

**PHYSICAL ACTIVITY PATTERN AND ITS INFLUENCING
FACTORS AMONG PREPARATORY SCHOOL STUDENTS IN
BISHOFTU TOWN: APPLICATION OF SOME CONSTRUCTS IN
HEALTH BELIEF MODEL**

SHIBRU BEKELE

**A THESIS SUBMITTED TO THE DEPARTMENT OF
SCIENCE AND MATHEMATICS EDUCATION**

**PRESENTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF MASTERS EDUCATION (MED) IN
PHYSICAL EDUCATION**

ADDIS ABABA UNIVERSITY

ADDIS ABABA, ETHIOPIA

JULY, 2016

Addis Ababa University
School of Graduate Studies

This is to certify that the thesis prepared by Shibru Bekele.

entitled: Physical Activity Pattern and Its Influencing Factors Among Preparatory School Students in Bishoftu (Application of some constructs Health Belief Model) :Perceptions and Practice and Submitted in partial fulfillment of the requirements for the degree of Degree of Master of Education (Physical Education) complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

Signed by the Examining Committee:

Examiner_____Signature_____Date_____

Examiner_____Signature_____Date_____

Advisor_____Signature_____Date_____

Advisor_____Signature_____Date_____

Chair of Department or Graduate Program Coordinator

Abstract

This day it is believed that regular and moderate physical activity has positive role for the health of human being. Meanwhile most of adolescents are not benefited from this as they have no trend of spending the required time for physical activity.

Thus, this study aimed to investigate the roles of self-efficacy, benefits of and barriers to physical activity and its relationship with physical activity in male and female preparatory school students. And with central objectives of the research in mind, cross-sectional, descriptive study design on the basis of its relevance to the study is applied. Target subjects were also selected systematically and n=150 students as the sample size from the total population N=240 was selected.

As of the data presentation, analysis and discussion shows students of preparatory school in Bishoftu Town have a trend of spending less time for physical activity even with respect to the general recommendation of 60 minutes daily for the sake of healthy life. Meanwhile self-efficacy, perceived benefit and perceived barriers are the strongest predictors to change health behavior related to physical activity. So it is for the regarded bodies to engage their efforts to enhance self-efficacy, perceived benefit and perceived barrier for enhancing students' positive behavioral change in exercising physical activity.

Key words

Physical activity pattern

Perceived benefit

Perceived barriers

Self-efficacy

Health belief model

Physical activity

Adolescent

Acknowledgement

First and foremost great thanks to Almighty God for his blessing and help me from the beginning to end of my long stay in this academic program and he has helped me in every aspects of my life. And I would be glad to extent my deepest gratitude and appreciations to my advisor Dr. Bezabih Wolde for his unreserved effort in providing me all the necessary guidance and encouragements have contributed a lot to the successful completion of the study.

It is also a pleasure for me to express my deepest love and respect and great indebtedness to my family for their financial, material and moral support which made me to be strong morally and psychologically.

Finally, I would like to thank forerunners involved in walk through of facilitating in this research undertaking for they have given a great deal in labor and time in supporting me of acquiring information.

Table of contents

List of table.....	viii
Chapter one: Introduction.....	1
1.1 Background of the Study	1
1.2 Statement of the Problem.....	6
1.3 Research question.....	8
1.4 Objective of the Study	8
1.5 Significance of the study	9
1.6 Limitation of the Study.....	9
1.7 Scope of the Study.....	9
1.8 Organization of the study.....	9
1.9 Definition of terms	10
Chapter two: Literature review	11
2.1 Introduction.....	11
2.2 Theoretical basis.....	11
2.3 Theoretical framework for enhancing physical activity engagement	14
2.4 Empirical literatures.....	15
Chapter three: Research design and methodology	17
3.1 Research Design.....	17
3.2 Research approach.....	17
3.3 Subject of the study	18
3.4 Population, sample and sample size of the study	18
3.5 Sampling Technique.....	19
3.6 Data collection instruments	19
3.7 Method of data analysis	20
Chapter four: Data presentation, analysis and discussion	21
4.1 Introduction.....	21
4.2 Demographic information about the respondents	21
4.3 Physical activity pattern.....	22

4.4 Physical activity pattern variation by sex categories – using independent sample t- test....	23
4.5 Factors influencing physical activity pattern using health belief model.....	25
4.6 Correlation between self-efficacy and physical activity pattern of the students	32
4.7 Correlation between perceived benefit and physical activity pattern of the students	33
4.8 Correlation between perceived barrier and physical activity pattern of the students	34
Chapter five: Summary, Conclusion and recommendation	36
5.1 Summary.....	36
5.2 Conclusion	38
5.3 Recommendation.....	39
References	41
Appendices	43
Self-administered structure questionnaires	43

Abbreviations

CDC Centers for Disease Control and Prevention.

PE Physical Education.

List of table

Table 1: Frequency and percentage distribution of the respondents by their age	21
Table 2: Descriptive statistics about Physical activity pattern for male students	22
Table 3: Descriptive statistics about Physical activity pattern for female students	22
Table 4: Independent sample t-test.....	24
Table 5: Internal consistency reliability test for likert scaling questionnaires about Self-efficacy.....	26
Table 6: Internal consistency reliability test for likert scaling questionnaires about perceived benefits	29
Table 7: Internal consistency reliability test for likert scaling questionnaires about perceived barriers	31
Table 8: Correlation between self-efficacy and physical activity pattern	32
Table 9: Correlation between perceived benefit and physical activity pattern	33
Table 10: Correlation between perceived barrier and physical activity pattern	34

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

As the benefits of moderate, regular physical activity have become more widely recognized, the need has increased for interventions that can promote this healthful behavior. Because theories and models of human behavior can guide the development and refinement of intervention efforts, this chapter first briefly examines elements of behavioral and social science theories and models that have been used to guide much of the research on physical activity (Stokols, 1992).

That is why schools offer an almost population wide setting for promoting physical activity to young people, primarily through classroom curricula for physical education and health education (Sallis, 1993). The CDC (in press) also recommends that comprehensive school and community health programs promoting physical activity among children and adolescents be developed to increase knowledge about physical activity and exercise , develop behavioral and motor skills promoting lifelong physical activity , foster positive attitudes towards physical activity, and encourage physical activity outside of physical education classes(Horne TE, 1994).

Meanwhile CDC's 1994 School Health Policies and Programs Study (Kann et al, 1995) examined the current nationwide status of policies and programs for multiple components of a school health program. The study examined through 12th-grade health education and physical education at state, district, school, and classroom levels (National Institutes of Health Consensus Statement, 2000). Results from the health education component of this study revealed that physical activity and fitness instruction were required in 65 percent of

states and 82 percent of districts and were included in a required health education course in 78 percent of schools. Only 41 percent of health education teachers provided more than one class period of instruction on these physical activity topics during the school year (Collins et al. 1995; quoted in CDC, 2010).

