academic Self-efficacy for Performance (1.5%)

Table 4-7.1.7

Systematic Individual Creative Activities of Leisure Activity Types and Other Variables Regression Analysis

Dependent Variable	Model Summary R Square	ANOVA	
		F	*p*
Psychological Well-being	0.003	1.975	0.160
Autonomy	0.000	1.137	0.711
Control Environment	0.003	1.531	0.216
Personal Growth	0.010	5.860	*0.016*
Positive Relationship	0.000	0.010	0.932
Purpose of Life	0.009	5.735	*0.017*
Acceptance	0.001	0.596	0.441
Academic Self-efficacy	0.013	7.781	*0.005*
ASE for Learning	0.011	6.431	*0.011*
ASE for Performance	0.015	9.110	*0.003*
Self-esteem	0.000	5.816	*0.691*
Perceived Stress	0.000	0.054	0.817

Dependent Variable	Independent Variable	Unstandardized Coefficients		Standardized Coefficient Beta	t	Sig.(p)
		B	Std. Error			
Personal Growth	(Constant)	11.075	.096		115.332	.000
	Systematic Individual Creative Activities	.041	.017	.098	2.421	.016
Purpose of Life	(Constant)	11.150	.084		132.783	.000
	Systematic Individual Creative Activities	.036	.015	.097	2.395	.017
Academic Self Efficacy	(Constant)	34.937	.514		67.980	.000
	Systematic Individual Creative Activities	**.255**	.092	.113	2.789	.005
Academic Self Efficacy for Performance	(Constant)	13.028	.204		63.908	.000
	Systematic Individual Creative Activities	.110	.036	.122	3.018	.003
Academic Self Efficacy for Learning	(Constant)	21.909	.323		67.897	.000
	Systematic Individual Creative Activities	.146	.057	.103	2.536	.011

Individual Creative Activities

As a result of a simple linear regression analysis (See Table 4-7.1.8), Individual Creative Activities significantly predicted

- Purpose of Life (4.3%)
- Academic Self-efficacy (4.1%)
- Academic Self-efficacy for Learning (4.5%)
- Academic Self-efficacy for Performance (3.1%)

Table 4-7.1.8

Individual Creative Activities of Leisure Activity Types and Other Variables Regression Analysis

Dependent Variable	Model Summary R Square	ANOVA	
		F	*p*
Psychological Well-being	0.023	14.240	0.000
Control Environment	0.009	5.473	0.020
Personal Growth	0.021	13.170	*0.000*
Positive Relationship	0.011	0.010	0.009
Purpose of Life	0.043	27.315	*0.000*
Academic Self-efficacy	0.041	25.962	*0.000*
ASE for Learning	0.045	28.261	*0.000*
ASE for Performance	0.031	19.608	*0.000*

Dependent Variable	Independent Variable	Unstandardized Coefficients		Standardized Coefficient Beta	t	Sig.(p)
		B	Std. Error			
Psychological Well-being	(Constant)	62.700	.370		169.608	.000
	Individual Creative Activities	.171	.045	.152	3.774	.000
Control environment	(Constant)	9.903	.088		112.927	.000
	Individual Creative Activities	.025	.011	.095	2.339	.020
Personal growth	(Constant)	10.960	.104		105.602	.000
	Individual Creative Activities	.046	.013	.146	3.629	.000
Positive Relationship	(Constant)	11.370	.088		128.610	.000
	Individual Creative Activities	.029	.011	.107	2.637	.009
Purpose of Life	(Constant)	10.954	.090		122.088	.000
	Individual Creative Activities	.057	.011	.208	5.226	.000
Academic Self Efficacy	(Constant)	33.902	.551		61.568	.000
	Individual Creative Activities	**.344**	.067	.203	5.095	.000
Academic Self Efficacy for Learning	(Constant)	21.163	.345		61.392	.000
	Individual Creative Activities	.224	.042	.211	5.316	.000
Academic Self Efficacy for Performance	(Constant)	12.739	.220		57.966	.000
	Individual Creative Activities	.119	.027	.177	4.428	.000

Individual Freely Activities

As a result of a simple linear regression analysis (See Table 4-7.1.9), Individual Freely Activities significantly predicted

- Personal Growth (1.6%)
- Academic Self-efficacy for Learning (1.1%)
- Academic Self-efficacy (0.8%)

Table 4-7.1.9

Individual Freely Activities of Leisure Activity Types and Other Variables Regression Analysis

Dependent Variable	Model Summary R Square	ANOVA	
		F	*p*
Psychological Well-being	0.005	3.023	0.083
Autonomy	0.001	0.323	0.570
Control Environment	0.000	0.148	0.700
Personal Growth	0.016	9.522	***0.002***
Positive Relationship	0.003	2.069	0.151
Purpose of Life	0.004	2.266	0.133
Acceptance	0.000	0.069	0.793
Academic Self-efficacy	0.008	5.102	***0.024***
ASE for Learning	0.011	6.891	***0.009***
ASE for Performance	0.004	2.387	*0.123*
Self-esteem	0.000	0.000	*0.990*
Perceived Stress	0.004	2.219	0.137

Dependent Variable	Independent Variable	Unstandardized Coefficients		Standardized Coefficient Beta	t	Sig.(p)
		B	Std. Error			
Academic Self-efficacy	(Constant)	33.752	.992		34.027	.000
	Individual Creative Activities	.122	.054	.092	2.259	.024
Academic Self Efficacy for Learning	(Constant)	20.913	.621		33.666	.000
	Individual Creative Activities	.088	.034	.106	2.625	.009
Personal growth	(Constant)	10.696	.184		58.011	.000
	Individual Creative Activities	.031	.010	.125	3.086	.002

Leisure Activity Types – Volunteer

Volunteer has an appropriate regression analysis with only one sub factors of Psychological Well-being, Personal Growth. ($\beta = .032$, $p = .033 < .05$). (See Table 4-7.1.10)

Table 4-7.1.10

Volunteer of Leisure Activity Types and Other Variables Regression Analysis

Dependent Variable	Model Summary R Square	ANOVA	
		F	*p*
Psychological Well-being	0.001	0.397	0.539
Autonomy	0.000	0.287	0.593
Control Environment	0.001	0.451	0.502
Personal Growth	0.007	4.551	***0.033***
Positive Relationship	0.000	0.017	0.896
Purpose of Life	0.002	1.038	0.309
Acceptance	0.001	0.824	0.364
Academic Self-efficacy	0.000	0.194	0.659
ASE for Learning	0.000	0.014	0.905
ASE for Performance	0.001	0.853	0.356
Self-esteem	0.000	0.000	0.990
Perceived Stress	0.000	0.229	0.632

Dependent Variable	Independent Variable	Unstandardized Coefficients		Standardized Coefficient Beta	t	Sig.(p)
		B	Std. Error			
Personal growth	(Constant)	11.073	.102		109.042	.000
	Volunteer	**.032**	.015	.086	2.133	.033

Total Leisure Time

As a result of a simple linear regression analysis (see Table 4-7.1.11), Individual Creative Activities significantly predicted

- Academic Self-efficacy (4.5%)
- Academic Self-efficacy for Learning (4.4%)
- Academic Self-efficacy for Performance (4.1%)