Results from the physical education component of the School Health Policies and Program Study revealed that physical education instruction is required by most states (94 percent) and school districts (95 percent) (Pate, Small, et al. 1995; quoted in CDC, 2010). These policies, however, do not require students to take physical education every year. For instance, although most middle and junior high schools (92 percent) and most senior high schools (93 percent) require at least one physical education course, only half of these middle and junior high schools and only 26 percent of these senior high schools require the equivalent of at least 3 years of physical education. Additionally, only 26 percent of all states require schools to offer a course at the senior high school level in lifetime physical activity (i.e., physical activity that can be practiced throughout one's lifetime) (Pate, Small, et al. 1995; quoted in CDC, 2010). The School Health Policies and Programs Study also revealed that instructional practices in physical education often do not reflect the emphasis on lifetime physical activity that is recommended in the national objectives in *Healthy People 2000* (USDHHS 1990; quoted in CDC 2010), in the National Physical Education Standards (National Association for Sport and Physical Education 1995), and in the CDC's *Guidelines for School and Community Health Programs to Promote Physical Activity Among Youth* (in press). More than half of physical education teachers devoted multiple class periods to traditional sports activities, such as basketball (87 percent), volleyball (82 percent), and baseball/softball (82

percent), whereas much smaller proportions of teachers devoted multiple class periods to lifetime physical activities, such as jogging (47 percent), aerobic dance (30 percent), and swimming (14 percent) (Pate, Small, et al. 1995; quoted in CDC 2010). Additionally, only 15 percent of all physical education teachers required students to develop individualized fitness programs (Pate, Small, et al. 1995; quoted in CDC 2010). Despite current guidelines' emphasis on lifetime physical activity, during the 2 years preceding the study only 22 percent of physical education teachers received in-services training on developing individualized fitness programs, and only 13 percent received training on increasing students' physical activity outside of physical education class (Pate, Small, et al. 1995; quoted in CDC 2010). Detailed findings from the School Health Policies and Programs Study are important because school-based physical education may be the most widely available resource for promoting physical activity among young people in the United States. For physical education to meet public health goals, it should provide all students with recommended amounts of weekly physical activity (USDHHS 1990; quoted in CDC 2010).

Imagine the schools were expected to be the cause for the youth could develop positive intention to undergo behavioral change in doing moderate to vigorous physical activity. However, the schools were not at this stance. Even this would be manifested by most youth didn't engage in recommended level of physical activity at least if they were participated in the recommended level of physical activity at least 60 minutes daily multiple health benefits accrue.

So, it is time seeing students' physical activity related behavior and factors affecting this behavioral change in theoretical model perspective. For the consumption of this paper we

focused on health belief model. The health belief model stipulates that a person's health-related behavior depends on the person's perception of four critical areas: the severity of a potential illness, the person's susceptibility to that illness, the benefits of taking a preventive action, and the barriers to taking that action (Hochbaum, 1958; quoted in Jones and Bartlett, 2011).

In align with this adolescents' physical activity related behavior depend on adolescents perception of critical areas such as perceived benefit, self-efficacy and perceived barriers which would be taken as also factors. Actually, several studies in different countries have been done to show which factors can be related to physical activity level in adolescents. According to Ali (2000) perceived benefits and barriers, self-efficacy and motivation, lack of social support, cooperation, facilities, and sufficient time were the most important concerns for adolescents' physical activity. Time constraints, doing homework, and pleasure to engage in other activities were the most important barriers for high school students not to participate in physical activity and in girls these barriers were far more than boys.

The effect of education on increasing self-efficacy, perceived benefits, and level of physical activity was also confirmed. Studies indicate a difference between girls and boys in following healthy behavior patterns, that is, physical activity. Although, mentioned and other studies have showed several influencing factors on adolescents' physical activity, those factors are affected by different socio cultural conditions too.

Thus, for any intervention planning regarding increasing physical activity we need to know country context conditions. Besides, the studies and researches in developing country in regards to physical activity patterns particularly in youngsters and adolescents

and the factors associated with them based on their sex is insufficient and of poor quality. The scarcity of studies in this field in the case of this land, Ethiopia has necessitated this study. Thus, this study revealed the roles of self-efficacy, benefits of and barriers to physical activity and its relationship with physical activity in male and female preparatory school students in Bishoftu Town.

1.2 Statement of the Problem

This day it is believed that regular and moderate physical activity has positive role for the health of human being (Jones and Bartlett, 2011). And schools provide a unique venue for youth to meet the activity recommendations, as they serve million youth & to teach the importance of regular physical activity for health, and to build skills that support active lifestyles. Unfortunately, most of them get little to no regular physical activity while in school.

Especially in case of some schools budgetary constraints and increasing pressure to improve standardized test scores have caused school officials to question the value of PE and other physical activity programs. This has led to a substantial reduction in the time available for PE, and in some cases, school-based physical activity programs have been completely eliminated.

Yet advocates for school-based physical activity programs argue that allocating time for daily PE does not adversely impact academic performance, and that regular exercise may improve students' concentration and cognitive functioning (CDC, 2010). So, schools are denying in creating conducive environment for enhancing the trend of students' physical activity.

Meanwhile, this day there is also a growing understanding as there is possibility for enhancing the pattern of students' physical activity by applying health belief model. Actually, several studies in different countries have been done to show which factors can be related to physical activity level in adolescents. Perceived benefits and barriers, self-

efficacy and motivation, lack of social support, cooperation, facilities, and sufficient time were the most important concerns for adolescents' physical activity. Time constraints, doing homework, and pleasure to engage in other activities were the most important barriers for high school students not to participate in physical activity and in girls these barriers were far more than boys (Ali, 2000).

Although researchers have studied a wide array of potential influences on physical activity among adults, the section focuses on factors that can be modified, such as self-efficacy and social support, rather than on factors that cannot be changed, such as age, sex, and race/ethnicity (Horne, 1994).

In addition, for any intervention planning regarding increasing physical activity we need to know country context conditions. Besides, the studies and researches in developing country in regards to physical activity patterns particularly in youngsters and adolescents and the factors associated with them based on their sex is insufficient and of poor quality. The scarcity of studies in this field in the case of this land, Ethiopia has necessitated this study. Thus, this study aimed to investigate the roles of self-efficacy, benefits of and barriers to physical activity and its relationship with physical activity in male and female preparatory school students in Bishoftu Town.

1.3 Research question

1. What are the self-efficacy, perceived benefits and barriers of physical activity among preparatory school students in Bishoftu Town?
2. What are the relationships between Bishoftu Preparatory School males and females students with regard to physical activity?

1.4 Objective of the Study

1.4.1 General objective

The general objective of this study is to assess physical activity pattern and its influencing factors among preparatory school students in Bishoftu Town.

1.4.2 Specific objective

The specific objectives of this research are to set capture two-folds:

1. Assess self-efficacy, perceived benefit and barriers to physical activity among preparatory school students in Bishoftu Town.
2. Assess their relationship with physical activity of both male and female preparatory school students in Bishoftu Town.

1.5 Significance of the study

The findings from this study can be used as empirical evidence to the theoretical model – health belief model related to physical activity by revealing influencing factors and their relationship with physical activity pattern among preparatory school students in Bishoftu Town. In addition it can serve other researchers who would like to carry out similar research undertaking by acquiring them with base line information.

1.6 Limitation of the Study

It was difficult to gather reasonable information from the students regarding to some items of the questionnaires.

1.7 Scope of the Study

To make the study manageable, the scope of this study was focused on preparatory school students in Bishoftu Town.

1.8 Organization of the study

This research paper was to set capture five-chapters: chapter one presented the introduction part, embodying background of the study, statement of the problem, objectives of the study, significance of the study, scope and limitations of the study and definition of terms; chapter two presented the literature review and chapter three encompassed research methodology embodied research design, sources of data and data collection techniques, target population and sampling methods and data presentation, processing and analysis technique; chapter four organized data presentation, analysis and discussion and chapter five encompassed summary, conclusion and recommendation.

1.9 Definition of terms

Physical activity – it is defined as any bodily movement produced by the contraction of skeletal muscle that increases energy expenditure above a resting level (CDC, 2010).

Perceived benefit – it is a person's opinion of the value or usefulness of a new behavior (Jones and Bartlett, 2011).

Perceived barriers - It is individual's own evaluation of obstacles in the way of him or her adopting a new behavior (Janz & Becker, 1984).

Self-efficacy – it is the belief in one's own ability to do something (Bandura, 1977).

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

As the researcher I reviewed theoretical literatures about physical activity, benefits of physical activity, schools and physical activity, enhancing physical activity engagement; theoretical framework and empirical literatures till I grasped the conceptual frame work of this study.

2.2 Theoretical basis

2.2.1 Physical activity

Physical activity is defined as any bodily movement produced by the contraction of skeletal muscle that increases energy expenditure above a resting level. Physical activity can be repetitive, structured, and planned movement (e.g., a fitness class or recreational activity such as hiking); leisurely (e.g., gardening); sports-focused (e.g., basketball, volleyball); work-related (e.g., lifting and moving boxes); or transportation-related (e.g., walking to school). The studies in this review included a range of ways to capture the frequency, intensity, duration, and type of students' physical activity (CDC, 2010).

2.2.2 Benefits of physical activity

The benefits of physical activity for older adults are well recognized and have shown to improve the physical, functional and psychological health of this population, as well as maintain the important roles of independence and vitality.

More specifically, moderate physical activity has shown to greatly improve physiological functioning by increasing heart vitality, decreasing hypertension, and reducing arteriosclerosis as well as rates of cardiovascular disease (Sequin & Nelson, 2003; quoted in Jennifer Gristwood, 2011).

It has also shown to increase muscle function, by enhancing strength and power, augmenting tendon and ligament flexibility, and significantly minimizing or even reversing sarcopenia.

Physical activity has also proven psychological and cognitive benefits for older adults including augmented reasoning, working memory and reaction time, decreases in levels of anxiety and depression and improved executive control through the enhancement of prefrontal and temporal grey matter.

2.2.3 Schools and physical activity

Today, obesity is one of the most pressing health concerns for children. Nearly one-third of children and teens, more than 23 million kids, are overweight or obese-and physical activity is a leading contributor to epidemic. The Surgeon General recommends children should engage in 60 minutes of moderate activity most days of the week, yet estimates show that only 3.8 percent of elementary schools provide daily physical education (PE).

Schools serve as an excellent venue to provide students with the opportunity for daily physical activity, to teach the importance of regular physical activity for health, and to build skills that support active lifestyles. Unfortunately, most children get little to no regular physical activity while in school.

Budgetary constraints and increasing pressure to improve standardized test scores have caused school officials to question the value of PE and other physical activity programs. This has led to a substantial reduction in the time available for PE, and in some cases, school-based physical activity programs have been completely eliminated. Yet advocates for school-based physical activity programs argue that allocating time for daily PE does not adversely impact academic performance, and that regular exercise may improve students' concentration and cognitive functioning (Active Living Research, 2009).

2.2.4 Enhancing physical activity engagement

Parental encouragement is positively related to physical activity among preschoolers and parental or adult support for physical activity is positively associated with physical activity among adolescents. Friends' support for physical activity also is positively related to physical activity among adolescents.

Direct help from parents, such as organizing exercise activities or providing transportation is positively related to physical activity among older children and younger adolescents. The availability of equipment has been positively related to physical activity among preadolescent and adolescent girls (Kann L, 1995).

2.3 Theoretical framework for enhancing physical activity engagement

2.3.1 Models Used in Behavioral and Social Science Research on Physical Activity

Health belief model

Numerous theories and models have been used in behavioral and social science research on physical activity. These approaches vary in their applicability to physical activity research. Some models and theories were designed primarily as guides to understanding behavior, not as guides for designing interventions. Others were specifically constructed with a view toward developing interventions, and some of these have been applied extensively in intervention research as well. Because most were developed to explain the behavior of individuals and to guide individual and small-group intervention programs, these models and theories may have only limited application to understanding the behavior of populations or designing communitywide interventions

The health belief model stipulates that a person's health-related behavior depends on the person's perception of four critical areas: the severity of a potential illness, the person's susceptibility to that illness, the benefits of taking a preventive action, and the barriers to taking that action (Jennifer Gristwood, 2011).

The model also incorporates cues to action (e.g., leaving a written reminder to oneself to walk) as important elements in eliciting or maintaining patterns of behavior (Becker 1974). The construct of self-efficacy, or a person's confidence in his or her ability to successfully perform an action (discussed in more detail later in this chapter), has been added to the model (Rosenstock 1990), perhaps allowing it to better account for habitual behaviors, such as a physically active lifestyle.

2.4 Empirical literatures

2.4.1 Determinants of physical activity in adult using the health belief model

Behavioral research in this area includes studies on both the factors influencing physical activity among adults (determinants research) and the effectiveness of strategies and programs to increase this behavior (interventions research).

This study also reviews determinants studies in which the measured outcome was overall physical activity, adherence to or continued participation in structured physical activity programs, or movement from one stage of change to another (e.g., from contemplation to preparation) (Sharp PA, 1992).

Although researchers have studied a wide array of potential influences on physical activity among adults, the section focuses on factors that can be modified, such as self-efficacy and social support, rather than on factors that cannot be changed, such as age, sex, and race/ethnicity (Horne TE, 1994).

2.4.2 Determinants of physical activity in primary school students using the health belief model

The most extensive and promising research on interventions for promoting physical activity among young people has been conducted with students in schools, primarily at the elementary school level. Although many school-based studies have focused on short-term results, a few studies have also examined long-term behavioral outcomes (Connell CM, 1992)

There is limited evidence concerning the effectiveness of school-community programs, interventions in health care settings, family programs, and programs for special populations.

In this section, the emphasis is on interventions designed to promote both unstructured physical activity during free time and supervised physical activity, such as physical education classes. Interventions designed to increase participation in, or adherence to, organized youth sports have been excluded from this review. The review places special emphasis on experimental studies, which feature random assignment of individuals or groups to intervention (experimental) or comparison (control) conditions, or quasi-experimental studies, which feature intervention and comparison groups.

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

3.1 Research Design

With central objectives of the research in mind, the researcher applied cross-sectional, descriptive study design on the basis of its relevance to the study.