Table 4-7.1.11

Total Leisure Activity Time and Other Variables Regression Analysis

Dependent Variable	Model Summary R Square	ANOVA	
		F	*p*
Psychological Well-being	0.038	23.736	***0.000***
Autonomy	0.004	2.384	0.123
Personal Growth	0.051	32.132	**0.000**
Positive Relationship	0.030	18.481	**0.000**
Purpose of Life	0.013	7.715	***0.006***
Acceptance	0.003	1.944	0.164
Academic Self-efficacy	0.045	28.384	***0.000***
ASE for Learning	0.044	27.745	***0.000***
ASE for Performance	0.041	25..837	***0.000***
Self-esteem	0.026	16.325	***0.000***
Perceived Stress	0.007	4.125	***0.043***

Dependent Variable	Independent Variable	Unstandardized Coefficients		Standardized Coefficient Beta	t	Sig.(p)
		B	Std. Error			
Psychological Well-being	(Constant)	60.580	.684		88.606	.000
	Total Leisure time	.047	.010	.194	4.872	.000
Purpose of Life	(Constant)	10.836	.170		63.792	.000
	Total Leisure time	.007	.002	.112	2.778	.006
Personal Growth	(Constant)	10.222	.191		53.655	.000
	Total Leisure time	.015	.003	.225	5.669	.000
Positive Relationship	(Constant)	10.883	.163		66.673	.000
	Total Leisure time	.010	.002	.172	4.299	.000
Academic Self Efficacy	(Constant)	30.780	1.024		30.052	.000
	Total Leisure time	.077	.014	.212	5.328	.000
Academic Self Efficacy for Learning	(Constant)	19.288	.643		30.011	.000
	Total Leisure time	.048	.009	.210	5.267	.000
Academic Self Efficacy for Performance	(Constant)	11.492	.408		28.199	.000
	Total Leisure time	.029	.006	.203	5.083	.000
Self-esteem	(Constant)	27.831	.548		50.748	.000
	Total Leisure time	.031	.008	.162	4.040	.000
Perceived Stress	(Constant)	19.165	.659		29.093	.000
	Total Leisure time	-.019	.009	-.082	-2.031	.043

2) Multiple Linear Regression

Multiple Regression was conducted to examine which predictor variables (Psychological Well-being, Self-esteem, Perceived Stress) influence on the Academic Self-efficacy. A multiple regression analysis was conducted to examine the predictors of Academic Self-efficacy. The three predictors were simultaneously entered into the statistic model: Psychological Well-being, Self-esteem, Perceived Stress. To find more specific factors among the Psychological Well-being's sub factors (Autonomy, Control Environment, Positive Relationship, Purpose of Life, Personal Growth, Acceptance) this study was conducted one more multiple regression.

Multiple linear regression formula is:

$$Y = B_0 + B_1X_1 + B_2X_2 + B_2X_2 + B_3X_3 + \ldots\ldots\ldots\ldots e$$

Y: the predicted value of the dependent variable

B_0: the intercept, the predicted value of y when the X is 0.

B_n: the regression coefficient of each independent variables

X_n: the independent variables (each leisure type influencing Y: dependent variable).

e: the error of the estimate, or how much variation there is in our estimate of the regression coefficient.

According to the results of the regression analysis, Perceived stress *(β=0.-151, p<.01)* was negatively associated with Academic Self-efficacy whereas Psychological Well-being (β=0.616, p<.001) and Self-esteem *(β=0.275, p<.01).* were positively associated with Academic Self-efficacy. (see table 4-7-2.1 p.134)

Table 4-7.2.1

Multiple Regression Analysis of Psychological Well-Being, Self-Esteem, Perceived Stress, and Academic Self-Efficacy

	Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics	
	B	Std. Error	Beta	t(p)	Tolerance	VIF
(Constant)	-8.930	4.636		-1.926		
Psychological Well-being	.616	.061	.410	10.134***	.695	1.439
Self-esteem	.275	.093	.146	2.975**	.472	2.120
Perceived Stress.	-.151	.072	-.096	-2.092**	.545	1.835
F(p)	92.796 (0.000)					
Adj.R2	0.313					
Durbin-Watson	1.982					

*p<.05, **p<.01, ***p<.001

Students were more likely to spend their leisure time in team sports than participating in individual sports and individual physical activity types of leisure. However, the team sport variable had no regression relationship with the Academic Self-efficacy variable. Interestingly, Individual sports and individual physical activity types had positive regression relationship with Academic Self-efficacy.

In addition, the three Creative activity types (Individual, Group, Systematic) had more statistical regression relationship than seven other leisure activity types. Individual Creative Activity had more statistical regression relationship than Systematic Individual Creative Activity. Finally, volunteering as a leisure activity had statistical regression relationship with only Personal Growth of the Psychological Well-being's sub factor (see table 4-7.2.2. p 135).

Table 4-7.2.2

Regression between Leisure Activity Types and Psychological Well-Being, Academic Self-Efficacy, Self-Esteem, and Perceived Stress

	Psychological Wellbeing							Academic Self-efficacy			Self-esteem	Perceived Stress
	PW	1	2	3	4	5	6	ASE	Learning	Performing		
Team Sports	-	-	-	-	.088	-	.119	-	-	-	.0135	-.135
Individual Sports	.171	-	.032	.046	.034	-		.265	.173	.093	.140	-.141
Individual Physical Activity	.200	-	.038	.066	.039	-	.025	.323	.198	.125	.125	-.124
Social Activity	-	-	-	-	-	-	-	.262	.151	.112	.166	-.184
Individual social Activity	.103	-	-	.035	.043	-	-	-	-	-	.066	-
Group Creative Activity		-	-			-	-	**.332**	**.197**	**.153**	.180	-
Systematic Individual Creative Activity	-	-	-	.041	-	.036	-	**.255**	**.110**	**.146**	-	-
Individual Creative Activity	.171	-	.025	.046	.029	.057	-	**.344**	**.224**	**.119**	-	-
Individual freely Activity	-	-	-	.031	-	-	-	.122	.088	.031	-	-
Volunteer	-	-	-	.032	-	-	-				-	-
Total Leisure Time	.047	-	-	.015	.010	.007	-	.077	.048	.029	.031	-.019

PW: Psychological Well-being, ASE: Academic Self-efficacy, 1: Autonomy, 2: Control Environment, 3: Personal Growth, 4: Positive Relationship, 5: Purpose of Life, 6: Acceptance

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

The central aim of this study was to examine the effects of leisure activity types of middle school students in Korea on their psychological well-being, academic self-efficacy, self-esteem, and stress. In addition, the purpose of this study was to investigate the effects of psychological well-being, self-esteem, and stress on students' academic self-efficacy.

This research tried to classify the leisure activities of students with 10 types of activity: organized team sports, organized individual sports, physical sports, organized social activity, unorganized social activity, organized group creative activity, organized individual creative activity, unorganized creative activity, individual passive activity, and volunteer.

The data was collected by using the questionnaires that consisted of 5 sections

- Students' participating time in Leisure Activity type
- Ryff and Keyes's 18 items version (5-point Likert scale) to survey Psychological Well-being
- Academic Self-efficacy survey form (8 items and 7-point Likert scale) developed by Brain & Motivation Research Institute of Korea University
- Perceived Stress survey form (Cohen, 1988) (10 items, 5-point Likert scale),
- Rosenberg's Self-esteem online version (10 items, 4-point Likert scale)..