3.2 Research approach

Research is done to learn about or find solutions for a definite problem or to discover something new. In order to accomplish this task successfully, it requires to be done through different approaches and means. Consequently, employing appropriate approach is the most crucial thing to do to get appropriate findings.

Selecting the right approaches hinge on the nature of the subject under study. Research approach might be understood as a process used for conducting a research. It refers to the processes the researchers exercise in performing research tasks (Kothari, 2004). In other words, all these approaches which are used by researchers during the study of their research problems are characterized as research methods.

Approach refers to how researchers go about doing research as they can select the methods to be used based on the topic under study. It is a way through which researchers crack to show problems that require investigation and how the research would proceed (Wimmer and Dominick, 2011).

Given the theoretical explanation of both qualitative and quantitative research approaches, the researcher adopted quantitative research approach due to its importance to the subject under study. This was done because the study was needed to be more objective, to have higher sample size and minimize possible cost (material and time).

3.2.1 Quantitative research approach

According to Kothari (2004:05), quantitative is a “type of research approach which roots on the measurement of quantity or amount”. It uses tools like questionnaires and structured interviews to generate statistical data.

It is believed that in this type of fact finding researchers could get more people and contact with these people quicker than it may happens in qualitative one. This approach is assumed to be relatively better in survey studies as it helps to be more objective, to have higher sample size and minimize possible cost (material and time).

3.3 Subject of the study

This study focused on preparatory schools’ students in Bishoftu Town representing the needy areas for this study.

3.4 Population, sample and sample size of the study

The population for this study was preparatory school’s students found in Bishoftu Town. First, based on the gender ratio of the students, from the preparatory school of entire Bishoftu Town, 50% female and 50% male were selected. Total population of the preparatory school was 240. The researcher selected 150 students using Glenn D Israel, (2010) sample size formula,

$$n = N / 1 + N (e)^2$$

n = Sample size

N = Total population of preparatory school students

e = Level of Precision = 0.05

3.5 Sampling Technique

Systematic random sampling was taken as sampling technique for equal proportion of male and female to be incorporated in this study.

3.6 Application of data collection instruments

According to Wimmer and Dominick (2011), method is a specific data collection process in accordance with the assumption of the selected methodology. Therefore, the researcher applied survey type research methods.

3.6.1 Survey/ Questionnaire

As explained earlier, it was necessary to administer questionnaires. This is because; the nature of this study by itself requests the views of students. The researcher looked-for a numerical percentage in order to indicate the view of the respondents. According to Barr, Davis and Johnson (As cited in Singh Yogesh, 2006: 192) “A questionnaire is a systematic compilation of questions that are submitted to a sampling of population from which information is desired.”

So, for this study the data was acquired through a multi sectional questionnaire that included sections as follows: Demographic characteristics, self-efficacy, and perceived benefits and barriers.

3.7 Data Analysis Technique

The gathered data were then studied and analyzed. Statistical tests such as independent t-tests, Spearman's correlation, Pearson's correlation coefficient and linear regression were used to interpret and analyze the data.

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter attempted to present, analyze and interpret the data collected and relate them to the theory discussed in the second chapter of the paper. At the same time, the data is analyzed in association with the research questions raised in chapter one.

The center of focus of the presentation and analysis of data is to reveal physical activity pattern and its influencing factors. Finally, summary of findings with respect to these same issues were analyzed and discussed in a way the researcher could grasp ideas leading to the next conclusion section.

4.2 Demographic information about the respondents

4.2.1 Data presentation

Table 1: Frequency and percentage distribution of the respondents by their age

Age of the respondent 1 = 15-17years, 2 = 18-21years 3 = 22-25years

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 18-21years	150	100.0	100.0	100.0

Source: field survey, April (2016)

As far as age concerned, the table above shows that 150 (100%) of the respondents are between the age of 18 and 21.

4.2.2 Analysis and discussion

Based on the above table it is possible to say that the majority of respondents are young. They are also at the appropriate schooling age for this study the researcher wants to see.

4.3 Physical activity pattern

4.3.1 Data presentation

This study assessed physical activity pattern for male and female students. It was measured by the minute per week these same students spent on physical activities, from moderate to vigorous- intensity activities.

Table 2: Descriptive statistics about Physical activity pattern for male students

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Physical activity	75	225.00	300.00	262.0000	21.82671
Valid N (list wise)	75				

Source: field survey, April (2016)

Table 3: Descriptive statistics about Physical activity pattern for female students

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Physical activity	75	125.00	199.00	161.9867	21.80348
Valid N (list wise)	75				

Source: field survey, April (2016)

The tables above show us male students on average spent 262 minute per week on physical activities, from moderate to vigorous intensity activities. Meanwhile female students also spent on average 161.9867 minute per week.

4.3.2 Analysis and discussion

Actually, based on the above table female students have a trend of spending 262 minute per week on work related physical activities (cleaning the house, caring for preschool children in the house) and transportation related physical activities (walking to school). Very few of them also have a trend of spending time on sport focused physical activity.

Regarding to male few of them have a trend of spending time on sport focused physical activity. However, most of them have a trend of spending time on work related physical activity (loading and unloading, digging) and transportation related physical activities (walking to school).

Meanwhile, Global Recommendations on Physical Activity for Health: youth aged 5–17 should accumulate at least 60 minutes of moderate- to vigorous-intensity physical activity daily. So, in contrast to this in case of both sexes average time students spent on physical activity too less.

4.4 Physical activity pattern variation by sex categories – using independent sample t- test

This study tried to investigate physical activity pattern variation by taking physical activity pattern as continuous dependent variable and independent categorical variable (sex: M = 1 and F = 2). Independent sample t-test output is shown below.

Table 4: Independent sample t-test

Group Statistics

	Sex: 1 = M, 2 = F	N	Mean	Std. Deviation	Std. Error Mean
Physical activity	Male	75	262.0000	21.82671	2.52033
	Female	75	161.9867	21.80348	2.51765

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2- tailed)	Mean Differenc e	Std. Error Differenc e	95% Confidence Interval of the Difference	
									Lower	Upper
Physical activity	Equal variance s assumed	0	0.994	28.075	148	0	100.01333	3.56239	92.97361	107.05305
	Equal variance s not assumed			28.075	148	0	100.01333	3.56239	92.97361	107.05305

Based on the above table significant level is 0.994 above 0.05 which forces the researcher to take the t – test of the upper row in independent t – test. This indicates the population – students in preparatory school are varied in their physical pattern as the result of their sex categories.

4.5 Factors influencing physical activity pattern using health belief model

4.5.1 Reliability test for the scale related questionnaires of self-efficacy

Before the researcher let in to further statistical analysis it was inevitable to check whether the scale related questionnaires of self-efficacy were reliable to the theoretical construct about self-efficacy; so, the researcher carried out internal consistency reliability test. The result of internal consistency reliability test is shown below.

Table5: Internal consistency reliability test for likert scaling questionnaires (Q1 – Q17) about self-efficacy

Reliability Statistics

Cronbach's Alpha	N of Items
1.000	17

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Self efficacy_Q1: I am confident to exercise in tired 0 = cannot do at all, 0.5 = moderately can do, 0.7 = certainly can do, 1 = higher certain can do	8.6400	27.421	1.000	1.000
Self efficacy_Q2: I am confident to exercise in bad mood 0 = cannot do at all, 0.5 = moderately can do, 0.7 = certainly can do, 1 = higher certain can do	8.6400	27.421	1.000	1.000
Self efficacy_Q3: I am confident to exercise if I don't have enough time 0 = cannot do at all, 0.5 = moderately can do, 0.7 = certainly can do, 1 = higher certain can do	8.6400	27.421	1.000	1.000
Self efficacy_Q4: I am confident to exercise if I am on vocation 0 = cannot do at all, 0.5 = moderately can do, 0.7 = certainly can do, 1 = higher certain can	8.6400	27.421	1.000	1.000
Self efficacy_Q5: I am confident to exercise when it is running 0 = cannot do at all, 0.5 = moderately can do, 0.7 = certainly can do, 1 = higher certain can	8.6400	27.421	1.000	1.000
Self efficacy_Q6: I am confident to exercise when I have a lot of work 0 = cannot do at all, 0.5 = moderately can do, 0.7 = certainly can do, 1 = higher certain can	8.6400	27.421	1.000	1.000
Self efficacy_Q7: I am confident to exercise when my family demanding more of my time 0 = cannot do at all, 0.5 = moderately can do, 0.7 = certainly can do, 1 = higher certain can	8.6400	27.421	1.000	1.000
Self efficacy_Q8: I am confident to exercise when my family demanding more of my time 0 = cannot do at all, 0.5 = moderately can do, 0.7 = certainly can do, 1 =higher certain can	8.6400	27.421	1.000	1.000

Continue

Self efficacy_Q9: I am confident to exercise when my family demanding more of my time 0 = cannot do at all, 0.5 = moderately can do, 0.7 = certainly can do, 1 =higher certain can	8.6400	27.421	1.000	1.000
Self efficacy_Q10: I am confident to exercise when my family demanding more of my time 0 = cannot do at all, 0.5 = moderately can do, 0.7 = certainly can do, 1 =higher certain can	8.6400	27.421	1.000	1.000
Self efficacy_Q11: I am confident to exercise when I have attending household chore 0 = cannot do at all, 0.5 = moderately can do, 0.7 = certainly can do, 1=higher certain can	8.6400	27.421	1.000	1.000
Self efficacy_Q12: I am confident to exercise when I have excessive work demand 0 = cannot do at all, 0.5 = moderately can do, 0.7 = certainly can do, 1=higher certain can	8.6400	27.421	1.000	1.000
Self efficacy_Q13: I am confident to exercise when social obligation are very time consuming 0 = cannot do at all, 0.5 = moderately can do, 0.7 = certainly can do, 1=higher certain can	8.6400	27.421	1.000	1.000
Self efficacy_Q14: I am confident I can read or study less in order to exercise more 0 = cannot do at all, 0.5 = moderately can do, 0.7 = certainly can do, 1=higher certain can	8.6400	27.421	1.000	1.000
Self efficacy_Q15: I am confident I can get up early even on weekend to exercise 0 = cannot do at all, 0.5 = moderately can do, 0.7 = certainly can do, 1=higher certain can	8.6400	27.421	1.000	1.000
Self efficacy_Q16: I am confident to exercise when I have worries and problems 0 = cannot do at all, 0.5 = moderately can do, 0.7 = certainly can do, 1=higher certain can	8.6400	27.421	1.000	1.000
Self efficacy_Q17: I am confident to exercise even if I feel depression 0 = cannot do at all, 0.5 = moderately can do, 0.7 = certainly can do, 1=higher certain can	8.6400	27.421	1.000	1.000

After carrying out internal consistency reliability test for scale related questionnaires of self-efficacy; Cronbach's Alpha becomes 1.000 which shows these same questionnaires were reliable to the theoretical construct about self-efficacy.

4.5.2 Reliability test for likert scaling questionnaires about perceived benefit

Regarding to perceived benefit also, before the researcher let in to further statistical analysis it was inevitable to check whether the likert scaling questionnaires about perceived benefit were reliable to the theoretical construct about perceived benefit; so, the researcher carried out internal consistency reliability test. The result of internal consistency reliability test is shown below.

Table6: Internal consistency reliability test for likert scaling questionnaires (Q1 – Q13) about perceived benefits

Reliability Statistics	
Cronbach's Alpha	N of Items
1.000	13

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Perceivedbenefit_Q1: I enjoy exercise 5 = Strongly agree, 4 = Agree, 3 = Indifferent, 2 = Disagree, 1 = Strongly disagree	50.40	81.181	1.000	1.000
Perceivedbenefit_Q2: Exercise decreases feeling depression and tension for me 5 = Strongly agree, 4 = Agree, 3 = Indifferent, 2 = Disagree, 1 = Strongly disagree	50.40	81.181	1.000	1.000
Perceivedbenefit_Q3: I will prevent heart attack by exercising 5 = Strongly agree, 4 = Agree, 3 = Indifferent, 2 = Disagree, 1 = Strongly disagree	50.40	81.181	1.000	1.000
Perceivedbenefit_Q4: Exercise improves my mental strength 5 = Strongly agree, 4 = Agree, 3 = Indifferent, 2 = Disagree, 1 = Strongly disagree	50.40	81.181	1.000	1.000
Perceivedbenefit_Q5: Exercise increases my muscle strength 5 = Strongly agree, 4 = Agree, 3 = Indifferent, 2 = Disagree, 1 = Strongly disagree	50.40	81.181	1.000	1.000
Perceivedbenefit_Q6: Exercise makes me feel relaxed 5 = Strongly agree, 4 = Agree, 3 = Indifferent, 2 = Disagree, 1 = Strongly disagree	50.40	81.181	1.000	1.000
Perceivedbenefit_Q7: Exercise lets me contact with friend and person I enjoy 5 = Strongly agree, 4 = Agree, 3 = Indifferent, 2 = Disagree, 1 = Strongly disagree	50.40	81.181	1.000	1.000
Perceivedbenefit_Q8: Exercise keeps me from having high blood pressure 5 = Strongly agree, 4 = Agree, 3 = Indifferent, 2 = Disagree, 1 = Strongly disagree	50.40	81.181	1.000	1.000

Continue

Perceivedbenefit_Q9: Exercise increases my level of physical fitness 5 = Strongly agree, 4 = Agree, 3 = Indifferent, 2 = Disagree, 1 = Strongly disagree	50.40	81.181	1.000	1.000
Perceivedbenefit_Q10: Exercise increases my stamina 5 = Strongly agree, 4 = Agree, 3 = Indifferent, 2 = Disagree, 1 = Strongly disagree	50.40	81.181	1.000	1.000
Perceivedbenefit_Q11: Exercise improves what I feel about my well-being 5 = Strongly agree, 4 = Agree, 3 = Indifferent, 2 = Disagree, 1 = Strongly disagree	50.40	81.181	1.000	1.000
Perceivedbenefit_Q12: Exercise helps me sleep better at night 5 = Strongly agree, 4 = Agree, 3 = Indifferent, 2 = Disagree, 1 = Strongly disagree	50.40	81.181	1.000	1.000
Perceivedbenefit_Q13: Exercise improves my body outlook 5 = Strongly agree, 4 = Agree, 3 = Indifferent, 2 = Disagree, 1 = Strongly disagree	50.40	81.181	1.000	1.000

The table above presents internal consistency reliability test for the likert scaling questionnaires of perceive benefit with Cronbach's Alpha 1.000 which shows the likert scaling questionnaires were reliable to the theoretical construct about perceived benefit.