The survey was conducted on 606 students in grades 1 (7^{th} grade in USA), 2 (8^{th} grade in USA), 3 (9^{th} grade in USA), from 2 areas (Wan-ju, Pyung-taek) middle schools in South Korea. The students completed the survey from February 14 to April 20. 2020. This data collection crossed over from the time students participated in face-to-face classes and concluded after students started an online class because of COVID-19. However, all survey was conducted with online survey tool, office.nave.com

Discussion Result

1) Leisure Activity types

The notable results are that male students of each grade spent more leisure time in the three physical activity types than female students. This result is similar to the previous study (Lee et al., 2016). Urban area students have more creative activity leisure types while rural area students spend their leisure time physical activity leisure types. Korean Students of both areas were more likely to spend their leisure time in the individual activity types, (Individual Social Activity, Individual Freely Activity except Individual Creative Activity) than team or group leisure activity.

2) Psychological Well-being, Academic Self-efficacy, Self-esteem, and Perceived Stress.

As result of the study, there was no statistically significant difference between male and female students in psychological well-being and academic self-efficacy. In self-esteem, male students' scores were statistically significantly higher than female students. Perceived stress, female students had higher scores than male students. The indication is that those female students were more stressed than male students.

In both regions, first-year students showed high scores on psychological well-being and self-esteem, while third-year students showed low academic self-efficacy and self-esteem scores and high Perceived Stress scores. In the case of 7th grade female students, the self-esteem and psychological well-being scores were significantly lower than those of other groups. In this point, it can be seen that the higher the grade, the more stress from the surrounding environment, and the academic factor among them is the cause of the stress.

Research Question 1: Do Leisure activity types have an effect on students' psychological well-being?

As a result of the study, the leisure types based on individual activities (Sport, Physical Activity, Social Activity, Creative Activity) correlated more with students' psychological well-being. More specifically, these individual leisure types affected the Psychological Well-being's subfactors (Control Environment, Positive Relationship, and Personal Growth) than other three factors (Autonomy, Acceptance, Purpose of life). Generally, this result shows similarity with the studies of Bartko and Eccles (2003), Garstet al. (2001), and Palen and Coatsworth (2007) that leisure activities improve psychological well-being of adolescents and construct a healthy self-identity. However, Passmore (2003) result differed from the previous studies as well as this research project in those leisure activities of goal-oriented (team sports) and social activities (meeting friends) in enhancing youth's self-efficacy, competence, self-worth, and mental health (Passmore, 2003).

In other words, Passmore' study shows an entirely different result from previous studies, in which goal-oriented leisure activities such as teams or groups work together to have a higher positive effect on the students' psychological well-being. In this study, Korean middle school students feel higher psychological well-being in individual and individual leisure activities rather than team or group activities.

Also, as a result of this study, it is shown to some extent consistent with previous studies that socially engaged leisure activities have a greater effect on students' psychological well-being, life satisfaction, and mental health (Lee et al., 2016). However, it is necessary to consider that social participation in previous studies was consider an organized schedule leisure activity. In this study, individual social participation activity is spontaneous time spent with friends.

In Korean society, students' participation in leisure activities is strongly influenced or forced by their parents. This is not the case for all leisure activity types. Activities in which students participate with other students may not be activities of their choosing but activities in which they participate under parental pressure. In addition, students are immersed in a highly competitive environment and culture. Although it may appear to be a leisure activity, Korean students continually feel compared and must be the best for approval both home and school. Students who have been compared to and competed with other students will have no choice but to be psychologically disengaged as they perceive be the activity as another competitive environment rather than psychological well-being in activities with others.

In the case of leisure activities with limited self-selection or autonomy, students' psychological well-being and leisure satisfaction inevitably decrease. Leisure activities that are considered a competitive situation will have negative rather than positive effects on students' psychological well-being.

Although it cannot be concluded that the individual leisure activity is premised on students' autonomous choice, students' personal leisure activities that are free from parental control or academic pressure, and students have the right to make their own decisions, are much more effective than team or group leisure activities, which students' parents typically drive.

Research Question 2: Do leisure activity types affect students' self-esteem?

Previous research indicated that leisure involvement in social interaction positively affects self-esteem (Trainor et al., 2010) and life satisfaction (Jeon et al., 2015; Ji & Jo, 2012). As a result of this study, it was found that among the ten leisure activity types, group creative activity, social activity, and individual physical activity types had the most positive effect on students' self-esteem.

Inter-active social leisure had a greater effect on self-esteem than individual social activity types (i.e. hanging out). This study and previous work suggest that inter-active leisure activities allow for increased interactive engagement with a wide range of society thus having a more positive effect on students' self-esteem than leisure activities limited to peers.

Other leisure activities such as individual sports(skiing) and physical activity(jogging) have more influence on students' self-esteem than team sports(soccer).

It is interesting to note that this result differs students' participation in creative activity. Although team sports such as a soccer did not affect self-esteem, in this study group creative activities (orchestra, band, robotics) have more influence on self-esteem than individual creative activity (music lessons). Physical activity group creative activity has more influence than individual creative activity. Although physical activity accompanied by intergroup competition affects students' self-esteem, it can be seen that the effect is less than that of other leisure activities. Students' participation in team sports can be inferred that students' psychological instability due to competition negatively affects their self-esteem.

The leisure activities based on physical activity, individual physical activity have a greater effect on self-esteem than team or group activities, and in creative leisure activities, working with multiple groups is more effective for students' self-esteem. Group creative activities are conducted through collaboration rather than individual competition within a group of students. This result shows that in the creative activities, individual competition existed in an individual creative activity rather than group creative activity. As a result of the study, male students had a statistically significantly higher self-esteem score than female students. Similarly, Kang and Hwang (2012) and Bachman et al. (2011) showed that male students had higher self-esteem than female students. It cannot be concluded from this finding that physical activity directly affects students' self-esteem. Nevertheless, it can be inferred that leisure activity can act as a mediating factor influencing students' self-esteem.

Among the ten types of leisure activities in this study, the result that volunteer activity did not have a statistical effect on students' self-esteem is contrary to the results of previous studies (Hong, 2015; Cha & Kim, 2015). For example, Kim (2012) found that students' participation in various volunteer activities significantly and positively effects on students' life satisfaction and self-esteem. In Korea's educational environment, students' volunteer activities are considered involuntary participation as a prerequisite for obtaining credits or going to college, rather than participating in activities with intrinsic motivation. It can be inferred that mandatory volunteerism, whether perceived or real, reduces the effectiveness of volunteering as an activity that increases self-esteem. Although volunteering has many benefits such as interaction with different social classes and age groups, volunteering should be presented as an elective for middle school students to enhance self-esteem.

Research Question 3: Do leisure activity types affect students' stress?

Physical activity types (Team Sports, Individual Sports, Individual Physical Activity) and Social Activity (social clubs, community engagement) had a negative correlation with students' perceived stress compared to other leisure activities (Creative, Volunteering, watching movies by oneself). This result is consistent with the previous studies that leisure and sport participation has been found to reduce stress (Kang, 2004; Cha & Ok, 2014), and are valuable experiences for developing the ability to effectively cope with stress (Coleman & Iso-Ahola, 1993), and reinforce students life satisfaction with improving mental and physical health (Park, 2007; Yoon et al., 2009; Kang, 2010; Ji & Jo, 2012).