4.5.3 Reliability test for likert scaling questionnaires about perceived barrier

Moreover, before the researcher let in to further statistical analysis it was inevitable to check whether the likert scaling questionnaires about perceived barriers were reliable to the theoretical construct about perceived barriers; so, the researcher carried out internal consistency reliability test. The result of internal consistency reliability test is shown below.

Table7: Internal consistency reliability test for likert scaling questionnaires (Q1 – Q7) about perceived barriers

Reliability Statistics				
Cronbach's Alpha		N of Items		
1.000		7		

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Perceivedbarrier_Q1: Exercise takes too much of my time 5 = Strongly agree, 4 = Agree, 3 = Indifferent, 2 = Disagree, 1 = Strongly disagree	22.20	7.611	1.000	1.000
Perceivedbarrier_Q2: Exercise tires me 5 = Strongly agree, 4 = Agree, 3 = Indifferent, 2 = Disagree, 1 = Strongly disagree	22.20	7.611	1.000	1.000
Perceivedbarrier_Q3: Places for me to exercise are too far away 5 = Strongly agree, 4 = Agree, 3 = Indifferent, 2 = Disagree, 1 = Strongly disagree	22.20	7.611	1.000	1.000
Perceivedbarrier_Q4: It costs too much to exercise 5 = Strongly agree, 4 = Agree, 3 = Indifferent, 2 = Disagree, 1 = Strongly disagree	22.20	7.611	1.000	1.000
Perceivedbarrier_Q5: Exercise facilities are in convenient for me with respect to schedule 5 = Strongly agree, 4 = Agree, 3 = Indifferent, 2 = Disagree, 1 = Strongly disagree	22.20	7.611	1.000	1.000
Perceivedbarrier_Q6: Exercise takes too much time from family relationship 5 = Strongly agree, 4 = Agree, 3 = Indifferent, 2 = Disagree, 1 = Strongly disagree	22.20	7.611	1.000	1.000
Perceivedbarrier_Q7: Exercise is hard work for me 5 = Strongly agree, 4 = Agree, 3 = Indifferent, 2 = Disagree, 1 = Strongly disagree	22.20	7.611	1.000	1.000

The table above presents internal consistency reliability test for the likert scaling questionnaires of perceive barrier with Cronbach's Alpha1.000 which shows the likert scaling questionnaires were reliable to the theoretical construct about perceived barrier.

4.6 Correlation between self-efficacy and physical activity pattern of the students

4.6.1 Data presentation

The researcher examined students' belief in their own ability to do physical activity. So, the strength of the relationship in between self-efficacy and physical activity pattern is shown below

Table 8: Correlation between self-efficacy and physical activity pattern

Correlations			
		Physical activity	Self-efficacy Median
Physical activity	Pearson Correlation	1	.912**
	Sig. (2-tailed)		0
	N	150	150
Self-efficacy Median	Pearson Correlation	.912**	1
	Sig. (2-tailed)	0	
	N	150	150
**. Correlation is significant at the 0.01 level (2-tailed).			

The above table indicates the correlation in between self-efficacy and physical activity pattern of the students with 0.912.

4.6.2 Analysis and discussion

Since the figure very approach to 1 it indicates that there is high correlation. Actually, those students' who were in the trend of engaging in more than their average physical activity they were with high scale in their responses to the self-efficacy questionnaires.

So, this finding comply in align with the previous theory as of Martin, Haskard-Zolnierrek & Matteo (2010) said that for a behavior change to be successful, an individual

must have confidence in one's own ability to overcome perceived barriers and have a strong belief that a specific action will result in a positive outcome(Ali,2000).

4.7 Correlation between perceived benefit and physical activity pattern of the students

4.7.1 Data presentation

The researcher examined students' belief that undertaking a recommended action in physical activity could decrease the risk or severity. So, the strength of the relationship in between perceived benefit and physical activity pattern is shown below

Table9: Correlation between perceived benefit and physical activity pattern

Correlations			
		Physical activity	Perceived benefit Median
Physical activity	Pearson Correlation	1	.920**
	Sig. (2-tailed)		0
	N	150	150
Perceived benefit Median	Pearson Correlation	.920**	1
	Sig. (2-tailed)	0	
	N	150	150

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

The above table indicates the correlation in between perceived benefit and physical activity pattern of the students with 0.920.

4.7.2 Analysis and discussion

Since the figure very approach to 1 it indicates that there is high correlation. Actually, those students' who were in the trend of engaging in more than their average physical activity they were with high degree of agreement to the likert scaling questionnaires of perceived benefit.

So, this finding comply in align with the previous theory as of Glanz, et al, (2002) said that one's belief that undertaking a recommended action in physical activity could decrease the risk or severity.

4.8 Correlation between perceived barrier and physical activity pattern of the students

4.8.1 Data presentation

The researcher examined students' belief around the tangible and psychological costs of the advised action in physical activity. So, the strength of the relationship in between perceived barrier and physical activity pattern is shown below

Table10: Correlation between perceived barrier and physical activity pattern

Correlations			
		Physical activity	Perceived barrier Median
Physical activity	Pearson Correlation	1	.781**
	Sig. (2-tailed)		0
	N	150	150
Perceived barrier Median	Pearson Correlation	.781**	1
	Sig. (2-tailed)	0	
	N	150	150
**. Correlation is significant at the 0.01 level (2-tailed).			

The above table indicates the correlation in between perceived barrier and physical activity pattern of the students with 0.781.

4.8.2 Analysis and discussion

Since the figure very approach to 1 it indicates that there is high correlation. Actually, those students' who were in the trend of engaging in more than their average physical activity they were with high degree of agreement to the likert scaling questionnaires of perceived barrier.

So, this finding comply in align with the previous theory as of Glanz, et al, (2002) said that one's belief around the tangible and psychological costs of the advised action, (Jones, 2011).

.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

This study was to assess physical activity pattern and its influencing factors among preparatory school students in Bishoftu Town. To this end, the study tries to answer the following basic questions.

- ✓ What are the self-efficacy, perceived benefits and barriers of physical activity among preparatory school students in Bishoftu Town?
- ✓ What are the relationships between Bishoftu Preparatory School males and females students with regard to physical activity?

The study employed cross-sectional, descriptive study design on the basis of its relevance to the study and it was conducted in one-government preparatory school of Bishoftu Town, Oromia Region. These samples were selected with systematic random sampling for keeping equal proportion of male and female. The subject of the study was 150 preparatory school students. The information was obtained from sample respondents through questionnaires. The data were analyzed using independent sample t-test and Pearson correlation. Based on the data analysis the following major findings were obtained.