However, creative leisure activity did not affect students perceived stress in either positive or negative direction, which differs from the researchers Iwasaki and Schneider (2003) that serious leisure activities that require professional skills and a specific place and time have positive effects such as giving a sense of achievement, improving self-esteem, and relieving stress. The creative activities of Korean middle school students linked to skill acquisition and learning do not affect the students' perceived stress compared to leisure based on physical activities and social activities. These research results are worthy of consideration. These research results are worthy of consideration fatigue and other stress may occur during the skill acquisition process when not at the appropriate developmental level of an individual.

Finally, this study found that students' perceived stress was similar to other self-esteem research (Agam et al., 2015; Kang & Hwang, 2012). With concurring research result, male students had a statistically significantly lower score in perceived stress and higher self-esteem than female students due to the many of time spent participating in physical activities. Once again, this finding reminds us that one cannot conclude that physical activity has directly affects students’ perceived stress and self-esteem. However, it can be inferred that leisure activity can act as a mediating factor influencing both students’ perceived stress and self-esteem

Research Question 4: Do leisure activity types influence students’ academic self-efficacy?

The fourth research question was the subject of much debate among previous research results (Asltonen et al., 2016; Bergin, 1992; Fox et al., 2010; Knifsend &

Graham, 2011). Past results differed related to team sports and their contribution to academic performance. In this study, although male students spent more time on physical team-based activities than female students, there was no statistically significant difference in academic self-efficacy between male and female students.

However, individual leisure activity types had more influence on the students' academic self-efficacy than team or group activities. In addition, the three Creative activity types (Individual, Group, Systematic) had more statistical regression relationship than seven other leisure activity types. But team sports had no relationship with academic self-efficacy. This is the complete opposite result from previous studies (Jung & Kim, 2016) that among middle school students who consistently participate in sports activities, improved their academic achievement and another study (Fox et al., 2010) that middle and high school male students' sports team participation was associated with a higher GPA.

Interestingly, creative leisure activities (e.g. art) in this study have more impact on student's academic self-efficacy and are generally consistent with the previous research result of Winsler et al. (2020) that verified the effectiveness of the creative experiential activity program. Winsler et al. (2020) found that adolescents who experienced creative experiential activities had significantly higher attachment to learning, self-confidence as learners, and curiosity about learning than those who did not. This study also found that creative activities are more effective on students' academic outcomes and other factors related to students' academic achievement.

In the context of Korean education, creative leisure activities are activities based on arts (playing musical instruments), science, and mathematics. These creative leisure activities are similar to Winsler et al. (2020) research result. That supports this study findings that Korean middle school students' individual or group creative leisure activities can directly affect students' academic self-efficacy.

This study found that individual leisure activities affect psychological well-being positively affect students' academic self-efficacy. It can be inferred that among the leisure activities of Korean middle school students, leisure activities that consider individual choices or leisure activities that allow students to experience a sense of accomplishment through self-discipline have more positive effects on their academic self-efficacy. Research Question 5: Is there a correlation between psychological well-being, self-esteem, stress, academic self-efficacy?

As a result, psychological Well-being has a strong positive correlation with Academic Self-efficacy, Self-esteem. However, perceived Stress has a negative correlation with other variables. Especially the variant of self-esteem showed the highest negative correlation with students' perceived stress.

Students' academic self-efficacy has a moderate correlation with psychological well-being and self-esteem. This result is opposite with a previous study (Farahn & Khan, 2015) that self-esteem and the impact of stress on GPA did not significantly correlate with students' academic performance. Instead, the result is similar to previous studies (Mo, 2010) that Self-esteem in adolescence contributes to maintaining psychological

well-being in the internal environment or social relationships and can perform a function to control academic stress.

Students' academic self-efficacy and self-esteem will be affected by various variables. Students' academic performance and self-esteem will not be determined simply by students' specific leisure activities. It is necessary to search for detailed factors that affect students' academic self-efficacy and self-esteem

Implication

Considering that grades and mental health are the main topics of interest from the family and society in the life of adolescents due to fierce competition for entrance exams, the fact that leisure activities have a positive effect on adolescents' psychological well-being, academic self-efficacy, and self-esteem, will have significant meaning for families, their children, and society. According to the National Youth Policy Institute (2021), in 2019, the amount of leisure time during one Monday through Sunday for Korean students was minimal. For example, 16.2% of students get less than one hour per week; 49.2% of Korean Students can experienced 1-3 hours per week; and just 14.2% of Korean youth are able to experience 3-4 hours of leisure activities in seven-day period. This study found that the leisure cultural activities of adolescents positively affect psychological well-being, academic self-efficacy, and self-esteem will be data that can inform the importance of youth leisure cultural activities.

This study classified the leisure activities of middle school students in detail, revealing the effect of each type of leisure activity on the students' psychological well-being, academic self-efficacy, self-esteem, and stress, the importance of leisure activities

for adolescents is emphasized, and adolescents' academic. This result is meaningful because it provides basic data that can be used for policy interventions for mental health, particularly for young adolescents.

One must consider the regional difference between urban and rural areas in where a child resides. It can be expected that students in urban areas are given more opportunities for creative leisure activities, whereas students in rural areas have fewer such opportunities. It seems that more attention to reduce the gap in leisure activities experiences need further assessment, focusing on activities that support academic self-efficacy and students' psychological well-being.

Currently, leisure activities for adolescent youth primally take place within private academic or private training center. In order to create an environment where leisure activities can be provided to everyone willing to participate in leisure activities, this study suggests building a regional council that the local community, school, central government, and parents participate in all together, and supported by all involved stakeholders.

Limitation of this Study

There are three limitations to highlight within this study. First, the result of this study cannot be generalized to all adolescents. Specifically, this study focused on Korean middle school students ages 12-14.

Second, within the data analysis of this research, the average score of each variable may not reflect each student's stress or psychological status. Efforts should be made to provide practical help to students with low scores of psychological well-being, perceived stress, self-esteem, and academic self-efficacy.

Third, the study should consider some limitations within the survey design. The survey was based on self-reported questionnaire surveys. Self-reporting requires students to have a level of cognitive development that allows them to understand the terms and questions used in this experiment accurately. Another limitation is that the results derived from students' self-reports may not accurately reflect the students' psychological state.

Future Research Recommendations

Self-esteem, stress, psychological well-being, and academic self-efficacy measured in this study are abstract concepts and maybe challenging to measure wholistically. This study's numerical results from this study maybe limited in reflecting a student's entire well-being. However, Haugland and Wold's (2001) study concluded that 14–16-year-olds could evaluate and provide reliable information on subjective health questionnaires. This quantitative study provides valuable insights, yet qualitative research such as individual interviews could expand schools and parents understanding of how specific leisure type activities improve the psychological states of middle students.

Beyond the cross-sectional design used in this study, more research is needed on the effects and directions of students' continuous participation in various leisure activities on psychological well-being, self-esteem, stress, and academic self-efficacy. Although expansive and challenging to accomplish, a longitudinal research design is an important research method to evaluate and compare changes in students' status beyond middle school and high school.

This study went through the process of subdividing various leisure activities into 10 types to find out the efficacy of students' leisure activities. These leisure activities

were categorized according to three primary groupings: (a) creative activity, (b) group or individual activity, and (c) organized and unorganized activities. It is recommended that future research uses a theoretical foundation in the process of subdividing leisure activities into more precise criteria. This study recommends Interaction Patterns in Recreation Activities by Avedon (as cited in Hawkers-Robins, 2015).