- ✓ Students in preparatory school are varied in their physical activity pattern as the result of their sex categories.

- ✓ Male students on average spent 262 minute per week on p hysical activities, from moderate to vigorous intensity activities.
- ✓ Meanwhile female students spent on average 161.9867 minute per week.
- ✓ Students' who were in the trend of engaging in more than their average physical activity they were with high scale in their responses to the self-efficacy questionnaires.
- ✓ Students who were in the trend of engaging in more than their average physical activity they were with high degree of agreement to the likert scaling questionnaires of perceived barriers.
- ✓ Students who were in the trend of engaging in more than their average physical activity they were with high degree of agreement to the likert scaling questionnaires of perceived benefit.

5.2 Conclusion

As of the data presentation, analysis and discussion showing us students of preparatory school in Bishoftu Town have a trend of spending less time for physical activity even with respect to the general recommendation of 60 minutes daily for the sake of healthy life. Meanwhile the researcher also noted as of self-efficacy, perceived benefit and perceived barriers are the strongest predictors to changes in health behavior related to physical activity. The findings of this study have indicated numerous factors influence the level of physical activity in students and undoubtedly the role of these factors are not the same in both genders. Understanding these factors can help educators and other health professionals to plan appropriate interventions. In order to design educational interventions to improve physical activity patterns; various psychological, social, and cultural factors have to be taken into account.

The role of individual values and beliefs a marked impact on physical activity engagement and adherence rates, and are solid predictors of current and future health behaviors in older adults. As there is little research on the strong relationship between the Health Belief Model and other adult physical activity engagement, the potential for future study could prove to be instrumental in better understanding and identify health behaviors associated with this population and have marked effects on future interventions.

5.3 Recommendation

- So it is better for the students, parents of students and physical education teachers to engage their efforts to enhance so far mentioned predictors (self-efficacy, perceived benefit and perceived barrier) for enhancing students' positive behavioral change in exercising physical activity.
- Actually to do students, parents of students and physical education teachers need to have well equipped with the toolkit that can provide them with the resources, materials, and guidance necessary to inform about the importance of regular physical activity, current physical activity guidelines, and how to encourage physical activity among youth.
- Toolkit materials can highlight specific strategies that schools, families, and communities can use to support youth physical activity.
- School boards, school administrators, and principals can feel confident that maintaining or increasing time dedicated for physical activity during the school day will not have a negative impact on academic performance, and it may positively impact students' academic performance.
- Recent recommendations indicate that 6- to 17-yearolds should be participating in at least 60 minutes of physical activity daily schools can and should provide opportunities for physical activity to help students meet this recommendation. In fact, the Institute of Medicine's *Preventing Childhood Obesity: Health in the Balance* report recommended that schools provide a significant portion of students' daily physical activity.
- To enable students to meet these recommended levels of physical activity, the National Association for Sport and Physical Education recommends that all pre-K through grade 12 schools implement a comprehensive school physical activity program, which includes quality physical education; physical activity before,

during, and after school, including recess and other physical activity breaks; extracurricular, noncompetitive physical activity clubs; interscholastic sports; and walk- and bike-to-school initiatives.

- Increasing or maintaining time dedicated to physical activity does not adversely impact academic performance. Indeed, studies suggest there may be a range of possible benefits for some students, including developing a stronger sense of self, fostering educational aspirations, maintaining interest in class, encouraging homework completion, and reducing dropout rates. School administrators and teachers can also encourage after-school organizations, clubs, student groups, and parent groups to incorporate physical activities into their programs and events (e.g., fundraisers, special activities).
- Collectively, the findings from this review support the National Association for Sport and Physical Education's recommendations for a comprehensive school physical activity program. The results also suggest that physical education and physical activity may help advance academic performance for many students and should not hinder academic progress.

REFERENCES

- Active Living Research, (2009), **Physical Education, Physical Activity and Academic Performance**
- Ali, N.S. (2000). **Prediction of coronary heart disease preventive behavior in women: A test of Health Belief Model**
- CDC, (2010), **The Association between School-Based Physical Activity, Including Physical Education, and Academic Performance**. Atlanta: *Department of Health and Human Services*
- Glenn D Israel. (2010). **Determining Sample Size**
- Horne TE. (1994). **Predictors of physical activity intentions and behavioral for rural homemakers**, *Canadian Journal of Public Health*
- Jennifer Gristwood. (2011). **Applying the Health Belief Model to Physical Activity Engagement among Older Adults**
- Jones and Bartlett, (2011). **Health Belief Model**
- Kann L, Collins JL, Pateman BC, Small ML, Ross JC, KolbeLJ. (1995). **The School Health Policies and Programs Study (SHPPS): rationale for a nationwide status report on school health programs**, *Journal of School Health*.
- National Institutes of Health Consensus Statement, (2000), **Osteoporosis prevention, diagnosis and therapy**
- Sallis JF, Nader PR, Broyles SL, Berry CC, Elder JP, McKenzie TL, (1993), **Correlates of physical activity at home in Mexican-American and Anglo-American preschool children**.

Sharp PA, Connell CM. (1992). **Exercise beliefs and behaviors among older employees: a health promotion trial.**

Stokols D. (1992). **Establishing and maintaining healthy environments: toward a social ecology of health promotion.**

APPENDIXES

Self-administered structure questionnaires

**Addis Ababa University
School of Graduate Studies
MED in Physical Education**

Questionnaires to be filled by Preparatory School Students

Dear respondents

The following detailed questionnaires are designed to assess physical activity pattern and its influencing factors among Preparatory School Students. So, the questionnaires have the following parts i.e.

- i. Questionnaires about physical activity pattern related to demographic characteristics**
- ii. Questionnaires about physical activity pattern related to home activities**
- iii. Questionnaires about physical activity pattern related to activities in school**
- iv. Questionnaires about physical activity pattern related to recreational activities**
- v. Questionnaires about physical activity pattern related to self-efficacy**
- vi. Questionnaires about physical activity pattern related to perceived benefit**
- vii. Questionnaires about physical activity pattern related to perceived barriers.**

Lastly, what I want to remind that the information you give is used only for academic purpose and will be kept confidential

I. Questionnaires about physical activity pattern related to demographic characteristics

1. Sex

☐ Male

☐ Female

2. Marital status

☐ Single

☐ Married

3. Education status

☐ Grade 12

☐ Grade 11

4. In which category your heights fall? For example: m.cm

☐ < 1.60

☐ 1.60-1.70

☐ > 1.70

5. In which category your weights fall? For example: Kg

☐ < 45

☐ 45-55

☐ > 55

6. Date of the birth

/ /

7. What is today's date

/ /

II. Questionnaires about physical activity pattern related to home activities

1. Getting up and going to bed (Please put a time at each box)

	Average over the past year	
	<i>At what time do you normally get up?</i>	<i>At what time do you normally go to bed?</i>
On a week day		
On a weekend day		

2. Getting about- Apart from going to school: Which form of transport do you use most often apart from your journey to and from school? Please tick (×) one box per line