Considering that leisure activities can be classified as activities related to others and within groups, Avedon's Interaction Patterns in Recreation Activities is thought to provide a theoretical foundation for subdividing students' leisure activities. Specifically, interaction patterns in recreation activities consisted of eight categories (Intra-individual, Extra-individual, Aggregate, Inter-Individual, Unilateral, Multilateral, Intragroup, Intergroup). Specific interaction patterns into three factors: (a) competition, (b) collaboration, and (c) autonomy. This study found individual leisure activities (running, martial art, etc.) had more impact on student's psychological well-being and academic self-efficacy than team sports or group leisure activity types (soccer, basketball). This researcher believes that the social interactions during play have a major effect on child development. Therefore, more investigation is needed related on social interaction differences between individual sports and group sports and their contribution to academic self-efficacy, and overall students' well-being. For a brief overview of Avedon's Interaction Patterns in Recreation Activities, eight different social interaction patterns can occur depending on the leisure type. These includes Intra-individual, Extra-individual, Aggregate, Inter-Individual, Unilateral, Multilateral, Intragroup, and Intergroup.

Conclusion

This study investigated the effects of students' participation in various leisure activities on students' psychological well-being, academic self-efficacy, self-esteem, and stress. In order to investigate the effect of specific leisure activities, this study subdivided the existing leisure activity classification into 10 types of leisure. As a result of the study, it was found that students' participation in leisure activities based on physical activity had a positive effect on students' stress relief. Female students who spent less time on physical activity-based leisure had lower self-esteem scores and higher Perceived Stress scores than male students. Since female Korean students have less opportunity to participate in all organized sports, it is recommended that physical activities be designed and offered specifically for girls. These organized opportunities could help them improve their self-esteem and relieve stress.

In addition, *creative leisure* activities correlated with students' academic self-efficacy more than any other type of leisure activity. It is important to note that students in urban areas devote more time to creative leisure activities than students in rural areas. This may be due to more opportunities available in an urban setting. Although there is not statistically significant difference between urban students' academic self-efficacy and students living in rural areas, this study shows an existing regional gap in the students' participation time in creative leisure activities. Considering that students' creative leisure activity participation shows a high correlation with academic efficacy, the expansion of creative leisure activities within rural areas can be a way to promote students' academic

self-efficacy and providing various creative leisure activities for students in rural areas can be a way to reduce the regional academic gap.

Students' participation in individual leisure-sports activities (running, martial arts) had more positive effect on students' psychological well-being, stress, and academic efficacy than other group- or team-leisure activities (soccer, basketball). It is necessary to encourage students to participate in individual leisure activities that respect and allow for student autonomy. Individual leisure activities allow students to set their own goals for what they want to achieve individually and thus more likely produce a sense of accomplishment and experience the efficacy of success based on voluntary participation.

In closing, Korean students' academic performance and culturally appropriate, social relationships are the main concerns of families and society. Academic performance pressure results in fierce and widespread competition within the Korean educational system, and this intense social pressure has its toll, creating a significant negative impact on youth development including high levels of stress, anxiety and student suicide. This research calls upon Korean society to recognize and consider that specific leisure activities have a needed and positive effect on adolescents' psychological well-being, academic self-efficacy, self-esteem, and stress. Also, families, schools, and society must re-evaluate leisure activities to reinforce students' life satisfaction and reduce the extreme stress of Korean middle school students. Lastly, additional research is necessary to provide the theoretical basis and practical advice for how different leisure activities affect different domains of child development.

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APPENDIX A

RESEARCH INSTRUMENT

The questionnaires about Middle School Students' Leisure Activity Types, Psychological Well-being, Academic Self-efficacy, Self-esteem, and Stress.

This survey is intended to find out what the middle school students leisure activities type and the impact of leisure activity types on the students' psychological well-being, Academic Self-efficacy, Self-esteem, and Stress. This package of survey form consists of six sections including Demographic section.

There are no right or wrong answers. Please carefully read each section and questions. And answer each question as honestly as possible.

Section1: Demographic
1. School : 1) Pyeong Tack □ 2) Bong Dong □ 2. Gender : 1) Male □ 2) Female □ 3. Grade : 1) 1st □ 2) 2nd □ 3) 3rd □

Section2: Leisure Activity Types			
There are 10 types of leisure activity. Each type suggests example of leisure activities. Also, participants will be asked to answer specific their leisure activities' properties and patterns. In the past 7 days. In time column, according to your time spending, please check the 1,2,3,4, or 5. In the frequency column, check all day when you had the leisure activity. In the choice column, when you chose your leisure activity by yourself, please check 1.			
Leisure Activity Types	Time (1=1hour, 2=1~2hour, 3=2~3hour, 4=4~5hour, 5=+5hour)	Check all the Frequency	Activity Choice (by oneself=1, other=2)
1. Organized team sports (e.g. football, netball, soccer, basketball, futsal, rowing, etc.)	1 2 3 4 5	M T W Th F Sat Sun	1 2
2. Organized individual sports (e.g. aerobics, athletics, running, swimming, gymnastics, cycling, martial arts, etc.)	1 2 3 4 5	M T W Th F Sat Sun	1 2
3. Unorganized physical activity (e.g. skating, jogging, riding bicycle, golf, surfing, walking etc.)	1 2 3 4 5	M T W Th F Sat Sun	1 2
4. Organized social activity (e.g. youth groups, scouts, guides, religious group, etc.)	1 2 3 4 5	M T W Th F Sat Sun	1 2

5. Unorganized social activity (e.g. doing something with friend 'Hanging out', parties, talking on the phone, movies, card/board games, shopping with friends)	1 2 3 4 5	M T W Th F Sat Sun	1 2
6. Organized group creative activity (e.g. attending band, orchestra, drama, Musical choir, debating, etc.)	1 2 3 4 5	M T W Th F Sat Sun	1 2
7. Organized individual creative activity (e.g. music lessons, cooking classes, drawing/ art classes, singing lessons, etc.)	1 2 3 4 5	M T W Th F Sat Sun	1 2
8. Unorganized creative activity (e.g.writing, reading, cooking, designing web pages, training dog, practicing instrument, photography, hobbies, painting, playing instruments, etc.)	1 2 3 4 5	M T W Th F Sat Sun	1 2
9. Individual passive activities (e.g. dreaming, watching sports, Listening to radio/music and NOT doing anything else, television/DVD/Videos Computer/Internet, Game Boy/X-Box etc.)	1 2 3 4 5	M T W Th F Sat Sun	1 2
10. Volunteer work on a regular basis (NOT AT HOME)	1 2 3 4 5	M T W Th F Sat Sun	1 2

Section3: Psychological Well-being					
Psychological well-being is a state which people might accept themselves as they are, maintain a positive relationship, and control their behavior independently. Please read the following questions and compare with your thinking in the moment. And then if you strongly disagree, check number 1, and if you strongly agree, check number 5. Please check for each question honestly.					
	Strongly Disagree	Disagree	Neutral	Agree	Strongly disagree
1. I like most parts of my personality.	1	2	3	4	5
2. When I look at the story of my life, I am pleased with how things have turned out so far.	1	2	3	4	5
3. Some people wander aimlessly through life, but I am not one of them.	1	2	3	4	5
4. The demand of everyday life often gets me down.	1	2	3	4	5
5. In many ways I feel disappointed about my achievements in life.	1	2	3	4	5
6. Maintaining close relationships has been difficult and frustrating for me.	1	2	3	4	5
7. I live life one day at a time and don't really think about the future.	1	2	3	4	5
8. In general, I feel I am in charge of the situation in which I live.	1	2	3	4	5
9. I am good at managing the responsibilities of daily life.	1	2	3	4	5
10. I sometimes feel as if I've done all there is to do in life.	1	2	3	4	5

	Strongly Disagree	Disagree	Neutral	Agree	Strongly disagree
11. For me, life has been a continuous process of learning, changing, and growth.	1	2	3	4	5
12. I think it is important to have new experiences that challenge how I think about myself and the world.	1	2	3	4	5
13. People would describe me as a giving person, willing to share my time with others.	1	2	3	4	5
14. I gave up trying to make big improvements or changes in my life a long time ago.	1	2	3	4	5
15. I tend to be influenced by people with strong opinions.	1	2	3	4	5
16. I have not experienced many warm and trusting relationships with others.	1	2	3	4	5
17. I have confidence in my own opinions, even if they are different from the way most other people think.	1	2	3	4	5
18. I judge myself by what I think is important, not by the values of what others think is important.	1	2	3	4	5

Section4: Academic Self-efficacy							
Academic self-efficacy is students' subjective belief to believe that students are able to achieve the academic goals and learning purpose by themselves. Please read the following questions and compare with your thinking in the moment. Please check for each question honestly.							
	Strongly disagree	Disagree	More or less Disagree	Neutral	More or less Agree	Agree	Strongly agree
1. I am confident in remembering what I learn in class.	1	2	3	4	5	6	7
2. I can understand well even if the teacher presents complex materials in class.	1	2	3	4	5	6	7
3. I am confident in solving problems with what I have learned in class.	1	2	3	4	5	6	7
4. I can distinguish what is important in the class.	1	2	3	4	5	6	7
5. I can easily understand what I am learning in class	1	2	3	4	5	6	7
6. I am confident to improve my skills and knowledge in class.	1	2	3	4	5	6	7
7. I am confident to take the test well.	1	2	3	4	5	6	7
8. I believe I can get good grades.	1	2	3	4	5	6	7

Section5: Self-esteem				
Self-esteem is a comprehensive and holistic concept that student believes they will be successful, competent and valuable.The scale consists of ten statements that you could possibly apply to you that you must rate on how much you agree with each. The items should be answered quickly without overthinking. Please read the following questions and compare with your thinking in the moment. Please check for each question honestly.				
	Strongly disagree	Disagree	Agree	Strongly agree
1. I feel that I am a person of worth, at least on an equal plane with others.	1	2	3	4
2. I feel that I have a number of good qualities.	1	2	3	4
3. All in all, I am inclined to feel that I am a failure.	1	2	3	4
4. I am able to do things as well as most other people.	1	2	3	4
5. I feel I do not have much to be proud of.	1	2	3	4
6. I take a positive attitude toward myself	1	2	3	4
7. On the whole, I am satisfied with myself.	1	2	3	4
8. I wish I could have more respect for myself.	1	2	3	4
9. I certainly feel useless at times.	1	2	3	4
10. At times I think I am no good at all.	1	2	3	4

Section 6: Perceived Stress Scale					
The questions in this scale ask you about your feelings and thoughts during the last week. In each case, you will be asked to indicate by circling how often you felt or thought a certain way. Please read the following questions and compare with your thinking. Please check for each question honestly.					
	Never	Almost Never	Some -times	Fairly Often	Very Often
1. In the last month, how often have you been upset because of something that happened unexpectedly?	0	1	2	3	4
2. In the last month, how often have you felt that you were unable to control the important things in your life?	0	1	2	3	4
3. In the last month, how often have you felt nervous and “stressed”?	0	1	2	3	4
4. In the last month, how often have you felt confident about your ability to handle your personal problems?	0	1	2	3	4
5. In the last month, how often have you felt that things were going your way?	0	1	2	3	4
6. In the last month, how often have you found that you could not cope with all the things that you have to do?	0	1	2	3	4
7. In the last month, how often have you been able to control irritations in your life?	0	1	2	3	4
8. In the last month, how often have you felt that you were on top of things?	0	1	2	3	4
9. In the last month, how often have you been angered because of things that were outside of your control?	0	1	2	3	4
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	0	1	2	3	4

Thank you for completing this Questionnaire.

Now you may do your favorite Leisure Activity!

APPENDIX B

ANALYZED DATA

Table 1

Middle school students' leisure time per 1 time

		Team Sports	Individual Sports	Individual Physical Activities	Social Activities	Individual Social Activities	Group Creative Activities	Systematic Individual Creative Activities	Individual Creative Activities	Individual Activities	Volunteer
Rural	Mean	2.40	2.10	2.88	1.70	3.75	1.52	1.57	1.50	3.60	2.90
Male 1st	SD	1.172	1.128	1.265	1.091	1.296	.933	1.130	.906	1.336	1.851
Rural	Mean	1.26	1.63	2.26	1.54	4.35	1.63	1.67	2.43	4.17	3.17
Female 1st	SD	.713	.826	.999	.936	.948	.974	.990	1.259	1.060	1.623
Rural	Mean	2.65	2.14	2.65	1.52	3.75	1.45	1.52	1.79	3.69	2.48
Male 2nd	SD	1.385	1.150	1.148	.892	1.118	.752	.860	1.094	1.249	1.566
Rural	Mean	1.44	1.49	2.30	1.51	3.84	1.48	1.56	2.16	4.05	2.57
Female 2nd	SD	.807	.809	.901	.849	1.052	.829	.904	1.241	1.071	1.533
Rural	Mean	2.52	1.88	2.19	1.69	3.81	1.50	1.38	1.95	3.71	2.07
Male 3rd	SD	1.234	1.131	.917	1.199	1.292	1.042	.909	1.248	1.066	1.421
Rural	Mean	1.39	1.58	2.42	1.47	3.61	1.55	1.50	2.21	3.76	2.45
Female 3rd	SD	.638	.889	1.130	.687	1.366	.760	.923	.991	1.149	1.389
Urban	Mean	2.17	2.17	2.42	1.58	3.37	1.43	1.74	1.78	3.82	1.52
Male 1st	SD	1.376	1.364	1.184	1.184	1.409	.935	1.189	1.139	1.158	1.032
Urban	Mean	1.32	1.39	2.01	1.31	3.65	1.49	1.85	2.34	3.86	1.55
Female 1st	SD	.677	.773	.895	.832	1.480	1.051	1.197	1.121	1.135	1.021
Urban	Mean	2.46	2.58	2.73	1.69	3.62	1.50	1.35	1.54	3.42	2.42
Male 2nd	SD	1.476	1.501	1.373	1.087	1.169	.762	.629	.811	1.501	1.447
Urban	Mean	1.54	1.86	2.16	1.57	3.86	1.51	2.08	2.49	3.73	2.73
Female 2nd	SD	.767	1.058	1.118	.899	1.337	1.017	1.211	1.325	1.146	1.521
Urban	Mean	1.81	1.74	2.16	1.65	3.55	1.48	1.32	1.52	3.97	1.84
Male 3rd	SD	.910	1.064	.898	.877	1.387	.890	.702	1.061	1.080	1.293
Urban	Mean	1.21	1.40	1.87	1.23	4.06	1.17	1.47	1.96	4.30	1.53
Female 3rd	SD	.549	.825	.824	.666	1.092	.433	.747	1.160	.858	1.060

Table 2

Middle school students' leisure activity frequency per 1 month

		Team Sports	Individual Sports	Individual Physical Activities	Social Activities	Individual Social Activities	Group Creative Activities	Systematic Individual Creative Activities	Individual Creative Activities	Individual Activities	Volunteer
Rural	Mean	2.40	2.13	3.70	1.65	3.50	1.30	1.65	1.53	3.95	2.00
Male 1st	SD	1.499	1.453	1.572	1.122	1.553	.823	1.272	1.012	1.467	1.340
Rural	Mean	1.17	1.59	3.02	1.24	3.70	1.37	1.57	2.67	4.30	1.96
Female 1st	SD	.486	1.066	1.719	.565	1.364	.799	1.068	1.492	1.072	.918
Rural	Mean	2.56	2.20	3.63	1.42	3.55	1.25	1.69	1.80	4.11	1.54
Male 2nd	SD	1.461	1.499	1.495	.856	1.296	.603	1.190	1.348	1.293	.923
Rural	Mean	1.31	1.49	3.08	1.41	3.49	1.31	1.49	2.39	4.20	1.72
Female 2nd	SD	.672	.960	1.595	.824	1.192	.743	1.059	1.584	1.222	.933
Rural	Mean	2.88	2.10	2.83	1.40	3.48	1.24	1.21	1.76	4.00	1.45
Male 3rd	SD	1.435	1.340	1.576	1.014	1.366	.790	.606	1.226	1.361	.832
Rural	Mean	1.39	1.53	2.92	1.45	3.29	1.37	1.53	2.32	3.97	1.76
Female 3rd	SD	.755	1.033	1.531	.921	1.431	.751	1.033	1.317	1.284	.913
Urban	Mean	2.11	2.42	3.14	1.45	3.09	1.15	1.58	1.88	4.37	1.32
Male 1st	SD	1.459	1.758	1.488	1.118	1.665	.537	1.236	1.352	1.232	.773
Urban	Mean	1.32	1.56	2.71	1.30	3.22	1.21	1.86	2.61	4.09	1.45
Female 1st	SD	.834	1.140	1.513	.742	1.453	.551	1.305	1.463	1.291	.863
Urban	Mean	2.31	2.35	2.88	1.35	3.27	1.50	1.38	1.50	3.27	1.88
Male 2nd	SD	1.379	1.495	1.479	.562	1.458	.949	.571	.707	1.638	.909
Urban	Mean	1.35	1.76	2.81	1.35	3.11	1.38	1.89	2.86	4.22	1.92
Female 2nd	SD	.588	1.321	1.697	.633	1.286	.828	1.197	1.512	1.272	1.038
Urban	Mean	2.03	1.74	3.03	1.42	3.71	1.23	1.19	1.61	4.19	1.48
Male 3rd	SD	.983	1.413	1.643	.886	1.510	.425	.543	1.145	1.352	.890
Urban	Mean	1.19	1.49	2.60	1.17	2.89	1.23	1.60	2.00	4.38	1.34
Female 3rd	SD	.576	1.177	1.542	.481	1.289	.786	1.077	1.367	1.114	.788

Table 3

Middle school students' (Area, Gender) leisure time per 1month

		Team Sports	Individual Sports	Individual Physical Activities	Social Activities	Individual Social Activities	Group Creative Activities	Systematic Individual Creative Activities	Individual Creative Activities	Individual Freely Activities	Volunteer	Total Time
Rural	Mean	7.99	5.67	9.72	2.81	14.20	2.10	2.98	3.98	15.52	5.01	69.99
Male	SD	6.919	6.300	6.832	3.852	8.106	2.334	4.463	5.242	7.820	5.807	28.054
Rural	Mean	2.00	2.97	8.06	2.42	14.63	2.52	3.00	6.72	17.53	5.90	65.74
Female	SD	2.095	3.811	6.371	2.950	7.681	3.187	3.990	6.317	7.365	5.532	25.441
Urban	Mean	5.97	6.30	8.14	3.05	12.87	2.18	2.93	3.75	16.46	3.43	65.07
Male	SD	6.754	7.441	6.251	4.798	8.708	2.889	4.529	5.063	8.099	4.625	31.020
Urban	Mean	2.10	3.13	6.20	2.05	12.71	2.19	4.13	6.91	17.33	3.39	60.15
Female	SD	2.831	4.462	5.239	2.771	7.689	3.231	4.878	6.504	7.555	4.362	27.709

Table 4

Middle school students' (Area, Grades) leisure time per 1month

		Team Sports	Individual Sports	Individual Physical Activities	Social Activities	Individual Social Activities	Group Creative Activities	Systematic Individual Creative Activities	Individual Creative Activities	Individual Freely Activities	Volunteer	Total Time
Rural	Mean	4.09	4.42	9.73	2.66	15.49	2.52	3.38	5.56	17.07	7.20	72.13
1st (86)	SD	5.162	5.264	7.248	3.580	8.150	3.169	5.223	6.320	7.711	6.572	29.675
Rural	Mean	5.52	4.60	9.30	2.52	14.17	2.21	3.16	5.27	16.60	4.95	68.30
2nd (132)	SD	6.615	5.981	6.561	2.943	7.427	2.744	4.217	6.116	7.587	5.421	25.619
Rural	Mean	5.40	3.89	7.37	2.75	13.65	2.23	2.29	5.11	15.71	4.36	62.76
3rd (80)	SD	5.588	4.498	5.927	4.046	8.321	2.408	2.789	5.248	7.741	4.612	25.077
Urban	Mean	3.75	4.47	7.11	2.54	12.58	2.14	4.19	6.07	17.02	2.79	62.66
1st (167)	SD	5.585	6.321	5.893	4.309	8.434	3.113	5.513	6.056	7.632	4.111	31.177
Urban	Mean	4.48	5.52	7.51	2.56	12.73	2.73	3.70	6.10	14.97	5.75	66.03
2nd (63)	SD	5.786	6.405	6.281	2.804	7.705	3.968	4.153	6.562	8.506	5.159	27.580
Urban	Mean	2.71	3.29	6.24	2.15	13.22	1.85	2.47	4.41	18.53	2.83	57.71
3rd (78)	SD	3.092	4.800	4.849	3.020	7.734	2.064	3.057	5.971	7.165	3.979	25.281

Table 5

Middle school students' Psychological Well-being score.

		Psychological Well-being	Autonomy	Control Environment	Personal growth	Positive Relationship	Purpose of life	Acceptance
Rural Male 1st	Mean	63.73	9.33	10.23	11.07	11.28	11.33	10.50
	SD	6.921	1.900	1.510	2.129	1.502	1.730	2.013
Rural Female1st	Mean	64.87	8.96	10.39	11.67	12.00	11.52	10.33
	SD	6.984	1.659	1.570	1.863	1.549	1.670	2.077
Rural Male 2nd	Mean	64.85	9.51	10.18	11.41	11.72	11.23	10.80
	SD	7.072	1.881	1.633	2.018	1.774	1.700	1.77
Rural Female 2nd	Mean	64.39	9.05	10.41	11.23	11.80	11.56	10.34
	SD	6.328	1.647	1.564	1.856	1.740	1.533	1.948
Rural Male 3rd	Mean	62.05	9.12	9.90	10.86	11.24	11.19	9.74
	SD	7.892	2.121	1.574	2.226	1.750	1.627	1.926
Rural Female 3rd	Mean	61.00	8.53	9.82	11.13	11.21	10.89	9.42
	SD	5.438	1.484	1.270	1.948	1.562	1.737	1.388
Urban Male 1st	Mean	65.65	9.48	10.31	11.22	11.85	11.35	11.45
	SD	6.667	1.993	1.713	2.147	1.449	1.754	1.741
Urban Female 1st	Mean	63.27	9.33	9.81	11.01	11.44	11.33	10.34
	SD	6.797	1.847	1.645	1.620	1.526	1.691	2.056
Urban Male 2nd	Mean	62.35	9.65	9.85	11.23	10.69	10.73	10.19
	SD	5.946	1.623	1.567	1.796	1.463	1.002	1.98
Urban Female 2nd	Mean	64.24	9.03	10.16	11.65	11.97	11.43	10.00
	SD	7.285	2.075	1.937	1.637	1.462	1.980	2.198
Urban Male 3rd	Mean	62.26	9.13	9.71	11.06	10.94	11.19	10.23
	SD	5.983	1.432	1.131	2.065	1.590	1.701	2.077
Urban Female 3rd	Mean	62.26	9.23	9.51	11.13	11.38	11.00	10.36
	SD	6.638	1.631	1.613	1.777	1.649	1.602	1.974

Table 6

Middle school students' Academic Self-efficacy, Self-esteem, and Perceived Stress score.

		Academic Self-efficacy for Learning	Academic Self-efficacy for Performance	Academic Self-efficacy	Self-esteem	Perceived Stress.
Rural Male 1st	Mean	21.37	13.10	34.48	31.35	16.07
	SD	7.023	4.284	11.133	4.475	6.431
Rural Female1st	Mean	22.46	13.67	36.13	30.59	18.54
	SD	6.206	3.899	9.806	5.528	6.817
Rural Male 2nd	Mean	22.45	13.35	35.80	31.34	15.04
	SD	6.272	4.148	10.207	4.727	5.758
Rural Female 2nd	Mean	23.26	13.74	37.00	30.02	19.02
	SD	6.014	3.619	9.256	5.380	6.667
Rural Male 3rd	Mean	22.02	13.07	35.10	28.45	19.88
	SD	6.264	4.033	10.009	5.752	5.756
Rural Female 3rd	Mean	21.66	12.76	34.42	27.95	20.53
	SD	6.157	3.452	9.371	4.139	4.012
Urban Male 1st	Mean	24.94	15.03	39.97	31.83	14.32
	SD	6.085	3.531	9.369	5.358	6.260
Urban Female 1st	Mean	21.58	13.01	34.59	29.25	19.12
	SD	6.395	4.092	10.282	5.453	6.484
Urban Male 2nd	Mean	20.42	12.04	32.46	28.12	19.08
	SD	6.658	4.745	11.097	5.015	5.803
Urban Female 2nd	Mean	23.16	13.62	36.78	29.14	19.22
	SD	7.744	4.991	12.461	7.447	7.714
Urban Male 3rd	Mean	23.29	14.13	37.42	29.06	17.61
	SD	5.769	3.676	9.287	5.272	5.649
Urban Female 3rd	Mean	21.06	12.43	33.49	28.98	19.09
	SD	6.222	4.236	10.204	5.045	5.763

Table 7

Middle school students' (Area, Gender) Psychological Well-being score

		Psychological Well-being	Autonomy	Control Environment	Personal Growth	Positive Relationship	Purpose of life	Acceptance
Rural Male	Mean	63.78	9.35	10.12	11.17	11.47	11.24	10.43
	SD	7.313	1.948	1.581	2.105	1.705	1.678	1.919
Rural Female	Mean	63.66	8.88	10.25	11.34	11.71	11.37	10.10
	SD	6.488	1.614	1.507	1.883	1.654	1.645	1.894
Urban Male	Mean	64.08	9.43	10.06	11.18	11.37	11.18	10.87
	SD	6.520	1.786	1.566	2.041	1.565	1.616	1.966
Urban Female	Mean	63.21	9.25	9.81	11.17	11.53	11.27	10.19
	SD	6.852	1.837	1.704	1.673	1.553	1.728	2.035

Table 8

Middle school students' (Area, Gender) Academic Self-efficacy, Self-esteem, and Perceived Stress score.

		Academic Self-efficacy	Academic Self-efficacy for Learning	Academic Self-efficacy for Performance	Self-esteem	Perceived Stress.
Rural Male	Mean	35.26	22.05	13.21	30.55	16.64
	SD	10.350	6.446	4.127	5.102	6.245
Rural Female	Mean	36.05	22.59	13.46	29.66	19.26
	SD	9.455	6.105	3.667	5.207	6.148
Urban Male	Mean	37.72	23.56	14.16	30.34	16.17
	SD	10.096	6.336	3.997	5.472	6.307
Urban Female	Mean	34.75	21.76	12.98	29.16	19.13
	SD	10.727	6.645	4.314	5.776	6.542

Table 9

Middle school students' (Area, Grades) Psychological Well-being score.

		Psychological Well-being	Autonomy	Control environment	Personal growth	Positive relationship	Purpose of life	Acceptance
Rural 1st	Mean	64.34	9.13	10.31	11.40	11.66	11.43	10.41
	SD	6.938	1.774	1.536	2.002	1.561	1.691	2.037
Rural 2nd	Mean	64.64	9.30	10.29	11.33	11.76	11.38	10.59
	SD	6.717	1.785	1.599	1.940	1.752	1.628	1.861
Rural 3rd	Mean	61.55	8.84	9.86	10.99	11.22	11.05	9.59
	SD	6.816	1.859	1.430	2.090	1.653	1.676	1.689
Urban 1st	Mean	64.20	9.39	10.01	11.09	11.60	11.34	10.77
	SD	6.826	1.901	1.684	1.839	1.505	1.710	2.008
Urban 2nd	Mean	63.46	9.29	10.03	11.48	11.44	11.14	10.08
	SD	6.780	1.913	1.787	1.703	1.584	1.674	2.097
Urban 3rd	Mean	62.26	9.19	9.59	11.10	11.21	11.08	10.09
	SD	6.346	1.546	1.436	1.884	1.631	1.634	1.942

Table 10

Middle school students' (Area, Grades) Academic Self-efficacy, Self-esteem, and Perceived Stress score

		Academic Self-efficacy for Learning	Academic Self-efficacy for Performance	Academic Self-efficacy	Self-esteem	Perceived Stress.
Rural 1st	Mean	21.95	13.41	35.36	30.94	17.40
	SD	6.581	4.068	10.415	5.051	6.717
Rural 2nd	Mean	22.83	13.53	36.36	30.73	16.88
	SD	6.144	3.902	9.761	5.063	6.483
Rural 3rd	Mean	21.85	12.92	34.78	28.21	20.19
	SD	6.177	3.748	9.656	5.026	4.984
Urban 1st	Mean	22.89	13.80	36.68	30.25	17.25
	SD	6.470	3.996	10.252	5.546	6.796
Urban 2nd	Mean	22.03	12.97	35.00	28.71	19.16
	SD	7.386	4.915	12.017	6.526	6.938
Urban 3rd	Mean	21.95	13.10	35.05	29.01	18.50
	SD	6.107	4.085	9.978	5.103	5.727