Distance of journey	Usual Mode of Transport			
	<i>Car</i>	<i>Walk</i>	<i>Public transport</i>	<i>Cycle</i>
Less than one mile				
1-5 mile(s)				
More than 5 miles				

3. Movement at home: please put a (×) on every line

Number of time you walk in your home	Average over the last 12 months					
	<i>None</i>	<i>1 to 5 times a day</i>	<i>6 to 10 times a day</i>	<i>11 to 15 times a day</i>	<i>16 to 20 times a day</i>	<i>More than 20 times a day</i>
On a week day						
On a weekend day						

4. Activities in and around the home: please put a (×) on every line

Approximate number of hours each week	Average over the last 12 months						
	<i>None</i>	<i>Less than 1 hour a week</i>	<i>1 to 3 hours a week</i>	<i>3 to 6 hours a week</i>	<i>6 to 10 hours a week</i>	<i>10 to 15 hours a week</i>	<i>More than 15 hours a week</i>
Preparing food, cooking							

and washing up							
Shopping for food and supermarkets							
Shopping and browsing in shops for other items (e.g. cloth, toys)							
Cleaning the house							
Doing the laundry and ironing							
Caring for preschool children and babies at home							
Caring for handicapped, elderly or disabled people at home							

III. Questionnaires about physical activity pattern related to activities in school

(please put a (×) on every line)

Activities in school	Activity level		
	Yes	No	Hours per week
Sitting- light work e.g. organizing paper works, Discussing on map			
Sitting- moderate work e.g. laboratory work, hand crafting			
Standing- light work e.g. easy exercise as energizer in class			
Standing - moderate work e.g. preparing equipment for nursery activity			
Walking - moderate work e.g. physical exercises in field			
Walking - heavy work e.g. preparing nursery activities			

IV. Questionnaires about physical activity pattern related to recreational activities

(Please put a (×) on every line & hour and minute at align the column head of average time per episode)

Recreational activities	Number of times you did the activity in the last 12 months								Average time per episode	
	<i>None</i>	<i>Less than once a month</i>	<i>Once a month</i>	<i>2 to 3 times a month</i>	<i>Once a week</i>	<i>2 to 3 times a week</i>	<i>4 to 5 times a week</i>	<i>6 times a week or more</i>	<i>Hours</i>	<i>Minute</i>
Swimming-competitive										
Swimming-Leisurely										
Backpacking or mountain climbing										
Walking for pleasure — you should not include walking as a means of transportation										
Racing or rough terrain cycling										
Cycling for pleasure — you should not										

include cycling as a means of transportation										
Mowing the lawn — during the grass cutting Season										
Watering the lawn or garden in the summer										
Digging, shoveling or chopping wood										
Weeding or pruning										
DIY e.g. carpentry, home or car maintenance										
High impact aerobics or step aerobics										
Other types of aerobics										
Exercises with weights										
Conditioning exercises e.g. using an exercise bike or rowing machine										

V. Questionnaires about physical activity pattern related to self-efficacy

(Rate your degree of confidence by recording a number from 0 to 100 using the scale given below)

Self-efficacy issues	Rating										
	0 (cannot do at all)	10	20	30	40	50 (Moderately can do)	60	70 (Certainly can do)	80	90	100 (Highly certain can do)
I am confident I can participate in regular physical activity when I am tired											
I am confident I can participate in regular physical activity when I am in a bad mood											
I am confident I can participate in regular physical activity when I feel I don't have enough time											
I am confident I can participate in regular physical activity when I am on vacation											
I am confident I can participate in regular											

physical activity when it is raining, snowing, or extremely hot											
I am confident I can participate in regular physical activity when I have a lot of work											
I am confident I can stick to my exercise program when my family is demanding more of my time											
I am confident I can stick to my exercise program even when I have to attend to household chores											
I am confident I can stick to my exercise program even when I have excessive work demands											
I am confident I can stick to my exercise program when social obligations are very time											

consuming											
I am confident I can read or study less in order to exercise more											
I am confident I can get up early, even on weekends, to exercise											
I can manage to carry out my exercise intentions, even when I have worries and problems											
I can manage to carry out my exercise intentions, even if I feel depressed											
I worried the exercise would cause further pain											
I were not sure exactly what exercises to do											

VI. Questionnaires about physical activity pattern related to perceived benefits

(Please tick (×) one box per line)

Perceived benefits/barriers issues	Likert scaling				Strongly disagree
	Strongly agree	Agree	Indifferent	Disagree	
I enjoy exercise					
Exercise decreases feelings of stress and tension for me					
Exercise improves my mental health					
I will prevent heart attacks by exercising					
Exercise increases my muscle strength					
Exercise gives me a sense of personal accomplishment					
Exercising makes me feel relaxed					
Exercising lets me have contact with friends and persons I enjoy					
I am too embarrassed to exercise					
Exercising will keep me from having high blood pressure					
Exercising increases my level of physical fitness					
My muscle tone is improved with exercise					
Exercising improves functioning of my cardiovascular system					
I have improved feelings of well being from exercise.					
Exercise increases my					

stamina					
Exercise improves my flexibility					
My disposition is improved with exercise					
Exercising helps me sleep better at night					
I will live longer if I exercise					
Exercise helps me decrease fatigue					
Exercising is a good way for me to meet new people					
My physical endurance is improved by exercising					
Exercising improves my self-concept					
Exercising increases my mental alertness					
Exercise allows me to carry out normal activities without becoming tired					
Exercise improves the quality of my work					
Exercise takes too much time from my family responsibilities					
Exercise is good entertainment for me					
Exercising increases my acceptance by others					
Exercise improves overall body functioning for me					
There are too few places for me to exercise					
Exercise improves the way my body looks					

VII. Questionnaires about physical activity pattern related to perceived barriers

(Please tick (×) one box per line)

Perceived barriers	Strongly agree	Agree	Indifferent	Disagree	Strongly disagree
Exercising takes too much of my time					
Exercise tires me					
Places for me to exercise are too far away					
It costs too much to exercise					
Exercise facilities do not have convenient schedules for me					
I am fatigued by exercise					
My spouse (or significant other) does not encourage exercising					
Exercise takes too much time from family relationships					
I think people in exercise clothes look funny					
My family members do not encourage me to exercise					
Exercise is hard work for me					

Declaration

I, the undersigned, declare that this research paper is my original work and that all sources of the materials in the research paper have been duly acknowledged. The matter embodied in this research paper has not been submitted earlier for award of any master degree, degree or diploma to the best of my knowledge and belief.

Name: -----

Signature: _____

Date: _____

Confirmation letter

Here I certify that Ato **Shibru Bekele** has contributed a research with a title of
“**PHYSICAL ACTIVITY PATTERN AND ITS INFLUENCING FACTORS
AMONG PREPARATORY SCHOOL STUDENTS IN BISHOFTU TOWN :
APPLICATION OF SOME CONSTRUCTS IN HEALTH BELIEF MODEL**” for
the partial Fulfillment of MED according to research writing guideline.

Approved by:

Advisor’s Name:

Signature:

Date: