



Physical Fitness norms of College Student in Vocational Colleges and Universities in
Zigong City, Sichuan Province, China

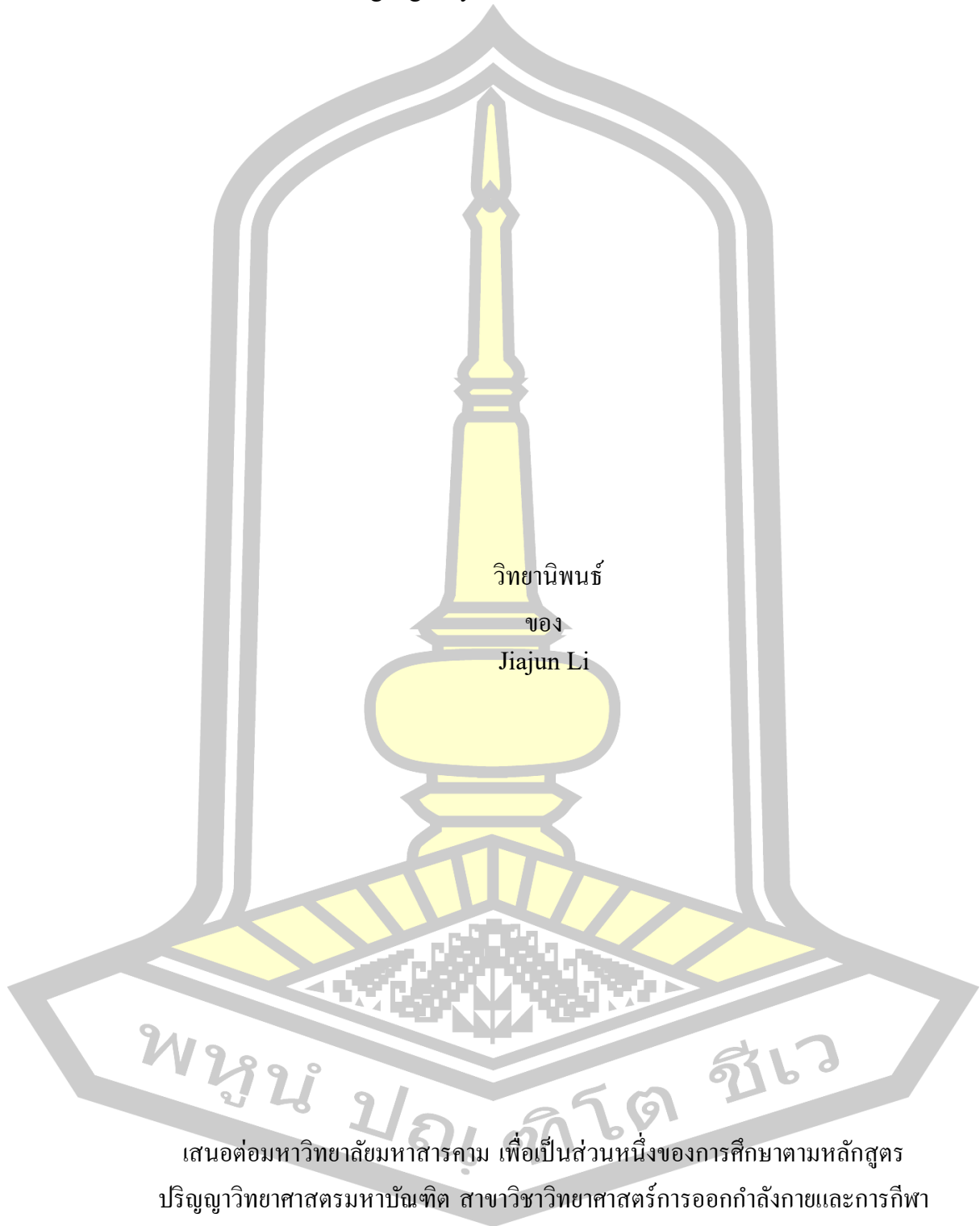
Jiajun Li

A Thesis Submitted in Partial Fulfillment of Requirements for
degree of Master of Science in Exercise and Sport Science

May 2025

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Zigong City, Sichuan Province, China



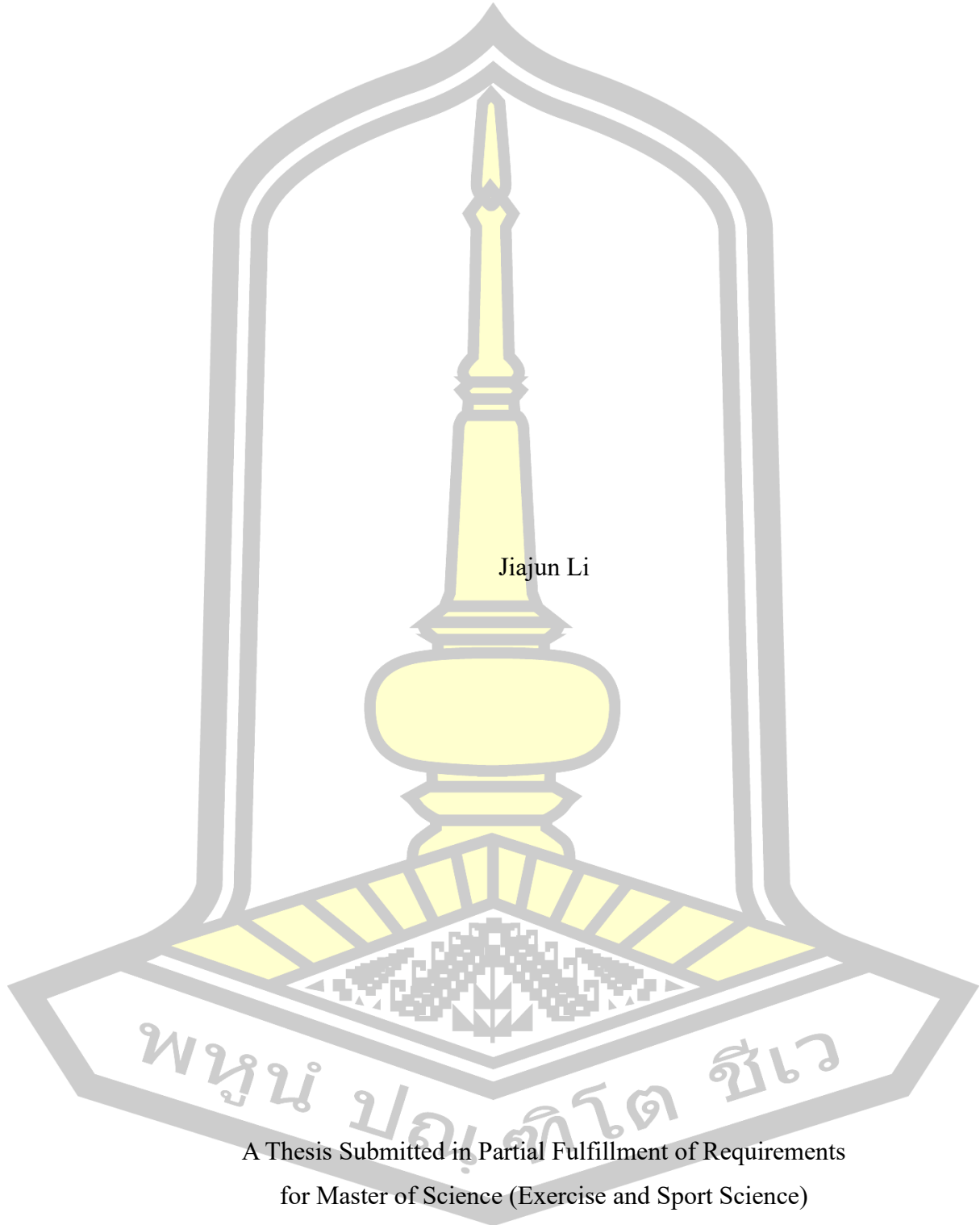
วิทยานิพนธ์
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เสนอต่อมหาวิทยาลัยมหาสารคาม เพื่อเป็นส่วนหนึ่งของการศึกษาตามหลักสูตร
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Physical Fitness norms of College Student in Vocational Colleges and Universities in
Zigong City, Sichuan Province, China



Jiajun Li

A Thesis Submitted in Partial Fulfillment of Requirements
for Master of Science (Exercise and Sport Science)

May 2025

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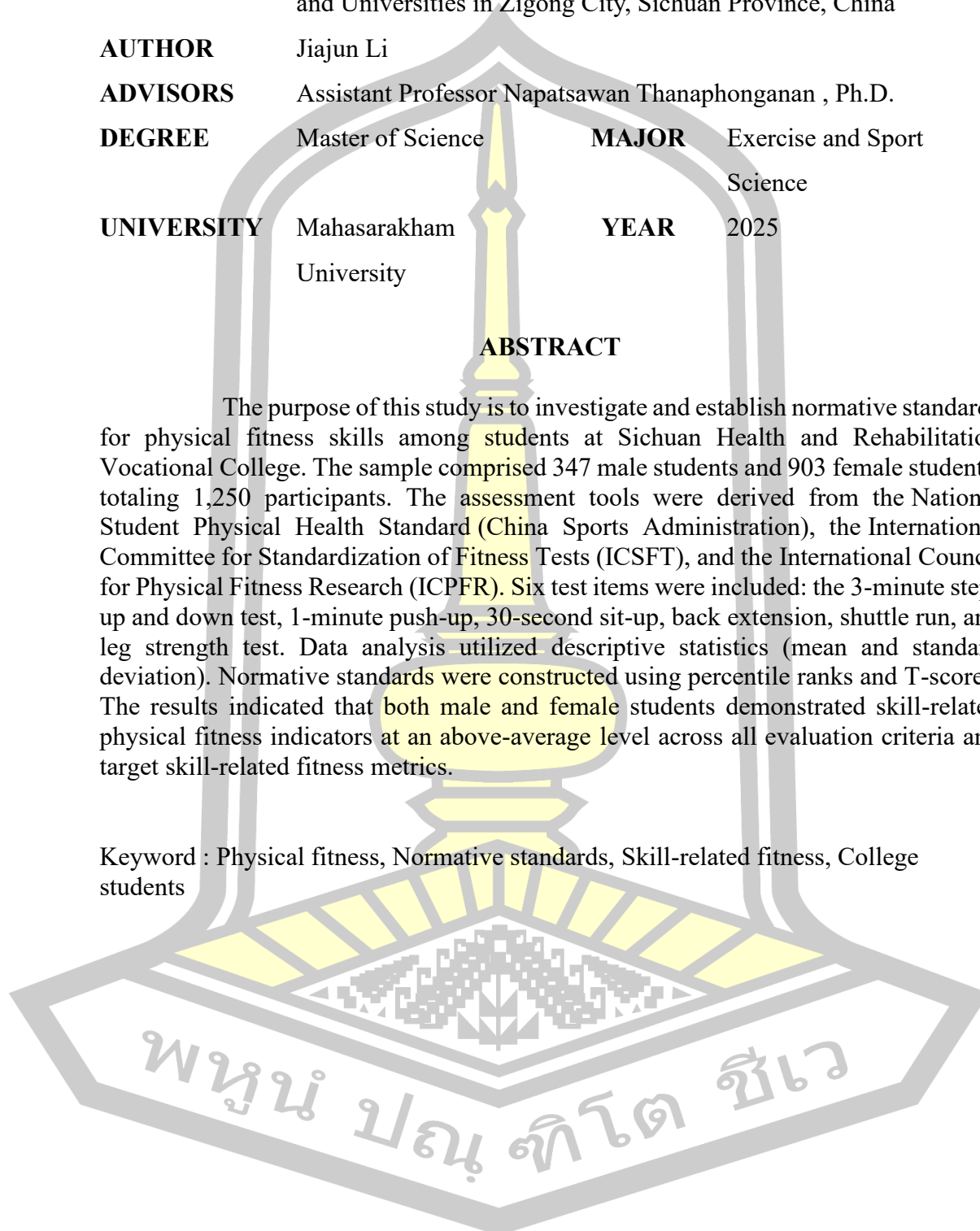
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TITLE	Physical Fitness norms of College Student in Vocational Colleges and Universities in Zigong City, Sichuan Province, China		
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ABSTRACT

The purpose of this study is to investigate and establish normative standards for physical fitness skills among students at Sichuan Health and Rehabilitation Vocational College. The sample comprised 347 male students and 903 female students, totaling 1,250 participants. The assessment tools were derived from the National Student Physical Health Standard (China Sports Administration), the International Committee for Standardization of Fitness Tests (ICSFT), and the International Council for Physical Fitness Research (ICPFR). Six test items were included: the 3-minute step-up and down test, 1-minute push-up, 30-second sit-up, back extension, shuttle run, and leg strength test. Data analysis utilized descriptive statistics (mean and standard deviation). Normative standards were constructed using percentile ranks and T-scores. The results indicated that both male and female students demonstrated skill-related physical fitness indicators at an above-average level across all evaluation criteria and target skill-related fitness metrics.

Keyword : Physical fitness, Normative standards, Skill-related fitness, College students



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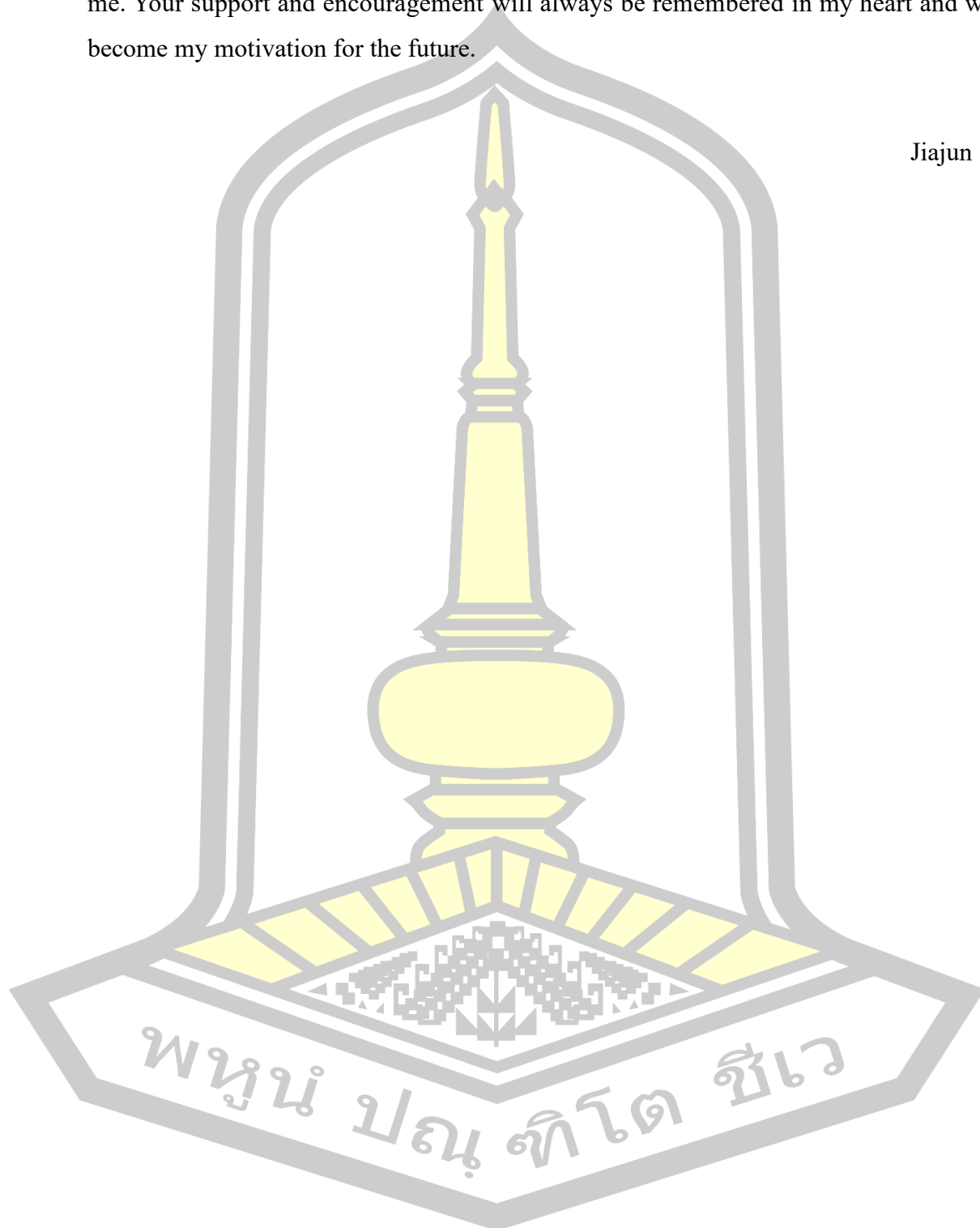
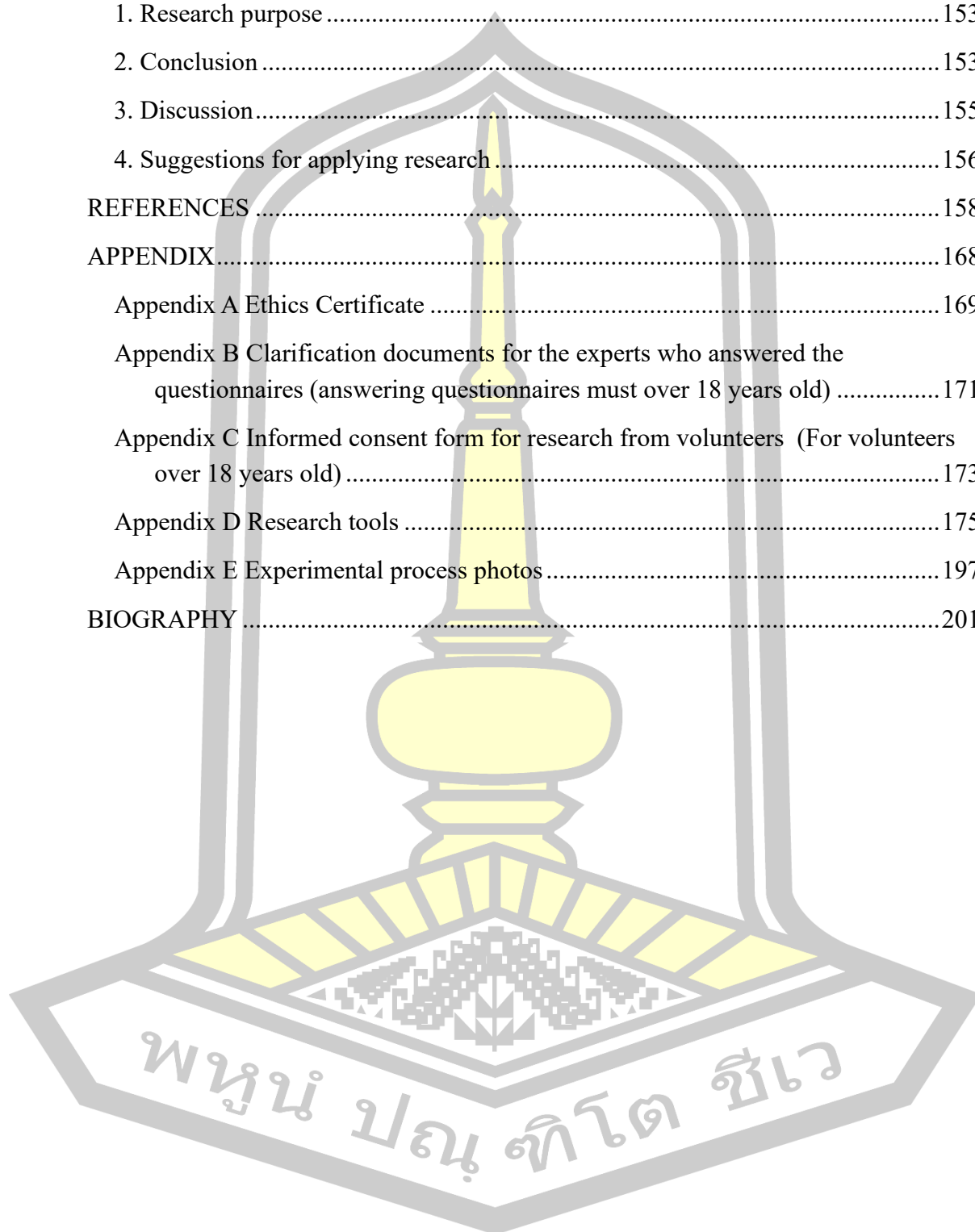


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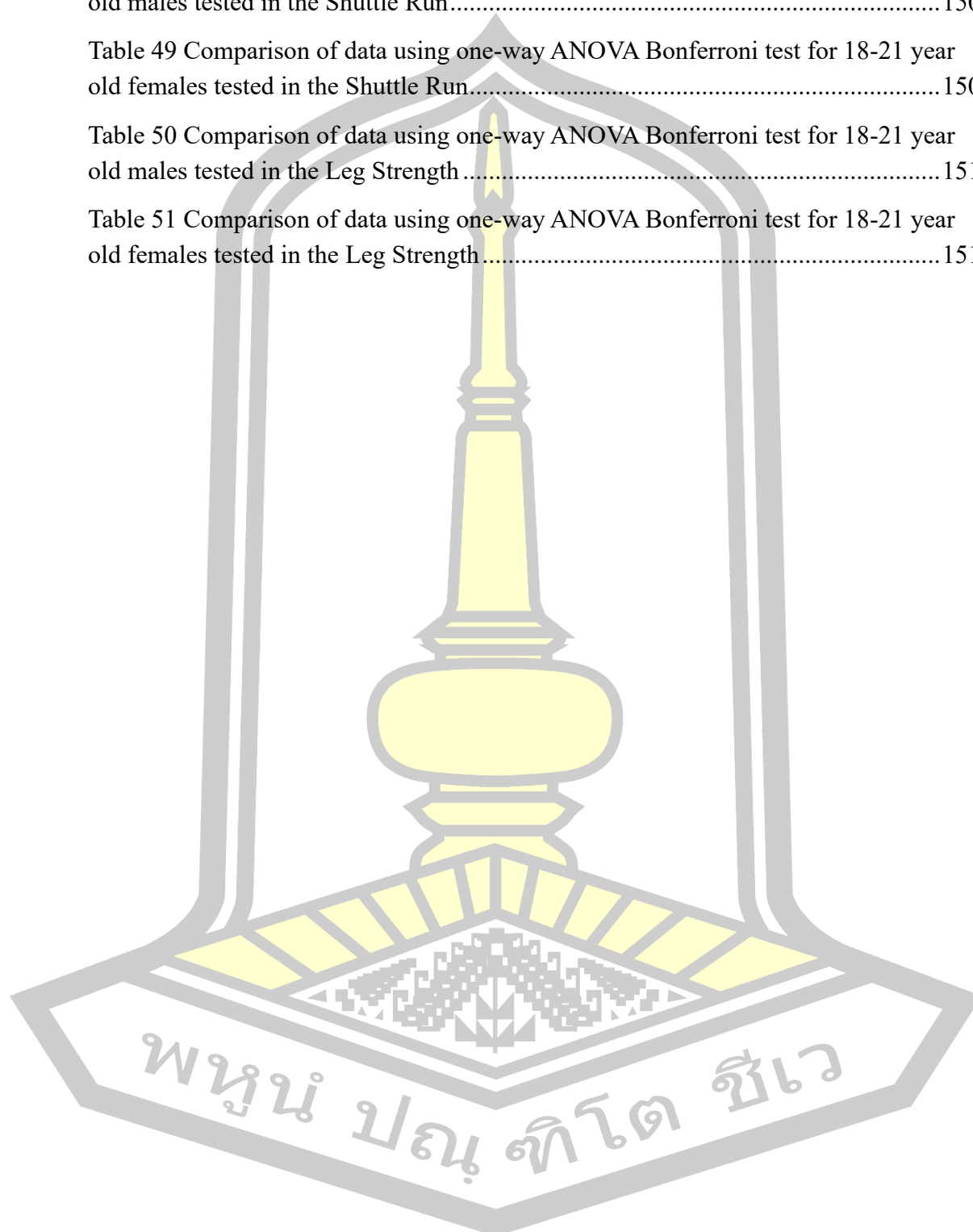
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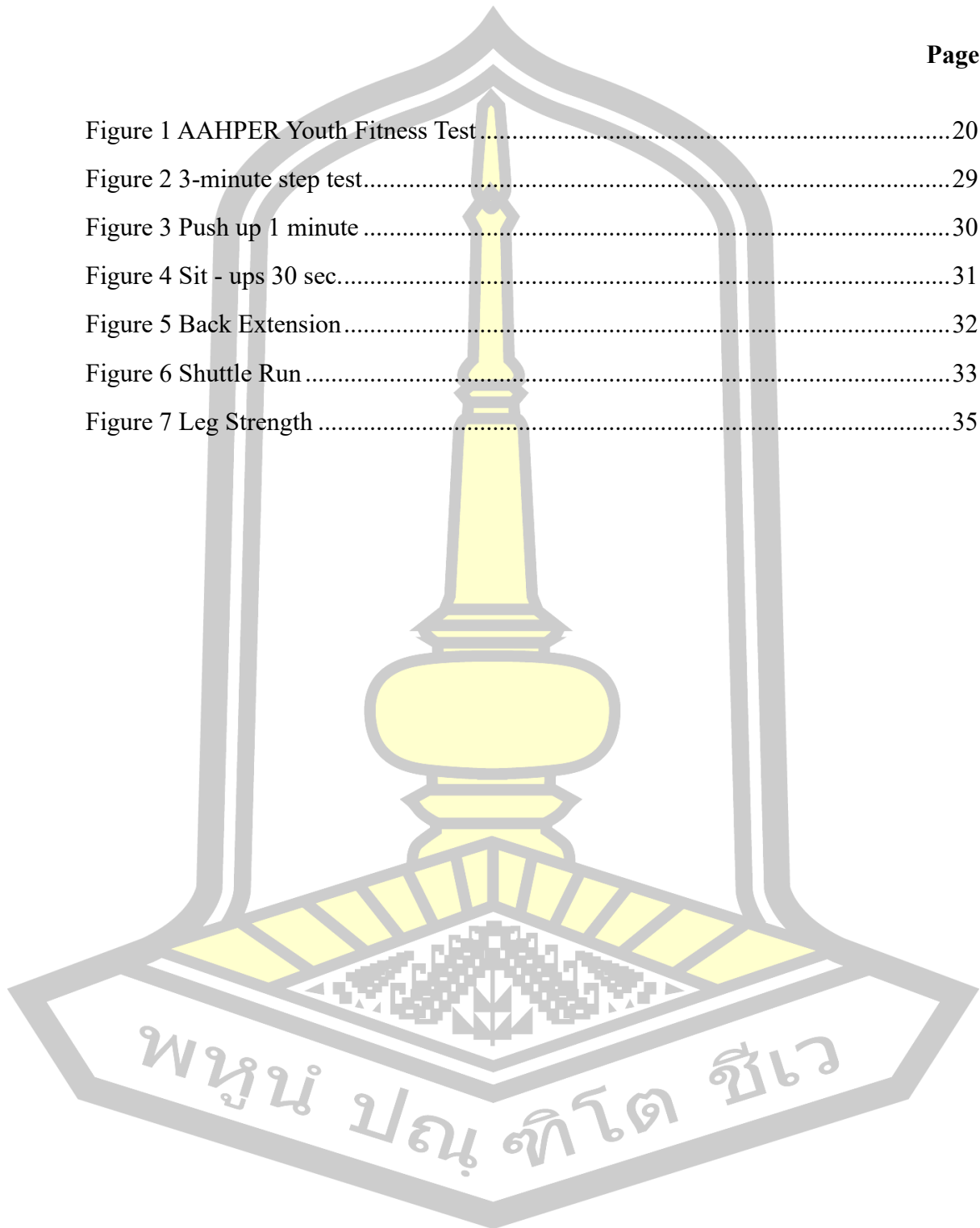
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CHAPTER I

INTRODUCTION

1. Background

Health is not only the cornerstone of life, but also a prerequisite for happiness. Without a healthy body, it is difficult to enjoy any amount of wealth or achievement. As an old adage says, "Good health is the greatest wealth." This means not only the absence of disease, but also physical strength, mental peace and spiritual fulfilment. Therefore, valuing and maintaining one's health, like caring for life's most precious treasure, is an indispensable part of everyone's pursuit of a happy life. It is undeniable that the physiological functions and qualities of the body are essential to health, and they are the basis for maintaining activities of daily living and achieving long-term health goals. Physiological functions include the proper functioning of various organ systems such as the heart, lungs, nervous system, etc. These systems co-ordinate with each other to ensure that the body is able to adapt to changes in the external environment, carry out efficient metabolic activities, and defend itself against diseases. In turn, good physical fitness, such as appropriate body weight, muscular strength, endurance, flexibility and co-ordination, improves the quality of an individual's daily life and enables him or her to carry out a wide range of physical tasks with ease. Physiological function tests, on the other hand, focus more on assessing the functioning of various body systems such as the heart, lungs, and metabolic system, and these tests are designed to understand an individual's physiological health and the body's ability to adapt to exercise. Physical fitness tests typically focus on assessing an individual's physical attributes such as strength, endurance, agility, and speed, and these tests are designed to measure an individual's ability to perform specific physical tasks (Sliusarchuk, et al. 2022).

The Dictionary of Physical Education (1984 Chinese edition) defines physical fitness as: "Physical fitness is a capacity for human activity. It refers to the body's functional abilities such as strength, speed, endurance, sensitivity and flexibility, which are manifested in sports, labor and life". Physical fitness is best demonstrated through the use of the five physical attributes, i.e., the ability of the body to perform well in diverse environments and in the face of different challenges. Physical fitness

can be seen to play a vital role in supporting individuals to fulfil their tasks and sustain their livelihoods. The advantages of this physical fitness are not only reflected in the completion of work and daily life but also provide a strong support and safeguard to cope with various challenges and stressful situations. According to the concept of physical fitness, physical fitness test assesses whether the physical fitness is in a healthy state or not (Chunli Zhong, 2022). Maintaining good physical fitness requires regular exercise and adherence to appropriate health standards, which provide a reference for the body's external performance and reflect the health of the internal physiological state.

Physical fitness tests are key tools for assessing an individual's physical fitness and health. They provide a holistic view of an individual's physical abilities and athletic performance by measuring a number of dimensions such as strength, endurance, agility and speed. These tests not only reveal an individual's strengths and weaknesses in specific fitness areas but also help to develop a targeted fitness programmed to improve overall health and quality of life. Dynamic monitoring based on the results of physical fitness tests can significantly enhance the effectiveness of health intervention measures (Wang Wei et al., 2023).

In a study by Solera-Sanchez et al. (2021), in which adolescents were tested for physical fitness in the areas of cardiorespiratory fitness, muscular strength, and athleticism, the researchers found that the physical fitness component had a significant positive effect at baseline on health-related quality of life at the subsequent 24 months. This finding emphasizes the importance of fitness testing in monitoring health progress and preventing potential health problems and also highlights the important role of physical fitness enhancement in improving the mental and physical health of adolescents. Therefore, fitness testing is not only an important tool for assessing an individual's current health status, but also a foundation for developing effective fitness programmers and promoting long-term health. Through regular fitness testing, individuals and health professionals can gain a better understanding of their physical condition and develop and adjust training programmers to achieve optimal health and fitness goals.

In today's world of information technology and globalization, the environment in which young people grow up has changed dramatically, and so has their physical

fitness, and it is particularly important to understand changes in fitness levels when studying trends in population health. Physical fitness levels of the population are always changing, usually once every five years. This change may be influenced by a number of factors, including changes in lifestyle, nutritional status and socio-economic conditions. Therefore, regular monitoring of changes in fitness levels is essential for the development of public health policies and health promotion programmers (Radulovic, et al. 2022). China's current National Physical Fitness Standards for Students, which were revised by the national education department in 2014, are a set of standards designed to scientifically evaluate the physical fitness of students at different age levels. This standard applies to students in kindergartens, primary schools, junior high school students, senior high school students, secondary vocational colleges and higher education colleges. It covers several aspects of evaluation criteria, mainly including body composition, muscular strength, speed, endurance, flexibility and so on. National standards are distributed by age and do not take into account the different growing environments and socio-economic conditions in each region, which may result in these standards not being fully applicable to all groups. Differences in geographic location, climatic conditions, dietary habits, lifestyles, and educational and medical resources all affect the growth, development and health status of individuals.

The terrain of the Zigong area is mainly hilly, accounting for more than 80% of the total area of Zigong City. The Zigong area has a subtropical humid monsoon climate with severe floods (Li Linjie, 2013). Since there are many low hills in the Zigong area, life and travel are often uphill. Therefore, the cardiopulmonary function indicators of students are generally good, and each age group is higher than the national average. Factors such as geographical environment and climatic conditions have caused the height of teenagers in Sichuan Province to be lower than the national average. In addition, due to dietary problems, their weight has not reached the national level (Zhao Na, 2015). It can be seen that the current physical condition of students in Zigong City, Sichuan Province has its own characteristics. Therefore, in order to more accurately assess and promote the healthy development of college students, these standards may need to be adjusted and refined regionally to reflect the characteristics of local college students. The actual situation.

In this study, Sichuan Health and Rehabilitation Vocational College was selected as the experimental school primarily due to its significant representativeness. Sichuan Province features diverse terrain and climate conditions. While national physical fitness tests are conducted nationwide, they often fail to adequately account for the impact of regional weather and environmental factors on students' physical fitness. The location of Sichuan Health and Rehabilitation Vocational College encompasses most common weather patterns in Sichuan and embodies the typical geographical and climatic characteristics of the Sichuan Basin. This grants the school broad representativeness regarding the relationship between student physical fitness and regional environmental factors, making it an ideal experimental institution for research on student physical fitness testing in Sichuan.

As a vocational and technical college specializing in health and rehabilitation, student populations across its departments share similar professional orientations and exhibit no significant disparities in physical fitness status. This homogeneity ensures high similarity among students regarding multiple factors influencing physical fitness. Such consistency not only effectively controls interference from individual differences in research outcomes but also provides a homogeneous sample pool for large-scale sampling research, thereby enhancing the accuracy and generalizability of findings. Based on these attributes, researchers selected student cohorts from the Nursing School and Rehabilitation School of this institution as sample sources. This approach strongly facilitates the advancement of this study in optimizing and refining existing student physical fitness testing systems.

After collecting and reviewing a large amount of relevant literature, the researchers found that the three standards of China's General Administration of Sports, "National Student Physical Fitness Standards", International Committee Standardization of Physical Fitness Testing (ICSPFT), and AAHPER Youth Fitness Test have been widely used in the field of college student physical fitness testing. Application, the application of these standards is not only common among domestic college students, but also has a certain influence on an international scale. The "National Student Physical Health Standards" of the General Administration of Sport of China is one of the authoritative standards for evaluating physical health levels in the domestic sports industry. It was formulated with reference to a large number of

scientific research results and actual data, and is widely used in schools, sports institutions and other units. The International Committee Standardization of Physical Fitness Testing (ICSPFT) is an international standards organization dedicated to promoting the international unification and standardization of physical fitness testing standards. The standards it publishes also have a certain influence internationally. In addition, the AAHPER Youth Fitness Test was developed by the American Association for School Physical Education and Health (AAHPER). It is a testing standard for adolescent physical fitness and is widely used around the world.

Based on the characteristics and application of each standard, this study decided to use the National Student Physical Health Standards of the General Administration of Sport of China, the International Committee Standardization of Physical Fitness Testing (ICSPFT), and the AAHPER Youth Fitness Test. These standards are formulated based on full consideration of scientific, practicality, feasibility and credibility. They can comprehensively assess the physical health level of college students and provide a solid foundation and reliable data support for further research. Includes the following 6 test items: 1) 3 minutes step up and down 2) push up 1 minute 3) sit-ups 30 Sec. 4) Back Extension 5) Shuttle Run 6) leg strength. Currently, all major schools and sports institutions in China use the National Student Physical Health Standards of the General Administration of Sport of China to test students. The test items include: 1) Vital Capacity 2) 50-Meter Sprint 3) Standing Long Jump 4) Sit-Ups or Pull-Ups 5) Sit and Reach 6) 1000-Meter Run (Men) / 800-Meter Run (Women). None of the six test items developed in this study were included. The selection of these six test items was based on the above three standards and combined with the comprehensive assessment needs for the physical fitness of college students in Zigong City. The step test assesses cardiovascular endurance performance, the push-up assesses upper body strength and endurance, the sit-up assesses abdominal muscle endurance, the back extension and leg strength tests consider waist and leg muscle strength and endurance, and the shuttle run. The test takes into account factors such as speed and agility. The selection of these six items is consistent with the purpose of the research, which can not only comprehensively assess the physical health level of college students, but also provide targeted data support, help analyze and interpret the research results, and provide a basis for further research to

comprehensively and effectively evaluate the physical health level of college students and build normal standards for physical skills of students in Sichuan Rehabilitation Vocational College.

2. Objective of the study

2.1 To study the physical fitness of students in Sichuan Health and Rehabilitation Vocational College.

2.2 To construct normal criteria for physical fitness for students' skills in Sichuan Health and Rehabilitation Vocational College.

3. Scope of the study

Sichuan Health and Rehabilitation Vocational College has a total student population of 2,500. A stratified random sampling method was employed to select 1,250 students aged 18-21 from the School of Nursing and School of Rehabilitation. Gender served as the stratification variable, dividing students into two groups: 347 male students and 903 female students.

4. Definition of terms

4.1 Physical fitness

Physical fitness refers to an individual's comprehensive abilities in physiological and biomechanical aspects that enable individuals to effectively perform various physical activities and sports. This article's research on college students' physical fitness mainly includes cardiopulmonary endurance, muscle strength, muscle endurance, and body speed and agility.

This study draws on domestic and foreign experimental experience, refers to relevant research by scholars in the field of physical health, and combines the current development of physical health of college students in my country to construct a new health and fitness standard for college students in Sichuan Health and Rehabilitation Vocational College. The 6 physical fitness items I designed this time are from the "National Student Physical Health Standards" of the General Administration of Sport of China, the International Committee Standardization of Physical Fitness Testing (ICSPFT), and the AAHPER Youth Fitness Test, including the following 6 items:

1) 3 minutes step up and down

Used to measure cardiovascular endurance during timed exercise. Participants perform step exercises at a specified pace and duration, with post-exercise recovery heart rate measured to assess this capability.

2) push up 1 minute

Evaluates upper body strength and endurance. Participants complete as many standard push-ups as possible within one minute, providing a quantitative assessment of upper body fitness.

3) sit-ups 30 Sec.

Assesses abdominal muscle endurance. The number of correctly executed sit-ups completed in 30 seconds reflects the participant's ability to sustain abdominal muscle activity over short durations.

4) Back Extension

Measures the strength and endurance of lower back muscles. Participants lie prone and lift their upper body; the height achieved is used to determine lower back muscular capacity.

5) Shuttle Run

Evaluates speed and agility. Participants sprint back and forth over a set distance to retrieve objects, with shorter completion times indicating superior speed and agility.

6) leg strength

Assesses leg muscle strength and endurance. Participants repeatedly stand up and sit down from a chair within one minute, with higher repetition counts indicating better leg muscle performance.

4.2 Norm

A set of norms for development or achievement, usually based on the average performance or common characteristics of most people, that reflect common patterns or characteristics of behavior in society.

Normative Procedure for This Study:

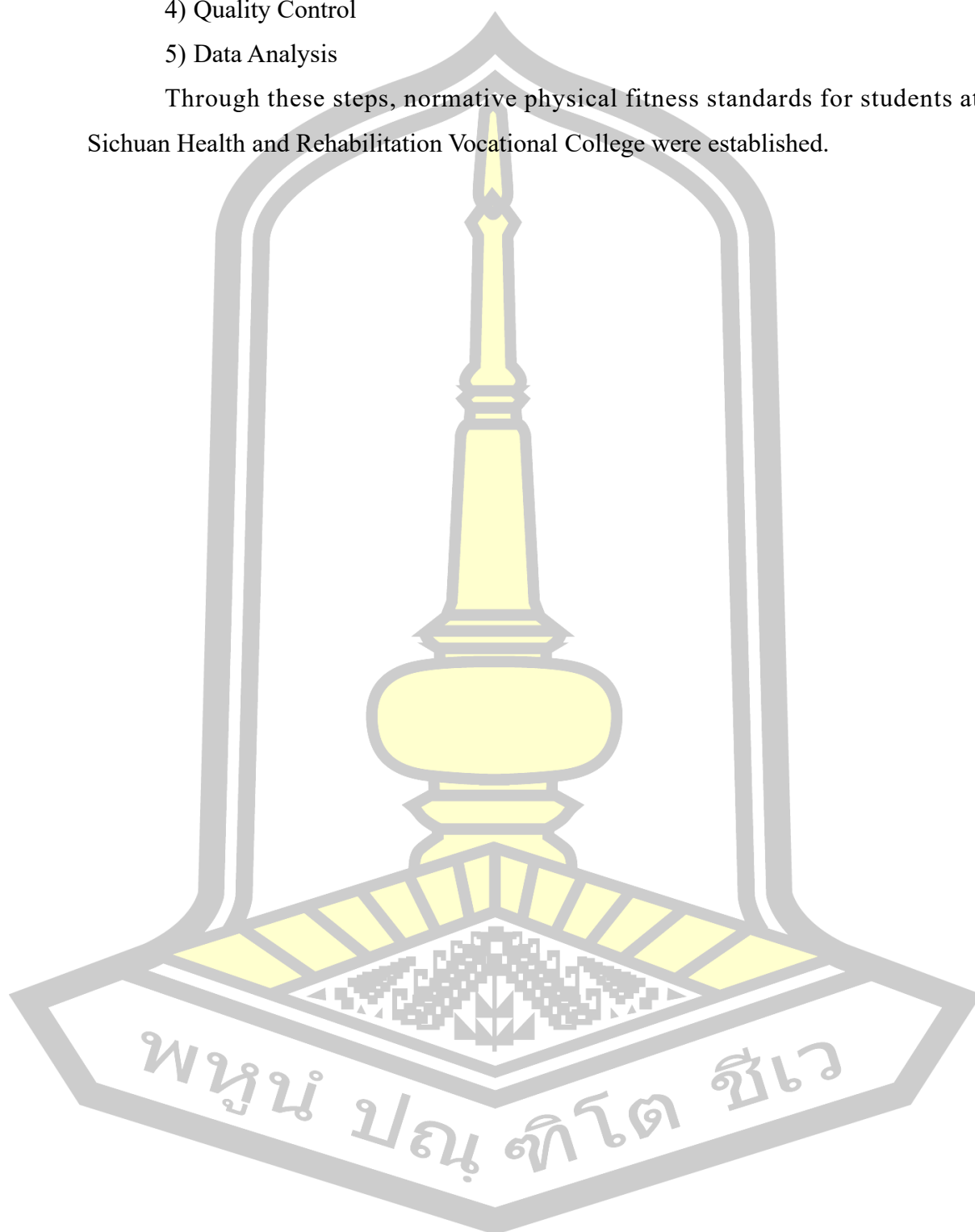
- 1) Research Preparation
- 2) Pilot Testing

3) Formal Testing Protocol

4) Quality Control

5) Data Analysis

Through these steps, normative physical fitness standards for students at Sichuan Health and Rehabilitation Vocational College were established.

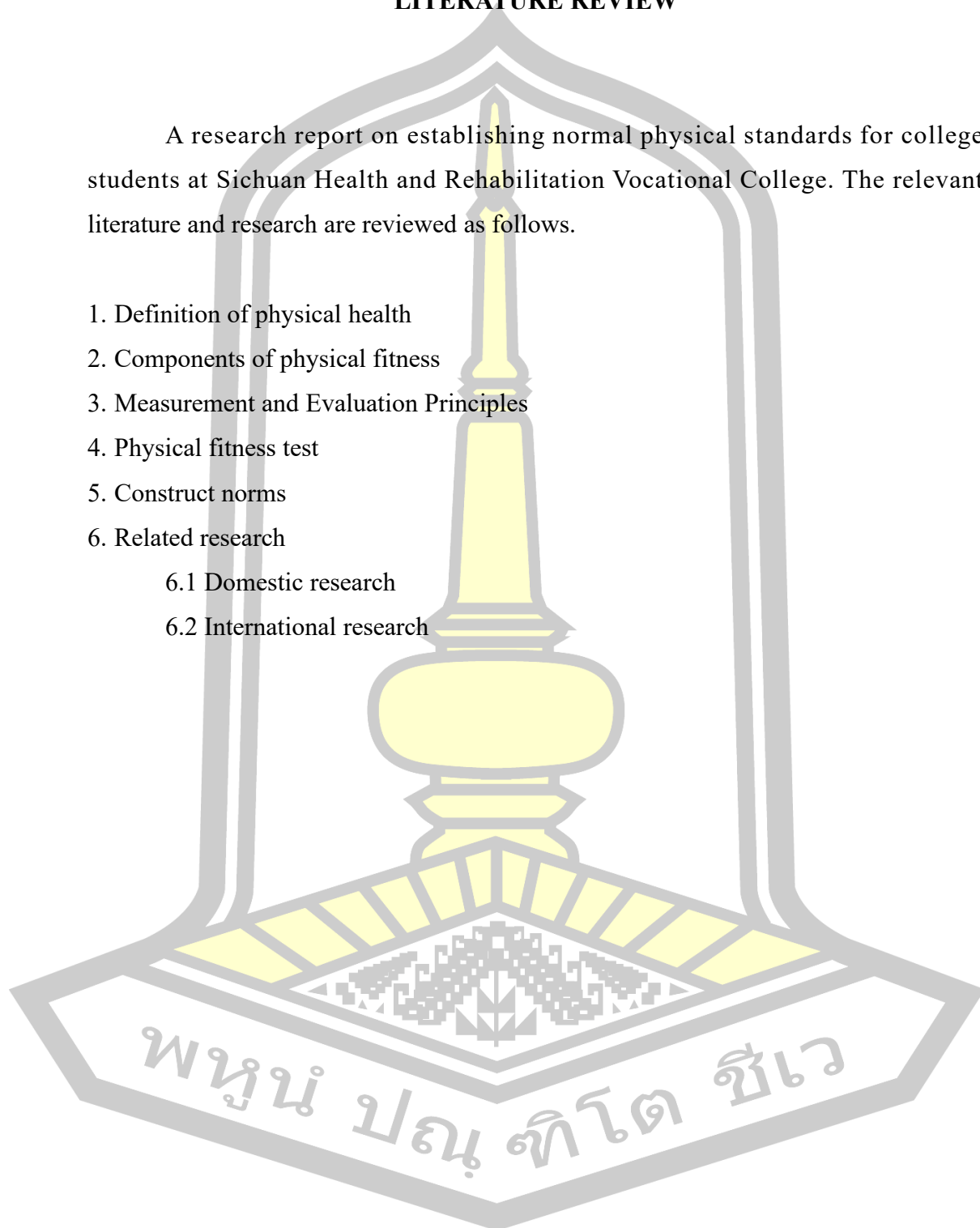


CHAPTER II

LITERATURE REVIEW

A research report on establishing normal physical standards for college students at Sichuan Health and Rehabilitation Vocational College. The relevant literature and research are reviewed as follows.

1. Definition of physical health
2. Components of physical fitness
3. Measurement and Evaluation Principles
4. Physical fitness test
5. Construct norms
6. Related research
 - 6.1 Domestic research
 - 6.2 International research



1. Definition of physical health

The World Health Organization (WHO) definition of physical health emphasizes the comprehensiveness of physical, mental and social aspects. The Charter of the World Health Organization states: Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. This definition highlights the comprehensive and proactive nature of health. Physical health is not only the absence of disease, but also covers comprehensive health in three aspects: physical, mental and social.

Chen Daming (1993) pointed out in the book "Practical Physique" that human physical fitness is a comprehensive, relatively stable characteristic formed on the basis of heredity and acquisition, which shows the morphological structure of the human body, Physiological functions and psychological factors. Physical fitness covers physical development, energy supply, athletic ability, mental development and adaptability.

Hao Yao (2016) pointed out in a review of the development of institutional research at home and abroad that foreign scholars 'definitions of "physique" vary from country to country and region. The Western theory of the meaning of "physique" originated earlier and can be traced back to Hyocrates' theory of humours. Among countries today, Germany defines "physique" as "work ability", the British interpret it as "fitness", the French define it as physical adaptability, and the United States defines it as "physical health quality."

Blanco-Donoso, et al. (2020) definition of physical health emphasizes the comprehensive ability of the human body: having enough energy to devote to daily work and study without feeling tired easily, while also enjoying the fun brought by leisure activities, and have the ability to deal with emergencies.

It can be seen that physical health has a great impact on people's life, work and social adaptation. It is also the state of life that everyone pursues and yearns for. To sum up, the current definition of physical health in academic circles is not completely consistent, but they all believe that physical health is a comprehensive indicator. Therefore, maintaining physical health requires comprehensive consideration of the functional status of each body system, metabolic level, immune capacity, psychological quality, social adaptability and other factors. In addition, lifestyle

factors such as eating habits, exercise, and sleep quality also play an important role in physical health. Therefore, we should take active health management measures to maintain good physical health.

2. Components of physical fitness

Professor Ji Liu (1998), in his "Prospects of Physical Education", divided physical fitness into two types of physical fitness related to health and sports skills. Physical fitness related to health mainly include: cardiorespiratory endurance, muscle strength, body composition and flexibility, etc.; physical fitness related to sports skills mainly include: speed, agility, coordination, strength and reaction time, etc.

Chai Jianshe (2000) believed in the study of physical fitness and sports quality that as a measure of physical fitness and a significant personality sign, the body refers to the human body, and the personality characteristics of physical fitness are manifested in the comprehensive functions of the human body, including life. Function, labor function, motor function, psychological function, intellectual function, etc. These functions use the body as a material carrier to form a synthesis of multiple qualities.

Li Zhiwen (2001) proposed in the discussion of the concept of physical fitness that physical fitness is an ability displayed by various organs of the human body during muscle movement through exercise, including strength, agility, speed, endurance and adaptive changes in physical state. and other physical characteristics. Greg Payne et al. (2008) pointed out that the composition of physical strength includes many aspects, summarizing physiological and physical indicators. The five aspects of physical fitness and health are related to movement quality, morphological quality, metabolic capacity, cardiopulmonary function and muscle quality.

Tian Maijiu (2012) discussed the concept of physical fitness based on sports training in his book "Sports Training". The book believes that physical fitness is the most basic athletic ability of athletes and an important component of their competitive ability. Broadly speaking, physical fitness includes three aspects: body shape, function, and quality; the level of physical fitness is closely related to the morphological characteristics of the human body and the functional characteristics of the human body.

To sum up, scholars and experts have analyzed the composition of physical fitness from various research aspects and angles. It can be seen that the composition of physical fitness is relatively broad. Based on the research results of the above-mentioned experts and scholars, this study defines the composition of physical fitness as: Physical fitness refers to the ability acquired through acquired sports training based on innate genetic factors in terms of cardiopulmonary endurance, muscle strength, muscle endurance, and body speed.

3. Measurement and Evaluation Principles

S.S. Stevens defined measurement in 1951: Broadly speaking, measurement is the assignment of numbers to things based on laws. This definition summarizes the common features of physical (physical) measurement, social measurement and psychological measurement. The results of measurement are specific numerical values that can be used for comparison, ranking or statistical analysis. In education, measurement typically involves the quantitative evaluation of learners' knowledge, skills, attitudes, or other learning outcomes. This includes using tests, exams, questionnaires and other tools to collect data and numerically represent learning outcomes.

Hu Ling (2008) pointed out that evaluation is a concept widely used in various fields. It is a process of systematic evaluation of a certain thing, activity or process. In the field of education, assessment is used to evaluate student learning outcomes, teaching quality, course content, and educational policies. It involves not only measuring learners' learning outcomes, but also the interpretation and value judgment of these outcomes. The purpose of assessment is to understand learners' learning progress, determine whether they have achieved established learning goals, and make teaching decisions accordingly.

3.1 Measurement and Assessment in Sport

Sports measurement and evaluation is the process of using scientific methods to make quantitative and value judgments on certain attributes or characteristics of people or phenomena in the sports category. The various components of physical fitness are quantified through a series of standardized tests.

Han Zhimin (2013) pointed out in the application of physical education measurement and evaluation in physical education teaching that the purpose of measurement is evaluation. Good evaluation can allow students to find confidence in the process of learning skills and discover the value of their own learning.

Zhao Xu (2021) pointed out in the analysis of the relationship between sports measurement and evaluation in physical education teaching that sports measurement provides quantitative information on people's physical fitness, body shape, etc. through certain measurement standards, while sports evaluation is based on specific standards. Conduct value judgment activities on the basis of sports measurement.

Zhang Qinzhi et al. (2022) pointed out in the study that sports measurement is a category of fact judgment, and sports evaluation is a category of value judgment. Sports measurement plays a very important role in the sports evaluation process. It can enable students to improve their physical fitness and professional skills, and guide students to establish lifelong Sports awareness and the cultivation of good sports habits must be given great importance.

To sum up, sports measurement and evaluation play a vital role in sports practice activities. Measurement provides objective data support and a basis for evaluation; evaluation makes value judgments on this basis, guiding and promoting the improvement of teaching, training and other practical activities. Therefore, we should pay full attention to sports measurement and evaluation and incorporate them into important aspects of physical education, training and other practical activities to better promote the development of sports.

4. Physical fitness test

4.1 Fitness Test Preparation and Safety Guidelines

Physical fitness tests can provide college students with a comprehensive physical health assessment. Through the measurement of multiple dimensions such as cardiorespiratory endurance, muscle strength and endurance, flexibility, speed and agility, students can understand their specific performance in these aspects, so as to have a comprehensive understanding of their physical condition and feedback from the physical fitness test. It can serve as motivation for students to set fitness goals and challenge themselves, prompting them to participate more actively in physical

exercise, which is of great significance to improving their enthusiasm and persistence in participating in physical activities. Positive exercise attitudes and exercise behaviors have a positive predictive effect on physical fitness test scores (Zhang Xiaonan, 2022). At the same time, the results of the physical fitness test can also be used as an important reference for physical education teaching. Through the physical education test of students, the school can understand the basic situation of the school's physical education teaching. The results of the physical fitness test can test whether the school's physical education methods and methods are effective and scientific. When students' physical test results are generally unqualified, teachers can adjust teaching content and methods in a targeted manner and design more reasonable physical education courses to meet the needs of different students and improve the physical quality of the majority of students. Valid guarantee.

Before taking the physical fitness test, you need to make the following preparations:

1) Prepare necessary sports equipment in advance

Before taking the physical test, candidates should prepare necessary sports equipment in advance, such as suitable sports shoes, loose sportswear, towels, water bottles, etc. At the same time, be careful not to wear too heavy clothing, as it will be more difficult to exercise during the test.

2) Arrange your diet properly

Proper dietary arrangements can help candidates perform better in physical exams. Before the test, candidates are advised to eat mainly high-protein, low-fat foods and try to avoid excessive drinking or eating too many high-calorie foods to avoid affecting the test results.

3) Carry out appropriate warm-up activities

Proper warm-up activities can better adapt to the intensity of sports tests, improve the flexibility of the body, and reduce the occurrence of sports injuries. It is recommended that candidates perform 5-10 minutes of warm-up exercises, such as jogging, stretching, etc., before taking the physical test.

4) Maintain a stable mentality

The health and condition of the body determine a big factor, but in sports tests, the quality of the mentality is also the key to success. Candidates should maintain a calm and confident attitude and use their best efforts to actively respond to the test.

Since the physical fitness test is open to all student groups, ensuring the safety of participants is the primary consideration. At the same time, high attention must be paid to the validity and accuracy of the test. To this end, all participants must strictly follow the following principles when participating in the physical fitness test:

- 1) All participants are required to obtain certification from a fitness testing expert before taking the physical fitness test.
- 2) Participants' resting blood pressure should be measured before testing.
- 3) Participants should avoid ingesting coffee, tea and other substances that may affect heart rate for at least six hours before the test.
- 4) If participants have chronic diseases or physical abnormalities, they must have explicit permission from a doctor or relevant expert to participate in the test.
- 5) Participants should do their best during the test but avoid overexertion.
- 6) All testing processes must be conducted under the guidance of professionals, and participants must strictly abide by the operating guidelines and safety instructions to ensure standardized execution of the test.
- 7) To ensure reliable and accurate test results, all test items should be completed within one day. If participants are unable to complete all projects on the same day, the remaining parts can be continued on the next day. Under special circumstances, appropriate adjustments can be made, but the interval should not exceed three days.

4.2 Physical fitness test standards by country

4.2.1 China General Administration of Sports "National Student Physical Health Standards"

As early as 1985, experts in the field of physical health in my country jointly established the "Chinese Student Physique and Health Research" department, which marked my country's deep concern for students' physical health issues. Since 1991, experts have used the method of "one small test every year and one test every five

years" to conduct multi-directional measurements and research on the physical health of college students, providing a systematic basis for a comprehensive understanding of the physical condition of college students. data. Since 2007, all types of colleges and universities must organize students to conduct physical tests and report the data to the sports data analysis and research department, and provide scientific guidance for their physical health evaluation work (Shi X Y, 2021). In 2014, the "National Student Physical Health Standards" were revised and promulgated. Subsequently, the Ministry of Education established the "National Student Physical Health Standards Data Management Center". Its main task is to systematically organize and in-depth analyze the physical health levels of students who participated in the physical examination. analyze. This data management center not only provides comprehensive student physical health information at the national level, but also feeds data back to each school, providing scientific basis for school sports evaluation work and promoting the continuous improvement of students' physical health levels across the country. This series of measures fully reflects my country's professional, scientific and systematic development direction in the field of physical health.

In the "National Student Physical Health Standards", the individual weights of the test items from the first grade to the fourth grade of elementary school have changed to varying degrees. The students' physical health level is calculated according to the weight, but generally speaking: the proportion of body shape and function is 15%, and the physical fitness is 70% (Zhang Qiangli, 2021). The "National Student Physical Health Standards" are graded based on the total score of the student's academic year, which is divided into four grades: excellent, good, passing and failing. Excellent and failing are respectively 90 points and above and below 60 points. 80.0-89.9 is good. , 60.0-79.9 is considered passing. China's "National Student Physical Health Standards" include the following 6 test items: (State Sports General Administration, 2014)

- 1) Vital Capacity
- 2) 50-Meter Sprint
- 3) Standing Long Jump
- 4) Sit-Ups or Pull-Ups
- 5) Sit and Reach

6) 1000-Meter Run (Men) / 800-Meter Run (Women)

Liu Yue (2017) To study: Research on physical health testing and evaluation of college students in Heze Medical College. The purpose of this article is to analyze the changes in various indicators of body shape, body function, and physical fitness of college students in Heze Medical College, and to provide a reference for physical education and after-school training in Heze Medical College. This article takes the physical health test data of the three students of Heze Medical College in 2012, 2013, and 2014 at the time of admission and at the end of the school year as the research object, including 1,180 boys and 2,911 girls in the 2012 class; 1,121 boys and 3,194 girls in the 2013 class; There are 1,156 male students and 3,364 female students. Nine indicators including height, weight, vital capacity, 800-meter run (female), 1000-meter run (male), standing long jump, sit-ups (female), pull-ups (male), sit and reach were studied and analyzed. Comprehensive grade results of the physical fitness test: The overall grades of girls from 2012 to 2014 at the end of the school year were better than when they entered school. In particular, the good rate and passing rate fluctuated greatly and the grade values showed an increasing trend. The overall outstanding rate of boys from the 2012 to 2014 grades fluctuated slightly and remained stable when they entered school and at the end of the school year, with most of them at the passing level.

Xia Chengqian, Ge Bin, Wu Dezhou, Yang Xiaoming (2021) To study: Research on the current situation of strength and endurance quality of college students and improvement strategies for test standards—based on the analysis of physical fitness test data of Jiangsu college students from 2007 to 2018. Research on improvement strategies for physical condition and test standards—based on the analysis of physical fitness test data of Jiangsu college students from 2007 to 2018. This study aims to analyze the current situation of strength and endurance of college students and put forward suggestions for improving the physical health test standards for college students. The article selects 67,237 physical health test data of college students in Jiangsu Province from 2007 to 2018 as research samples for analysis and judgment., the physical fitness test items include standing long jump, pull-ups, sit-ups, and endurance running. The results show that the strength quality of college students

is generally not strong and the compliance rate is low. The endurance quality compliance rate of college students is high, but the excellent rate is low. Among the current physical health test standards, the strength and endurance quality test standards for college students are on the high side.

Chen Yuqi (2022) To study: Research on comprehensive evaluation methods of college students' physical health. Based on the "National Student Physical Health Standards", this article draws on the research experience of domestic and foreign scholars, uses the literature survey method to improve the current physical health evaluation index system of college students, and formulates a new evaluation index system, which includes 10 test items: BMI , body fat percentage, vital capacity, step test, grip strength, standing broad jump, sit and reach, pull-ups (men)/sit-ups (women), 50-meter run, 1000-meter run (men)/800-meter run (women) .The research subjects were college students from Shenyang University of Technology, among whom 130 boys and 135 girls participated in the physical fitness test. BP neural network and PSO-BP neural network were used to establish a physical health evaluation model to conduct a comprehensive evaluation of college students' physical health, and the evaluation values of the two models were compared with expert evaluation values. The results show that using the PSO-BP neural network model to evaluate college students' physical health is more accurate, and provides new ideas and methods for evaluating college students' physical health.

Liang C,Xinghua Z.(2022) To study: A Method of Improving College Students 'Physical Fitness Test Based on Fuzzy Comprehensive Evaluation of Information Fusion. This study uses an efficient physical fitness test improvement method based on fuzzy comprehensive evaluation information fusion in order to improve the accuracy and precision of physical fitness tests. This study analyzed the physical health test data of students in Zhuzhou City, Hunan Province. Test items include height, weight, lung capacity, standing long jump, grip strength (male students) sitting forward bend (female students), and step test. Based on the fuzzy comprehensive testing method, it is concluded that the physical health status of boys is mainly concentrated in the passing and good range, while the physical health status of girls is mainly concentrated in the passing range and there are fewer outstanding students.

4.2.2 AAHPER Youth Fitness Test

The history of the development of student physical standards in the United States can be traced back to the late 19th century. In 1904, the National Student Athletic Association was established in the United States and began to conduct standardized testing of students' physical fitness. In the early 20th century, physical education professionals advocated evaluating students' physical fitness by measuring fitness, strength, and flexibility. The AAHPER Youth Physical Fitness Test was created in 1957. The full form of AAHPER is the American Alliance for Health, Physical Education and Recreation. The American Federation for Health, Physical Education and Recreation has constructed a Youth Physical Fitness Test Battery to assess physical fitness levels. AAPER test helps to evaluate muscular strength, flexibility, agility, cardiovascular endurance, and coordination. During the years 1957-58 these tests were applied to approx. 8000 school children of classes 5 to 8 in the USA. On the basis of this study, standard rooms were created. Studies were conducted on 2200 college-level students in 1960 and percentile rooms were created, similarly, percentile rooms were created on the basis of studies belonging to 50 institutions. New percentile rooms were created again in 1965 on the basis of age. This study included 9200 boys and girls in the 10 to 17 years of age group. The AAHPER Youth Fitness Test has included the following components:(Deependra Parihar,2022)

- 1) Sit and Reach
- 2) Pull-Ups
- 3) Sit-Ups
- 4) Standing Long Jump
- 5) 50-Yard Dash
- 6) 600-Yard Run

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AAHPER YOUTH FITNESS TEST	
American Alliance For Health, Physical Education And Recreation	
PULL- UPS [boys] FLEXED ARM HANG [girls]	Muscular strength [Dynamic] and muscular Endurance of Arms and Shoulder
BENT KNEES	Muscular strength and Endurance
SHUTTLE RUN	Speed and Agility
STANDING BROAD JUMP	Explosive strength of legs
50YARD DASH	Speed of lower Extremities and explosive strength
600 YARD RUN-WALK [10 to 12 years] 9 min run walk or 1 mile or 12 min run walk 1.5 mile run walk age 13 and above	Cardiovascular endurance

Figure 1 AAHPER Youth Fitness Test
(Deependra Parihar,2022)

Kalidas Karak (2016) To study: Comparative study on physical fitness between physical education students and general students. The purpose of the study was to compare the Physical fitness between physical education students and general students (age group 17-20 years). Total 60 subjects were taken for the study from S.B.S.S Mahavidyalaya, Goaltore, Paschim Medinipur, and West Bengal. To measure the Physical fitness AAPHER YOUTHFITNESS TEST BATTERY (1976) was used. The test items consisted in AAHPER YOUTH fitness testier pull ups for boys, bent knee sit ups, standing broad jump, shuttle run, 50 yards dash and 600 yards run and walk. To compare the physical fitness between physical education students and general students (age 17-20 years) the independent t-test was conducted at 0.05 level of significant. The findings of the present study reveal that there were significant difference found in pull ups, sit ups, standing broad jump, shuttle run, 50 yards dash and 600 yards run and walk for knowing the Arm and shoulder Strength, Abdominal strength, Leg strength, Agility, Speed and Cardio-vascular Endurance respectively. On the basis of the obtained result, it has been observed that Physical education students have more Arm and Shoulder strength, Abdominal strength, Explosive leg strength, Agility, Speed and Cardio-Vascular Endurance than General students for the involvement of games and sports and doing the various types of physical activities.

Kayum Sahid Bepari(2016)To study: Comparative study on physical fitness components between Bengali and Rajbangsi college students. The main objective of this study is to measure the sports fitness level of physical education students and

measure the differences among students to understand the status of physical education students in Cooch-Bihar district of West Bengal. This study aimed to observe the physical health status of Rajbanshi and Bangladeshi college students. The subjects of this study were 70 students majoring in physical education at Cooch-Bihar College, Dinhata College and Tufangang College. Aged between 18 and 22 years old. The subjects were mainly divided into two categories, namely, ordinary Bengali students and Rajbanshi students. The AAHPER Youth Fitness Test (AYFT) measures body fitness components such as speed, agility, leg power, hand and shoulder strength, abdominal muscle strength, cardiovascular endurance, and more. Testing was conducted in accordance with the AAHPERD Adolescent Physical Fitness Testing Manual. The results showed that boys from urban schools performed better in pull-ups and sit-ups than boys from rural schools. Moreover, SBJ's 50-meter sprint speed, explosive power and chin-crossing strength are much better than those of ordinary students. In the 10x4 meter round trip, pull-ups, and sit-ups, the Bengali students performed better than the Rajbanshi students.

Sunil Kumar Gadipally (2016) To study: Relationship between body types and physical fitness variables among engineering college students in West Telangana The purpose of this study is to study the relationship between body types and physical fitness variables among engineering college students in West Telangana. The subjects were 90 male students from Telangana Class Engineering College, aged between 18 and 21 years old. The subjects were tested using the AAHPER Youth Physical Fitness Test. The results showed that adult students in the 18 to 21-year-old age group Body shape is called a somatotype and has a strong relationship with physical health. Compared with 19- and 18-year-old students, 21-year-old students are in poorer physical condition.

Somarathna RDAM et al. (2017) To study: Assessment and Reconstruction of AAHPER Test for Sri Lankan Youth Aged 10 – 17. The research question raised to assess the fitness level of the Sri Lankan youth and objective of the study was to construct a new fitness test norms for Sri Lankan age 11, 12, 13, 14, 15 and 16 years old youth boys and girls based on AAHPER test. To achieve the purpose of this study 1000 girls and boys (age 10-17 years) selected from various provinces in Sri Lanka by random sampling method. The data were collected using the AAHPER test batteries

which consist with six test items 50-yard run, standing broad jump, shuttle run, pull-up for boys and flex arm hang for girls, sit up and 600 yards run respectively and was analyzed by using SPSS. From the results, following percentile norms were created 5th 10th 15th 20th 25th 30th 35th 40th 45th 50th 55th 60th 65th 70th 75th 80th 85th 90th 95th 100th. From the results it was concluded that, newly constructed norms are slightly lower than AAHPER youth fitness test battery. Hence it was recommended that, newly constructed fitness norms are appropriate to categorize fitness level of the Sri Lankan youth.

Ajay Kumar (2018) To study: A study of physical fitness in different age groups boys. The purpose of this study was to compare the Physical Fitness different age groups boys. The present study was conducted on the 2000 School Boys, 500 subjects from each group. Their age was ranged 13 to 16 year. In the selection of the subject's random sampling technique was employed. The AAHPER Youth Fitness (1976) test was selected for the purpose of this study. The result of the study concluded that there was statistically significant difference in age groups. There was significant difference obtained on pull-up, sit-up and shuttle run among various groups (13 years to 16 years) boys. When the paired mean differences existed between 13 years & 14 years, 13 years & 15 years, 13 years & 16 years, 14 years & 15 years, 14 years & 16 years and 15 years & 16 years of boys.

4.2.3 ICSPFT physical fitness test

During the 19th Olympiad in Tokyo in 1964, an international committee was formed to standardize physical integrity testing (ICSPFT: International Committee Standardization of Physical Fitness Testing) to conduct a study to find a physical fitness test that would be used as a global standard. The committee The ICSPFT test was constructed after 8 years of research and data collection. In 1972, it was tested around the world as a basic physical fitness test. Test items include:

- 1) 50-Meter Sprint
- 2) Standing Long Jump
- 3) Sit-Ups
- 4) Pull-Ups
- 5) Sit and Reach

6) 800-Meter Run

7) Grip Strength

8) Shuttle Run

Marek Popowczak (2013) To study: Physical fitness of children aged 10 years participating in physical education classes enriched with coordination exercises. To determine changes in selected individual components of coordinated movement abilities and physical fitness among 10-year-old students that are due to This occurred due to the implementation of a special (based on the author's plan) physical education curriculum enriched with coordination exercises. Materials and methods. Study participants included 92 students from two primary schools in Wowed. A method of conducting teaching experiments using parallel group techniques. During 1 of the 6 physical activity teaching hours per week, the experimental group spent 20 minutes developing selected indicators of coordinated movement abilities. The results obtained by the experimental group were compared with those obtained by a control group undergoing so-called traditional physical education classes. Afterwards, changes in selected coordinated movement ability levels were analyzed, namely spatial orientation, rapid reaction, kinesthetic differentiation and motor adaptation. To determine the physical fitness level of children, the test of the International Committee for Standardization of Physical Fitness Testing (ICSPFT) was used. The results show that changes in selected coordination abilities and physical fitness levels can be achieved through the systematic implementation of coordination exercises.

Sanong Yamdee (2011) To study: Physical Fitness of Students in Northern Institute of Physical Education in Academic Year 2008. This thesis was intended to study and standardize physical fitness both male and female students, in northern Institute of Physical Education in academic year 2008. The selected group, 200 male students and 200 female students, were chosen by non-proportional stratified random. The data were collected by using the international Committee for the Standardization of Physical Fitness Test (ICSPFT). After the data were treated for mean, Standard deviation, and T-score for mean difference. Physical fitness for both male and female students in academic year 2008, there were T-score for the highest level and above 67 and 65, at 59 - 66 and 58 – 64 for high level, at 42 - 58 and 43 - 57 for middle level, 34 - 41 and 36 - 42 for low level, and at most 33 and 35 lowest level.

Jarosław Maśliński (2015) To study: Physical fitness 11-12 years boys who train judo and those who do not practice sport. The aim of the study was the knowledge about overall physical fitness of school youth who train judo and who do not practice any sport. The study group consisted of 44 boys 11-12 years old, including 22 persons who train judo (three times a week for 90 minutes each training session) and 22 boys who do not practice any sport. The Test of Physical Fitness (development by the International Committee on the Standardization of Physical Fitness Test) was used in the study. Results: Boys who train judo do not exceed on the level statistically significant boys who do not practice any sport only in 3 tests: a run over a distance of 50 meters; a run over a distance of 600 meters (boys 11 years old, and 800 meters 12 years old); handgrip strength. The difference in results of the other 5 tests is significant ($p < 0.0005$) on the plus side of judokas.

Artur Litwiniuk (2016) To study: Physical Activity and Physical Fitness of Students at University of Physical Education and Sport in Białá Polacanthid study covered a group of 95 students studying Physical Education on Physical Education and Sport Faculty in Białá Podlaska, with 39 of them being sportspeople training, among other things, football and handball, volleyball, basketball, athletics, MMA, taekwon-do and swimming. Results. All the respondents prefer an active model of spending leisure time, where slightly fewer than every third student (29.4%) are the people who systematically attend trainings in sports clubs. Almost all of the researched people (92.64%) achieved the level of physical condition described as high between 468 and 667 points on the ICSPFT scale. Conclusions. It was stated that almost all the respondents achieved high scores in ICSPFT, however, no statistically significant correlations between the results obtained in subsequent ICSPFT trials assessing physical fitness and their weight and height were observed.

Tadeusz Ambroży et al (2021) To study: The Impact of Reduced Training Activity of Elite Kickboxers on Physical Fitness, Body Build, and Performance during Competitions. The outbreak of the pandemic caused by SARS-CoV-2 has led to a crisis in many sectors, including sport. The participants included 20 kickboxers competing at the international level. Their physical fitness was evaluated based on the test developed by the International Committee on the Standardization of Physical Fitness Test (ICSPFT) and their body build was assessed using Tanita BC601 body

composition monitor and a body height meter. Differences between physical fitness before the COVID-19 outbreak and during the pandemic after re-opening sports facilities were evaluated. Results: Temporary closing of sports clubs has led to the increase in body mass of the participants by 2.65 kg on average and significantly deteriorated physical fitness. Conclusions: Temporary closing of sports clubs and restrictions on physical activity aimed at containing the spread of COVID-19 caused a significant reduction in physical fitness and increased body mass of the participants. This is likely to cause worse performance in the nearest competitions and have a negative impact on the athletes' health status and immunity to diseases.

4.2.4 Physical fitness reference standards for Chinese children and adolescents

In view of the declining physical health level of Chinese children and adolescents, Feng Zhang et al. (2021) developed age- and gender-specific physical health reference standards for Chinese children and adolescents, and used standardized effect sizes to express age- and gender-related differences, as Provide reference for improving the physical fitness of Chinese children and adolescents. There is a total of 7 test items, including:

- 1) grip strength
- 2) standing long jump
- 3) 30-s sit-ups
- 4) sit and reach
- 5) 50-m dash
- 6) 20-s repeated straddling
- 7) 20-m SRT

4.2.5 Physical fitness and health standards for Japanese college students

Japanese student physical standards have a long history, and European and American sports concepts were introduced as early as the early 20th century. In 1954, the implementation of the "Student Sports Law" made physical education a core component of school education. Since then, Japan has gradually established a student physical education measurement system, further promoting the measurement and evaluation of students' physical fitness. In 1986, the Japanese government passed an

amendment to the School Health Care Act, officially including college students in the health management system. Since then, Japan has continuously revised relevant laws and regulations and gradually strengthened the comprehensive evaluation of college students' physical fitness. In 2004, the "School Health Care Law" was revised again, clearly requiring universities to carry out health management, including regular physical evaluation. In recent years, as lifestyle changes and health issues have emerged, the latest version of the "School Physical Education Guidance Outline" document was promulgated in 2015, aiming to gradually diversify the physical evaluation of college students, not only focusing on physical fitness, but also emphasizing mental health and living habits. And other factors. At present, Japan conducts a comprehensive physical fitness and athletic ability evaluation known as the "New Physical Fitness Test", which is widely implemented in schools across the country. It includes the following 6 test items:([Yohei Yamashita,2023](#))

- 1) Grip Strength
- 2) Sit-Ups
- 3) Standing Long Jump
- 4) Side Stepping
- 5) Sit and Reach
- 6) 20-Meter Shuttle Run

4.2.6 Physical fitness and health standards for French students

In 2017, the French national BOUGE study evaluated 11,186 children and adolescents (5,546 boys and 5,640 girls) aged 10 to 15 years. Sex- and age-specific physical health percentiles were determined for French youth. Participants were tested on their cardiorespiratory fitness, muscular endurance, speed, flexibility and agility using the following tests:([Vanhelst, Jérémy ET AL,2017](#))

- 1) 20-m shuttle run tests
- 2) Curl-ups test
- 3) 50-m sprint test
- 4) Back-saver sit and reach test
- 5) 10×5-m shuttle run test

4.2.7 Physical fitness and health standards for Canadian students

CAPL, developed by the Healthy Active Living and Obesity Research Group (HALO) in Canada, is an assessment tool designed to evaluate four dimensions of daily behavior, physical capabilities, motivation and confidence, knowledge, and understanding among adolescents aged 8 to 12. The first version of this tool was introduced in 2008, revised in 2014, and the second version was released in 2017. The new version of CAPL divides the evaluation content of each dimension more clearly, making the assessment more independent and effective. Motivation and confidence, knowledge and understanding are assessed through questionnaire evaluation, while daily behavior is assessed through a combination of questionnaires and pedometer measurements. The physical capabilities section includes the PACER (Progressive Aerobic Cardiovascular Endurance Run), agility and motor skill assessment (CAMSA, which is the "Obstacle Course" from the 2014 version), and plank. Each dimension is evaluated at four levels: basic, progressing, achieving, and excellent (Shao Pengfei, 2017). Compared to the old version, the new version of physical capabilities assessment has removed body composition/morphology indicators and focuses more on mastering motor skills (Chen Sitong et al., 2016). Test items include:

- 1) PACER test (from FITNESSGRAM)
- 2) obstacle course
- 3) planks
- 4) grip strength
- 5) Sitting forward bend
- 6) Height, weight, BMI, waist circumference (HALO, 2014)

4.2.8 International Physical Fitness Test

The International Physical Fitness Test (IPFT) is a battery of tests developed with the cooperation between The United States Sports Academy and the Supreme Council for Youth and Sports. The test manual is based on norms collected on Arab youth aged 9 to 19, and has been adopted by more than 21 nations throughout the years. The test was first introduced in 1977 as a two-day test battery, made up of the 50-meter sprint, standing long jump, grip strength, 1000-meter run, 30-second sit-up, pull-up, 10-meter shuttle run, and trunk flexion. A year later, after evaluation of the

test procedures and results, the battery was changed from a two-day to a one-day test for purposes of efficiency and because it was found that their second-day performances were affected after testing in the heat of the Middle East. The test battery was also reduced from eight to five components, which better reflected those fitness components needed in sport, and eliminated costly equipment such as the hand dynamometer. The current test battery measures the basic components of physical activity - speed, strength, suppleness and stamina. In addition to measurements of height and weight, the fitness test battery is as follows: (Robert Wood, 2008)

- 1) 50-meter sprint test
- 2) Flexed Arm Hang
- 3) 10-meter shuttle run
- 4) Back throw
- 5) 1000 meter run

After reviewing and studying the health and fitness standards of students at home and abroad, I selected 6 physical fitness test items, namely 3-minute step test, 1-minute push-ups, 30-second sit-ups, back extension, shuttle running test, and leg strength, as the test project of my current research, aims to construct the health physical standards of college students in Sichuan Health and Rehabilitation Vocational College.

4.3 Physical fitness test items

3 minute step test (Nguyen Thi Van Kieu, 2020)

Purpose:

To assess the subject's cardiovascular endurance performance during exercise.

Equipment:

steps 30CM; metronome; stopwatch.

Test method:

1. Each test starts with a 2-minute resting phase while subjects are seated on a chair in a quiet temperature- and humidity-controlled room.

2. Subjects are required to step up and down on a 30 cm box 72 times in 3 minutes (step up-updown-down).

3. Stepping frequency is indicated by a metronome set at 96 beats per minute (4 clicks = one step cycle) for a stepping rate of 24 steps per minute.

4. The subject immediately stops upon completion of the test and then sits down and remains still. After 5 seconds, the subject's heart rate is monitored for one minute.

Test regulations:

You must stand completely every time you go up a step, and both feet must touch the ground when you go down a step.

Situations not included in the count:

1. Not standing up completely straight.
2. Not following the rhythm.



Figure 2 3-minute step test

Push up 1 minute (Streckert Brownwood,2020)

Purpose:

Assess chest, shoulders, and triceps strength and endurance.

Equipment:

Smooth surface; timer

Test Methods:

1. The tester lies face down on the ground, with the palms of the hands under the shoulders, the arms straight, the heels together, the toes on the ground, and keeping the body in a straight line.

2. With your arms fully extended, press your body up, then lower your body until your chest is three inches above the floor (but do not let your body touch the floor)

3. Repeat as many times as possible in 1 minute. If necessary, you can only rest in the "up" position. Each complete push-up (that is, lowering from and back to the starting position) counts as one.

Test regulations:

The body needs to remain in a straight line and the chest should be close to the ground when descending.

Situations not included in the count:

1. The body is drooping or tilted.
2. The chest is not close to the ground.



Figure 3 Push up 1 minute

Sit - ups 30 sec.(Mackenzie, B. , 2000)

Purpose:

To assess abdominal muscle strength and endurance

Equipment: cushion, timer

Test Methods:

1. The tester lie on the mat with the knees bent at right angles, with the feet flat on the floor and held down by a partner.
2. The fingers are to be interlocked behind the head.
3. On the command 'Go', raise the chest so that the upper body is vertical, then return to the floor. Continue for 30 seconds.
4. For each sit up the back must return to touch the floor.

Test regulations:

With each movement, the upper body needs to be raised until the elbows touch the knees.

Situations not included in the count:

1. The upper body is not raised to the specified height.
2. Keep your feet off the ground.



Figure 4 Sit - ups 30 sec.

Back Extension Test (Napatsawan Thanaphonganan et al.,2021)

Purpose:

To assess the strength and endurance of the low back muscles.

Equipment:

Stable mat, timer

Test Methods:

1. The tester lies prone on the mat, with his legs straight and his hands placed at his sides or behind his head.
2. Lift your upper body from the prone position so that your chest is off the ground and keep your lower back muscles tight.
3. Use a timer to record how long the tester can maintain this stretched position until it is no longer possible.

Test regulations:

The angle at which the upper body is lifted must reach a certain standard.

Situations not included in the count:

1. Use arm support.
2. The specified angle is not reached.



Figure 5 Back Extension

Shuttle Run Test (Elizabeth Quinn,2022)

Test Purpose:

To evaluate speed, agility and ability to change direction.

Equipment:

Three wood blocks, stopwatch number

Test Methods:

1. The subjects started from a standing start.
2. After the start, start from outside line S1, run to line S2, pick up a wooden block and run back.
3. Exchange wood blocks before reaching line S1.
4. Run back to S2 to exchange for another block, and push out the S1 line with the block.
5. Record the entire time and take one decimal place as the final result.

Test provisions:

You must remove and place wood blocks when you run through the shuttle.

Cases not included in the statistics:

No blocks were removed during the shuttle run.



Figure 6 Shuttle Run

Leg Strength Test(Napatsawan Thanaphonganan et al.,2021)

Purpose of the test:

To assess the strength and endurance of the leg muscles.

Equipment:

chair with backrest, timer

Test Methods:

1. Place the chair firmly to ensure it does not move during the test. The subject sat in a chair with his back straight and his feet flat on the ground, shoulder-width apart.
2. After the "start" signal, the subject quickly stood up from a sitting position, ensuring that the legs were fully extended, then sat back in the chair with control, and stood up again immediately after lightly touching the chair.
3. The subject repeated this action within 60 seconds, completing the cycle of standing and sitting as many times as possible.

Test regulations:

1. Make sure your legs are fully straight every time you stand, and touch the chair lightly instead of sitting down completely when sitting down.
2. Maintain the rhythm, and the movements should be coherent and controlled to avoid losing balance too quickly or affecting the test results too slowly.

Situations not included in the count:

1. When standing, the legs are not fully straightened
2. When sitting down, the buttocks and thighs do not lightly touch the chair, or the subject sits completely and puts all his weight on the chair.

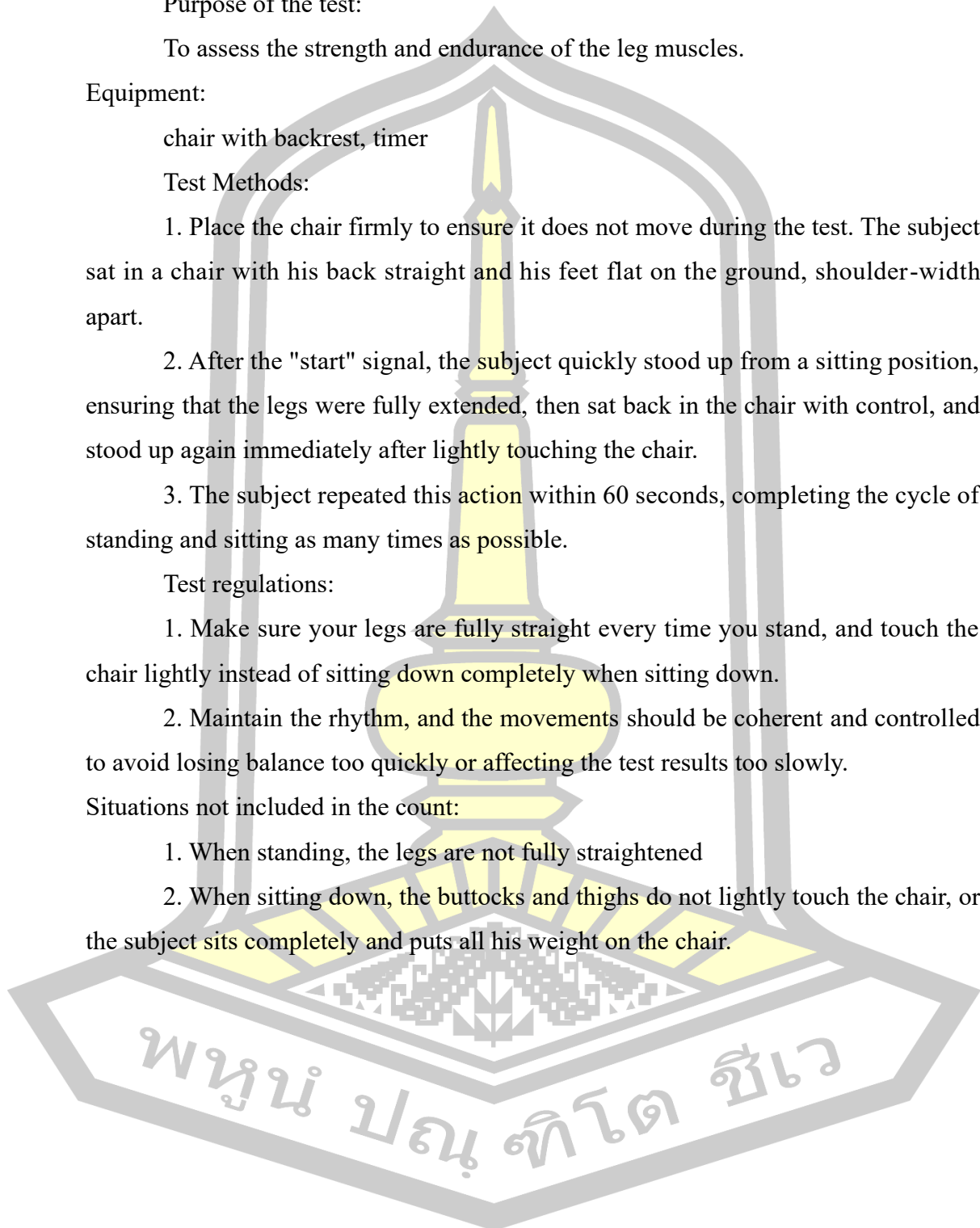




Figure 7 Leg Strength

5. Construct norms

5.1 National standards are standards formulated by national standardization agencies or relevant government departments to regulate the quality and safety of various products, services, processes or systems.

5.2 The standards for special groups are formulated based on the specific needs and characteristics of the group. In the field of education, in order to adapt to students from different cultural backgrounds, schools need to develop inclusive teaching plans. At work, to support the employment of people with disabilities, we need to relax standards to ensure people with disabilities can achieve their potential in work. Standards for special groups ensure that they can participate and compete fairly in a variety of settings.

5.3 The existence of normal physical standards is of great significance to both individuals and society. For individuals, these standards provide a clear target to help them understand where they are performing well and where they may need more exercise or intervention. For doctors and health professionals, these standards are important tools for assessing patient health and developing personalized health plans. For policymakers and public health officials, understanding a population's physical standards can help develop effective health promotion strategies and interventions to improve the health of society as a whole. The formulation of standards usually

involves a large amount of statistical analysis, including determining the average, median, standard deviation and other statistics of various indicators, as well as considering the impact of age, gender, lifestyle and other factors on physical performance. By continually updating and improving these standards, we can better understand the multidimensional characteristics of health and provide a reference framework for assessing an individual's physical strength and fitness level.

6. Related research

6.1 Domestic research

Chen Yuyong (2017) To study: A study on constructing physical health evaluation standards for primary school students aged 7-10 years in Hanoi, Vietnam. This article follows the physical fitness measurement and evaluation of primary school students aged 7 to 10 in Hanoi, Vietnam for four consecutive years to understand the specific changes in physical health of primary school students in Hanoi, Vietnam from the age of 7, to find factors that affect the physical health of primary school students in Hanoi, and to explore corresponding countermeasures, and finally establish an evaluation system suitable for evaluating the physical health status of primary school students aged 7 to 10 in Hanoi, Vietnam. The subjects of this study were 690 primary school students aged 7 to 10 years old in 24 primary schools in Hanoi City, Vietnam, including 350 boys and 340 girls. They were tested on 6 physical fitness items, including: 30-meter standing start, standing long jump, grip strength test, all-out running for 5 minutes, soft flexion and extension, and return run 4×10 meters. The results show that according to the "Physical Evaluation Standards for Students Aged 7 to 10 in Hanoi" formulated in this article, more than 60% of students achieved average and passing proportions in the test, which is consistent with the normal distribution. Therefore, this assessment scale can scientifically and reasonably evaluate the physical health of students aged 7 to 10 in Hanoi.

Feng Chenzhong, Song Shichuang, Li Muhang (2018) To study: Research on the physical fitness evaluation of college students based on fuzzy neural network. This article uses the physical status of college students as the evaluation standard to establish a physical evaluation model for college students based on T-S fuzzy neural network to conduct a reasonable evaluation of the physical fitness of college students

in our school. The data used in this article are the 2017 physical test index scores of junior students in Shanxi Agricultural University's School of Urban Construction, School of Resources and Environment, and School of Software. There are 1,879 pieces of data in total. The data includes height, weight, 50-meter dash, sit and reach, standing broad jump, pull-ups (boys), one-minute sit-ups (girls), 1000-meter run (boys) and 800-meter run (girls). The results show that the T-S type fuzzy neural network model is applied to the physical evaluation of some college students at Shanxi Agricultural University. The evaluation results are consistent with the actual situation, have good adaptability and accuracy, and can be a certain reference basis for the physical evaluation of college students.

Lu Xu; Yang Chuan; Zhang Yu Jing; Huang Shan Qiu; Li Li; Chen Hao Qun; Gao Long; Ma Yan; Song Wei (2019) To study: Test method for health-related physical fitness of college students in mobile internet environment. Due to the complex operation and low efficiency of traditional health physique testing, this paper designs a set of health physique testing methods for college students based on smart mobile terminals. The experiment selected 116 college students (59 males and 57 females) between the ages of 18 and 22 as experimental subjects. The test items were 1.6km brisk walking, sit-ups, pull-ups, sit and reach, and body mass index (BMI). The traditional physical examination evaluation method and the intelligent mobile terminal (smartphone) comprehensive testing system were used to test and compare the health-related physical fitness of the respondents. The experimental results confirmed the accuracy of this method in evaluating the health physical fitness of college students.

Yang Fang et al. (2020) To study: Testing and evaluation of basic sports abilities of female college students—taking Hunan University of Finance and Economics as an example. This article aims to understand the basic athletic ability of female college students and help them more accurately understand the defects in the basic functions of their bodies. Researchers randomly selected 105 first-year girls who were not majoring in physical education at Hunan University of Finance and Economics to conduct the Functional Movement Test (FMS). The total score of the 7 items of the FMS test was 21 points. The test items are squats, hurdle steps, linear lunges, shoulder flexibility, active straight knee leg raises, trunk stability push-ups, and rotational stability. The results show that the average score of overall basic

physical exercise ability of female college students is 14.87, and the overall level is not high. Female college students have strong flexibility and joint mobility, but balance, stability and muscle strength require targeted training. Core strength training should be emphasized in daily training.

Zhang Zhihai (2020) To study: Analysis of the teaching effect of "Jiangsu Province College Students' Physical Fitness Assessment Guidance Standards"—taking Nanjing City Vocational College as an example. The purpose of this study is to explore the impact of the "Provincial Physical Fitness Assessment Standards" on the physical fitness of students in higher vocational colleges. The experimental subjects were 205 students from the 2019 grade of Nancheng College, including 90 males and 115 females. The test items are vital capacity, 2000 (women)/2400 (men) meter endurance run, level 3 frog jump, and seated forward bend. The results show that the "Provincial Physical Fitness Assessment Standards" can effectively stimulate college students' interest in participating in physical education, and can improve students' cardiorespiratory endurance, vital capacity, and flexibility quality levels. The test indicators of the "Provincial Physical Fitness Assessment Standards" are relatively reasonable, and can be used by physical education teachers and There is a high degree of recognition among students.

Zhang Feng, Bi Cunjian, Yin Xiaojian, Chen Qi, Li Tongqiang, Liu Yuan, Zhang Ting, Li Ming, Sun Yi, Yang Xiaofang (2021) To study: Physical fitness reference standards for Chinese children and adolescents. The purpose of this study was to develop age- and gender-specific physical health reference standards for Chinese children and adolescents. A stratified random cluster sampling method was used to recruit 85,535 children and adolescents aged 7 to 18 years from 6 regions in China, 48.7% of whom were girls. The items tested are grip strength, standing broad jump, 30-second sit-ups, sit and reach, 50-meter sprint, 20-second repeated straddle and 20-meter SRT. Using LMS to calculate percentile curves for each physical fitness test, it was found that boys scored higher in all physical fitness items except the sit and reach test. Girls showed better performance in all analyzed percentiles.

Zhao Peijun et al. (2021) To study: the extension of the evaluation results of the National Students' Physical Fitness and Health Standard in the view of physical quality. The purpose of this paper is to solve the problems of measurement instead of

evaluation, inconsistency and incompleteness in the evaluation of physical fitness in the National Students' Physical Fitness and Health Standard, and to provide more practical and intuitive evaluation results for students' physical fitness and health interventions. Strength, speed, endurance, flexibility and agility were used to replace the original test items as the new secondary assessment indicators of physical fitness. 50-meter run speed, sit and reach flexibility, rope skipping agility, sit-ups waist and abdominal strength, 50-meter \times 8 round-trip run endurance, standing broad jump lower limb strength, pull-ups upper limb strength, 1000 meters/800 Meter running endurance. Ten experts in the field of physical education were selected for questionnaire consultation, and a hierarchical analysis was used to determine the weights of the physical fitness level 2 indicators in the model and the weights of the test items. The improved evaluation model not only maintains the content and process of the original school physical education test, but also reflects students' physical fitness more consistently and intuitively, and has a more practical and comprehensive evaluation effect on students' physical fitness and health.

Sang Yunpeng, Wang Lijun (2022) To study: Physical fitness data monitoring of college students based on the Internet of Things and blockchain. The research purpose of this article is to monitor and study college students' physical fitness data based on the Internet of Things and blockchain technology. This article mainly studies the physical fitness test data of students in the class of 2019 from 2019 to 2021. The test content includes: lung capacity, standing broad jump, sit and reach, 50-meter sprint, men's one-kilometer run, women's 800-meter run, men's pull-ups, women's one-minute sit-ups, based on the Internet of Things and blockchain technology, the physical health data of college students were analyzed and studied. The results showed that the levels of men's pull-ups and women's sit-ups were very low.

Xu Wei (2022) To study: Study on the correlation between BMI index and physical function and physical fitness indicators of college students - taking North China University as an example. The purpose of this study is to explore the relationship between Body Mass Index (BMI) and the physical health test indicators of college students. The survey subjects were first- to fourth-year college students at North China University. A total of 33,070 students were tested, and the total number of valid data was 28,869. The physical tests conducted were: height, weight, 50-meter

dash, sit and reach, standing broad jump, pull-ups (boys), one-minute sit-ups (girls), 1000-meter run (boys) and 800-meter run (girls). This article uses literature research method, measurement method, Pearson correlation analysis method of mathematical statistics, single-factor analysis of variance, etc. to conduct research and analysis on the physical function test indicators and physical fitness test indicators among the physical health indicators of college students. The results show that college students Most of the body mass index ranges are within the normal range, but the degree of obesity and overweight among male college students is more serious than that of female college students; for both male and female college students, there is a gap between their BMI index and the physical function and physical fitness indicators in the college student physical health test. There is a certain correlation, and all physical fitness test indicators of overweight and obese college students in the abnormal BMI group are not ideal.

Zhou Qiyu (2023) To study: Research on the evaluation method of contemporary college students' physical level based on Markov chain. This study starts from the body shape, function, and quality of college students, and is based on the physical test scores of college students, which includes 7 test contents: BMI, vital capacity, standing long jump, sit and reach, pull-ups (male)/sit-ups (female), 50-meter run, 1000-meter run (male)/800-meter run (female), a method for evaluating the physical fitness level of contemporary college students based on the Markov chain model was established. Finally, an example was given to verify the rationality of the method, and the analysis of the results provides a feasible method for objectively evaluating the physical level of contemporary college students.

6.2 International research

Akbar Rostami, Seyed Hossein Alavi (2014) To study: Evaluation of physical and motor situation of the Shomal university students and making of standard norm. The aim of this study was to evaluate the physical and motor development of norms and standards with the University of Shomal Amol by using the fitness test that was AAHPERD. The research population included all male and female students who were in the second semester of the University of Shomal 2013-2014 studying the general physical education course1 (physical fitness) was one of the courses that they select.

In order to determine the actual sample that is representative of the study sample included 273 by considering Morgan's table and are solution of 120 female students and 153 male students were randomly selected. Descriptive method of research that was conducted in this field. After collecting information related fitness test AAHPERD Data analysis was conducted in two parts: descriptive statistics and inferential statistics. Statistical methods for data classification and 'z' standard norm tables and inferential statistics in the countries selected for comparison with test norms 't' Independent groups were used in each group. The test results showed that compared to students at both 540 meters Shomal of Birjand University; male students gained a better record while the female students were not it. In test 4*9 Meters, students of Shomal University, to comparing with Students in Birjand University and students in Guilan University, records with a weaker won.

Soheila Sarvi, Sara Hasani Nogani, Nora Davarpanah, Meisam Zabihzadeh Roshan (2014) To study: European Online Journal of Natural and Social Sciences Developing Tests and Physical Fitness Norms for Female Students in Iran. The purpose of this study is to develop tests and physical fitness norms of female students of Islamic Azad University of Rasht. Statistical population of the study includes all female students at Islamic Azad University of Rasht who attended in General Physical fitness courses of the university in the academic year of 2013-14. Out of 210 persons, 50% (105 persons) in the range of 18 to 47 years were selected as sample. After coordination with the trainers, for data collecting, the trainers cooperated with the researcher through four physical fitness tests, including crunch, flexibility, Sargent jump and 540 meters. Descriptive statistical methods such as Kolmogorov- Smirnov, Pearson and Spearman correlation coefficients tests were used for reporting the raw data and for statistical analysis at a significant level $P \leq 0.05$. The results showed that there is no significant relationship between age, weight, height of students with each of the physical fitness factors. Overall, the findings of the research developed tests, and appropriate physical fitness norms for the female students of Islamic Azad University of Rasht supported the hypothesis that each of these physical fitness tests and the age, weight and height of students are independent and to assess the physical fitness of the students, all the tests can be used.

Manoj Kumar M, C. Venkatesh (2015) To study: Construction of Norms for Health Related Physical Fitness for 16 to 18 Years College Men Students. The purpose of the study was to construct norms for health-related physical fitness for 16 to 18 years pre-university college men students. A sample of 2020 pre-university men students were taken for the present study. The muscular strength measured by chin-ups, flexibility measured by bridge up test, body composition by skinfold tests, general physical fitness factor by measuring body weight and cardio-respiratory endurance measured by 1500 meters run/walk tests were conducted for data collection. Norms were constructed for the health-related physical fitness such as percentile and T scale and standard for evaluation of college student male also established under normal distribution.

Brenda Reeves, Erin Barwick, Priscilla Maghrabi (2018) To study: Physical Fitness Level of First Year Exercise Science Students., including 100 male students and 175 female students. Tests included the Cooper 12-min run, wall sit-and-reach, 1-min sit-up, and YMCA bench press tests. A one-sample T-test was used to compare student data and found that only 9 out of 275 students' Three percent (3%) met all criteria, with most male and female participants failing to meet the YMCA bench press criteria and most men failing to meet the 1-minute sit-up test criteria.

Bilal Ahmad Malla, Manoj Kumar Pathak (2019) To study: Norms Construction and Physical Fitness Test Standardization for Physical Education Entrance in Kashmir University. Physical Education is education through physical activities in which body is the primary tool. Its aim is the same as that of education to bring about an all-round development of an individual and make him an effective member of the society. Physical education is the education of body and mind. The purpose of this study was to standardize a battery of physical fitness tests and skill tests for selected games, namely, basketball, football and hockey for entrance test for Kashmir University. To achieve the purpose, 300 students were randomly selected from five physical education colleges, at the age group of 18 to 25 years. The newly standardized batteries of physical fitness and skill tests were administered on the subjects, which actually to measure the capability of each individual candidate. It was concluded from the results of the study that the newly designed skill test has satisfied the reliability to be the standardized tests.

Chessa Sanchez Pituk, Jonathan Yap Cagas (2019) To study: Physical Activity and Physical Fitness among Filipino University Students. The purpose of this study was to investigate the physical activity and physical fitness of college students. The experimental subjects were 474 healthy college students, including 167 male college students and 307 female college students. They filled out a physical activity questionnaire and underwent anthropometric measurements and physical fitness assessments including: (1) height, (2) weight, (3) body fat percentage, and physical fitness tests namely: (1) 20- meter shuttle run test, (2) modified sit and reach test, (3) zipper test, (4) 1-minute partial curl-up test, and (5) vertical jump test. Men performed better than women on the following tests: vertical jump ($p=.000$), curl ($p=0.000$), and aerobic output ($p=0.000$). No significant gender differences were found in upper body flexibility. The results show that male college students are more active and healthier than female college students.

Gunathevan Elumalai et al. (2019) To study: Physical fitness norm for form six sports science students in Kedah. The purpose of this study was to develop a reference standard for health-related physical fitness standards for sixth grade sports science students in Kedah. A purposive sampling method was used to select 225 subjects, including 107 boys and 118 girls. The physical fitness level was tested using the Progressive Aerobic Cardiovascular Endurance Run (PACER), curl ups test, push-ups 90o test, trunk lift test and BMI test. Researchers used scores with standard deviation of the mean and T-scores to derive overall health-related health standards. The results showed that there were significant differences between male and female students in each component of health-related physical fitness.

Mostafa Rahimi et al. (2019) To study: Study of physical-motor fitness level of scholarship male students in a military center and determination of current status. The purpose of this study was to assess the health and skill related physical fitness level of male students in a military center as a way to manage the physical fitness of the students. The subjects of this study were 581 scholarship male students in a military center in 2018 and 2019, who were measured for body composition, trunk muscular endurance, upper body muscular endurance, flexibility, cardiovascular endurance, agility and speed. The results showed that the subjects were within the normal range of body weight, had moderate body fat, and had good status of trunk muscular

endurance, but weak muscular endurance in the upper trunk. Subjects showed normal flexibility, while cardiorespiratory endurance and agility were weak.

Mohar Kassim et al. (2020) To study: The Level of Physical Fitness among First Year Female Students in National Defense University of Malaysia. The purpose of this study was to test the level of physical fitness among first year female students in National Defense University of Malaysia, Kuala Lumpur based on seven test items and to establish health standards. The study population consisted of 130 first year female students in NDUM from different demographic backgrounds. The seven test items were: 2.4km run, sit-ups, push-ups, 30m sprint, 10m sawtooth jump, seated stretch and standing long jump with a self-administered questionnaire on demographic characteristics. The results were able to reflect the level of physical fitness of 130 first year female students at NDUM and successfully established fitness norms. It was also found that less than 30 per cent of the subjects had excellent physical fitness.

Mostafa Rahimi, Behzad Bazgir, Maryam Kazemipour, Abolfazle Shakibae (2020) To study: Physical Fitness Status of scholarship Female Students in a Military Medical Center. The purpose of this study is to investigate the physical fitness level of female college students in a military medical center. The research subjects of this article were 75 female scholarship students at the Military Medical Center in Tehran, Iran. Anthropometric tests (height, weight and body mass index) and physical fitness tests were conducted. The physical fitness tests included body composition (body composition analysis), trunk muscle endurance (sit -ups 30 Sec.), upper body muscular endurance (push up 1 minute), flexibility (sit and reach), cardiovascular endurance (shuttle run) and agility (4×9 test). It was found that the girls' body mass index was within the normal range, but they had poor body fat percentages and poor records in cardiovascular endurance, flexibility and agility.

Nasirzade Alireza, Niazipour Ali, Aziminia Mohammad, Nakhaei Hadi (2020) To study: Evaluation of Some Indicators of Physical Fitness, Body Composition and Balance in Imam Ali University Students with the Purpose of Norm Presentation. Background and Aim: Since having good Physical fitness is one of the important indicators for enrolling students in military colleges, in order to compare and determine the ranking of these students in relation to society, presenting up-to-date norms is necessary. Accordingly, the aim of the present study was to evaluation of

some indicators of Physical fitness, Body Composition and Balance in Imam Ali university students with the purpose of norm presentation. Methods: The statistical population of the present study consisted of all students in Imam Ali University, who after conducting initial assessments, based on the objectives of the research and using the cluster sampling plan, 272 of these individuals were selected as the research sample. After familiarizing the subjects with the research methods, physical-motor fitness tests consist of 60 meters sprint run, 3600 meters endurance run, 4 by 9 meters agility test, curl up (maximum number in 2 minutes), push up (maximum number in 2 minutes) and pull up ((maximum number), as well as the three modes of static Balance test and Body Composition assessment test were performed. Findings were presented as percentage norms and histogram diagrams. Results: The mean and standard deviation values for BMI (22.72 ± 2.45), Body Fat Percentage (15.21 ± 4.80), skeletal muscle mass percentage (47.81 ± 2.80), Whr (0.82 ± 0.04), curl up (63.67 ± 14.54), push up (63.09 ± 13.66), pull up (8.42 ± 5.20), 60 meters run (8.94 ± 0.69), 3600 meters run (13.53 ± 0.81), 4 by 9 meters agility test (9.27 ± 0.71), front and rear foot component of static Balance test (0.92 ± 0.54) and one-footed component of static Balance test (1.43 ± 1.37) were recorded. Conclusion: The descriptive data presented in this study can be used to assess the Health and Physical fitness of students of Imam Ali University and other military colleges of the army forces of the Islamic Republic of Iran and also to select more appropriate criteria for the entrance exam of army colleges.

Waseem Raja Malik (2020) To study: Assessment and Construction of Norms for Speed Among College Students of Jammu And Kashmir. Speed is an important skill-related fitness component that determines the physical status of an individual. In modern society most of the adolescents and young adults are not participating in physical activities and concentrate only on their studies. Therefore, we conducted the present study to evaluate the total fitness so that an individualized and practically feasible fitness program for the college students addressing the various fitness components in which they are lacking would be designed. The purpose of this study was to compare and construct norms for speed among male college students of Jammu and Kashmir. To achieve the purpose, 1200 male college students of age group 19 to 21 years, were randomly selected from two regions (Jammu region and Kashmir

region) of union territory of Jammu and Kashmir. Speed was selected as criterion variable and was measured by 50 meters dash run. The collected data was analyzed by using 2×3 factorial ANOVA to find out the significant difference, whenever the interaction effect was found to be significant the simple effect and then least significant difference (LSD) post hoc test was applied to find out the paired mean difference. In all the cases 0.05 level of confidence was fixed to test the hypothesis. The calculated standard deviation was multiplied by 0.07 to get the hull scale value. The hull scale value is serially added and subtracted to the mean score to get the percentile scale. The results of this study revealed that irrespective of age and region maximum number of male college students falls in the category of average. Those who score below the 50th deciles on speed in their respective age group should be encouraged to improve their speed. The study concludes with recommendations for an appropriate evaluative measures and early intervention fitness programmed for college students.

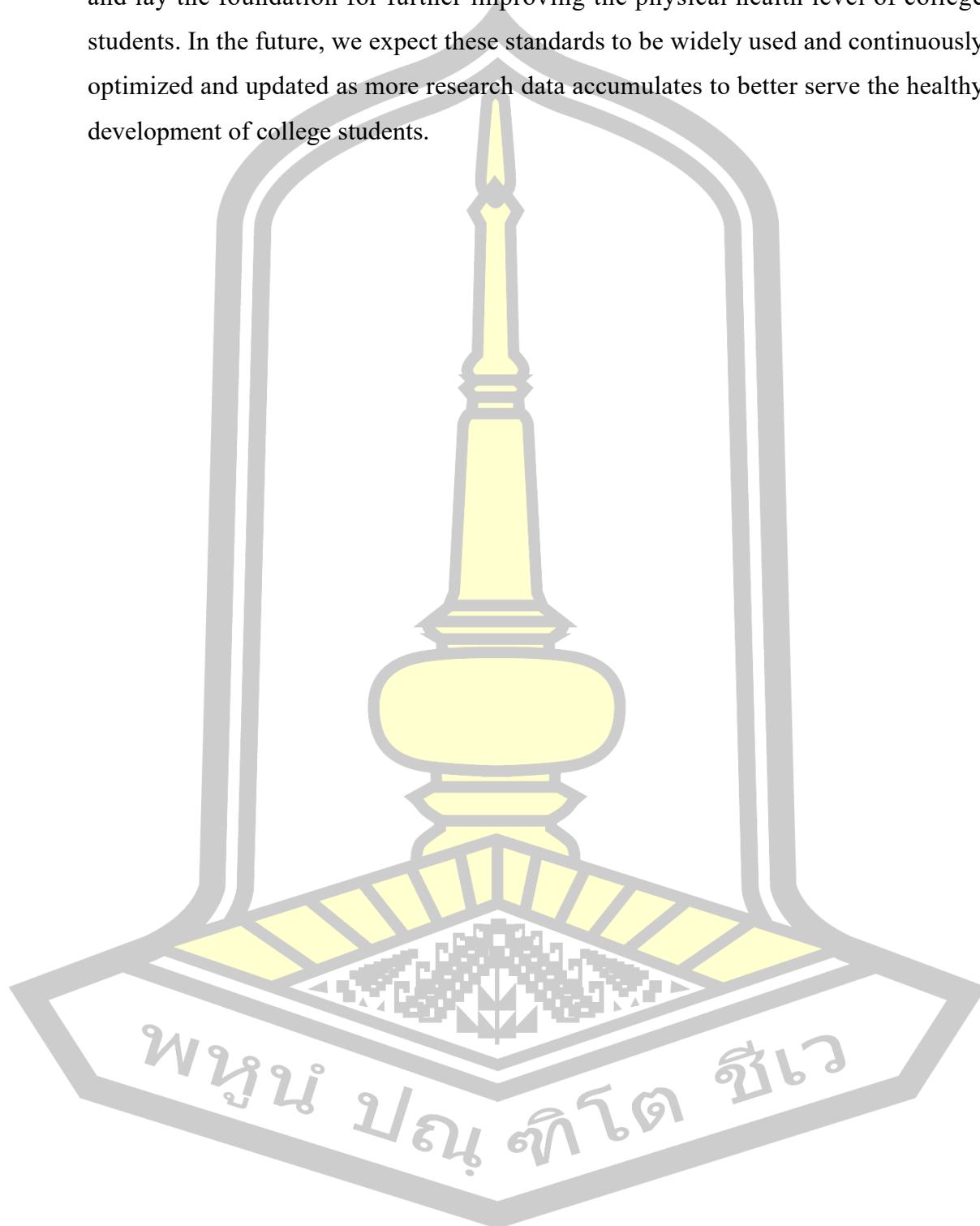
Jaruwet Oncharoen, Wichan Mawinthorn, Vorramong Yamngamlua(2021)To study: The Norms - Referenced of Physical Fitness for Vocational Certificate Students in Industry Program Ratchaburi Technical College. The purpose of this research was to construct the norms - referenced of physical fitness for vocational certificate students in industry program, Ratchaburi technical college. The population were 1,265 male students of vocational certificate in industry program, Ratchaburi technical college in semester the, academy year 2018. The instrument was six physical fitness standardized test which contain 6 items include; 1) body mass index 2) 1,000 m. distance run 3) modified sit-ups 30 second 4) sit and reach 5) grip strength and 6) squat thrust 10 second. The index of item-objective congruence (IOC) of Rovinelli and Hambleton was judged by 5 experts for the content validity of research instruments at 0.80 – 1.00 The data were analyzed by using percentages, means, and standard deviation. The norms - referenced constructed by using “T-score” and divided into 5 levels; very good, good, moderate, poor and be improve. The major results revealed that: The physical fitness test that selected have content validity and the norms-referenced of physical fitness by using T-score could be assess vocational certificate students in industry program, Ratchaburi technical college.

Napatsawan Thanaphonggan; Yannapat Seehamongkon(2021) To study: Construction of Skills-Related Physical Fitness Norms for the Sport Science Students, Faculty of Education, Mahasarakham University. Skill-Related Physical Fitness Norms. 471 sports science students (316 males and 115 females) from the School of Education, Mahasarakham University were selected and conducted 12 test items, namely: 3 minutes step up and down, push up 1 minute, sit-ups 30 Sec. 50 meters sprint, zig zag run, shuttle run softball, standing broad jump, leg strength, hand grip strength, back extension, sit and reach. The statistics used in data analysis are mean and standard deviation, and the construction of healthy physical standards uses percentile ranking and t-score. The results show that the technical and physical fitness specifications of male and female college students are at a medium level in various evaluation indicators.

Pablo Prieto-González (2022) To study: Relationship between Specific Field-Based Physical Fitness Test Results and Selected Health Biomarkers in College-Aged Males: A Cross-Sectional Study. Correlates of specific health biomarkers in men. Among them, the physical fitness test includes four items, sit and reach, standing broad jump, shuttle run, 3 minutes step up and down, in order to achieve the purpose of assessing maximum oxygen uptake. Anthropometric and health variables assessed were weight, height, body mass index, body fat percentage, lean body mass, abdominal circumference, waist-to-hip ratio, systolic blood pressure, diastolic blood pressure, oxygen saturation, mean blood pressure, double product, and fasting blood glucose. It was concluded that there were weak to moderate correlations between anthropometric variables and health variables, while significant correlations were shown between anthropometric variables ranging from weak to very strong. Physical fitness test results showed weak to moderate correlations.

Through a comprehensive analysis of relevant domestic and foreign studies, we can see that physical fitness testing is of great significance for assessing and improving the physical health of college students. As a scientific tool to evaluate physical health, sports testing and evaluation play an irreplaceable role in revealing the physical fitness status of college students and guiding physical education and training. Therefore, researchers believe that it is necessary to construct normal physical health standards for college students at Sichuan Vocational College of Health

and Rehabilitation, which will help students understand their own physical conditions and lay the foundation for further improving the physical health level of college students. In the future, we expect these standards to be widely used and continuously optimized and updated as more research data accumulates to better serve the healthy development of college students.



CHAPTER III RESEARCH METHODS

This is an experimental study, which aims to construct the health physical standards of students in Sichuan Health and Rehabilitation Vocational College.

1. Population group

1.1 Population

Sichuan Health and Rehabilitation Vocational College has 2500 students enrolled.

1.2 Target group

The total population of the study was 2,500 participants. To determine the appropriate sample size, the Yamane formula was first used to ensure that the sample was representative and met a 95% confidence level with a margin of error of 2%. Yamane's formula is: $n = N / (1 + N e^2)$, where N is 2500 and e is 0.02. Substituting these values into the formula gives: $n = 2500 / (1 + 2500 \times (0.02)^2) = 2500 / (1 + 2500 \times 0.0004) = 2500 / 2 = 1250$.

Therefore, the required sample size is 1250 participants. Then, 1250 participants were selected from the total population using stratified random sampling. In this study, gender was used as a stratification variable, and students were divided into two classes: boys and girls. There are 694 boys and 1,806 girls.

Calculate the ratio of each layer:

The proportion of male students in the total number is $694 \div 2500 = 0.2776$.

The proportion of girls in the total population is $1806 \div 2500 = 0.7224$.

Calculate the sample size for each stratum:

Sample size of male students = total sample size \times proportion of male students
 $= 1250 \times 0.2776 \approx 347$.

Female sample size = total sample size \times proportion of female students = $1250 \times 0.7224 \approx 903$.

Through the stratified random sampling method, it is possible to ensure that the distribution of the sample by gender is similar to the overall distribution, thus improving the representativeness of the sample. At the same time, the process of

random sampling also ensures the randomness and independence of the samples, and the probability of each student being selected is equal and does not affect each other. Such samples can more effectively reflect the overall characteristics and provide reliable data support for the research of college students' physical fitness test.

Table 1 Sampling method of students from Sichuan Health and Rehabilitation Vocational College

Age groups	Male sample size	Female sample size	Total sample size
18-19	116	301	417
19-20	116	301	417
20-21	116	300	416

1.3 Sample selection criteria

Inclusion criteria

1.3.1 College students aged 18-21 years old at Sichuan Health and Rehabilitation Vocational College.

1.3.2 Good health.

1.3.3 Voluntarily participate in the research and be willing to sign the research consent form.

Exclusion Criteria

1.3.4 Existing health problems.

1.3.5 Students who are recovering or injured.

2. Research Tools

This study used the National Student Physical Health Standards of the State General Administration of Sports, the International Committee for Standardization of Physical Fitness Testing (ICSPFT), and the AAHPER Youth Physical Fitness Test, with a total of 6 test items:

- 1) 3 minutes step up and down (Cardio Endurance)
- 2) Push up 1 minute (upper body strength and endurance)
- 3) Sit-ups 30 Sec. (abdominal strength and endurance)
- 4) Back Extension (lower back strength and endurance)
- 5) Shuttle Run (speed and agility)
- 6) Leg strength (leg strength and endurance)

3. Steps for building a student fitness test norm

3.1 Research Preparation

3.1.1 Literature Research and Information Collection

Through reading papers and textbooks, synthesize academic results, practical experience and professional advice to obtain information about testing tools and assessment methods.

3.1.2 Tool Development and Validation

1) Preparing the initial version of the test program based on literature

In order to ensure the consistency and accuracy of the test, the researcher develops a detailed test log document covering the test steps, equipment materials and data collection methods, which serves as a guide for research assistants to ensure that the test is performed according to uniform standards and reduce experimental errors.

2) Three experts' validation

To ensure the validity of the test instrument and the accuracy of the content, the researcher consulted three experts in the field of sports, and the IOC value of the test item was greater than 0.5.

3.2 Pre-experimentation

3.2.1 Standardization of sites

Fixed test sites for each program.

3.2.2 Personnel training

Research assistants need to pass the standardized test:

Accuracy of action demonstration $\geq 90\%$

Instrument operation pass rate 100%

3.2.3 Pretest

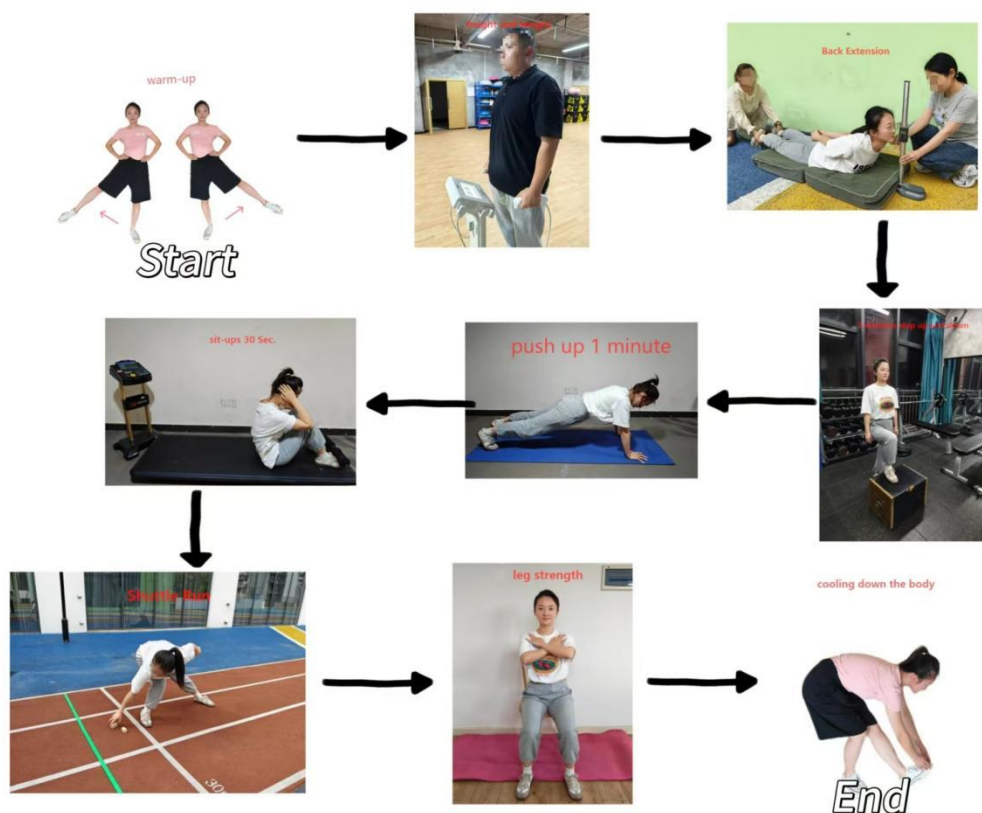
20 non-subjects complete the whole process of testing

3.3 Formal testing process

Table 2 Test Sequence Design Criteria

Test items	Physiological basis	Literature support
Height and weight	Avoid post-exercise changes in body fluids affecting baseline data	Heyward (2010) Body composition measurement specifications
Back Extension	Avoiding Changes in Muscle Elasticity after Flexibility Testing Affects Strength Performance	NSCA Testing Guidelines (2022)
3 minutes step up and down	Need to obtain accurate cardiorespiratory data without fatigue	ACSM Standards for Exercise Testing (11th Edition)
Push up 1 minute	Upper body strength testing prioritized over core testing to avoid the effects of abdominal fatigue	International Society of Biomechanics Recommendations
Sit-ups 30 Sec.	Core endurance test is a separate group to avoid cross-talk with other muscle group tests	Japanese Physical Strength Measurement Standard
Shuttle Run	The test of agility requires an optimal state of excitation of the neuromuscular system	Bosco's neuromuscular theory (1983)
Leg strength	Large muscle group strength tests are placed last to prevent lactic acid buildup from affecting subsequent tests	NSCA sequencing principles

3.3.2 Standardized chain of operations



3.4 Quality control

3.4.1 Expert IOC scoring

The three experts are:

- 1) Ms. Yan Hong, Associate Professor, Chengdu Institute of Physical Education (National Fitness and Social Sports)
- 2) Mr. Liao Jiang, Associate Professor, School of Physical Education, Sichuan Health Rehabilitation Vocational College (Fitness Management)
- 3) Mr. Ni Pengcheng, Associate Professor, School of Physical Education, Sichuan Vocational College of Health and Rehabilitation (majoring in recreational sports).

The IOC value of this test item is greater than 0.5, indicating a high degree of consistency in the experts' views on this test item.

3.4.2 Research Assistant Qualification Control

Admission Requirements:

≥ 2 years of experience organizing athletic events at the varsity level

School-level certification through the Code of Practice for Physical Fitness Testing

3.5 Data Analysis

3.5.1 The scores of all participants on each test item were statistically analyzed to obtain the mean and standard deviation of these scores, and the raw scores of each participant were converted to T-scores.

3.5.2 Establishment of normal standard. For the students of Sichuan Health and Rehabilitation Vocational College, Score-Score and T-Score were used to categorize the level of physical fitness quality into five levels: very good, good, average, poor and very poor, to establish the normal standard, and to clarify the range of scores for each level.

The formula for z-score is:

$z = (x - \mu) / \sigma$, where x is the raw score, μ is the overall mean, and σ is the overall standard deviation.

The formula for the t-score is:

$$t = (x - \mu_0) / s_x \sqrt{n}$$

where x = sample mean, μ_0 = overall mean, s = sample standard deviation, and n = sample size.

3.5.3 The experimental data were analyzed by ANOVA using F-ratio test.

4. Protection of samples

The researcher protected the rights to participate in the sample by clarifying the study objectives and data collection process and asking researchers and parents to participate voluntarily. The consent form and clarification of the research project clearly stated that participants had the right to make free choices during the research process and could opt out of the study at any time without any negative consequences. The sample data is considered confidential and will be used for this study only, and the action information provided in the overview is for academic research purposes only and will not cause harm to the participating samples or interfere with their normal rest time.

5. Physical fitness test

The researcher conducted physical fitness tests according to the test set, divided the students participating in the test into several groups, and determined the test order of each group of students in each test item by drawing lots. After each test item was completed, the students were rotated to the next one in the predetermined order. A testing site until all items are tested. A designated research assistant was responsible for recording data at each testing site to ensure data accuracy and completeness. After collecting all test data, use statistical software to organize and analyze the data.

In order to ensure the accuracy and validity of the physical fitness test, the steps to perform the test need to strictly adhere to the following process:

5.1 Test planning and arrangement

Choose non-holiday testing to avoid interfering with students' learning and the school's normal teaching activities. Notify students in advance of the specific date, time, and location of the test to ensure that all participants arrive on time.

5.2 Students arrive at the testing location

Before the test starts, ask students to rest in the designated area for about 10-15 minutes and wait for the test to start.

5.3 Collect basic information

Before the test begins, record basic information about each student, including age, gender, and pulse during breaks.

5.4 Warm up

Guide all students through an approximately 5-minute warm-up that includes muscle stretching and light aerobic exercise.

5.5 Carry out physical fitness test in the following order:

5.5.1 Height and weight

5.5.2 Back Extension

5.5.3 3 minutes step up and down

5.5.4 Push up 1 minute

5.5.5 Sit-ups 30 Sec.

5.5.6 Shuttle Run

5.5.7 Leg strength

Divide the students into 4 groups and rotate the 5.5.1-5.5.7 test sites in a predetermined order until all tests are completed.

6. Data analysis

6.1 Perform statistical analysis on the scores of all participants in each test item to obtain the mean and standard deviation of these scores. and convert each participant's raw scores into T-scores.

6.2 Establish normal standards. For students of Sichuan Health and Rehabilitation Vocational College, based on scores-Score and T-Score are used to divide physical fitness levels into five categories: very good, good, medium, low and very low. level, establish normal standards, and clarify the score range for each level.

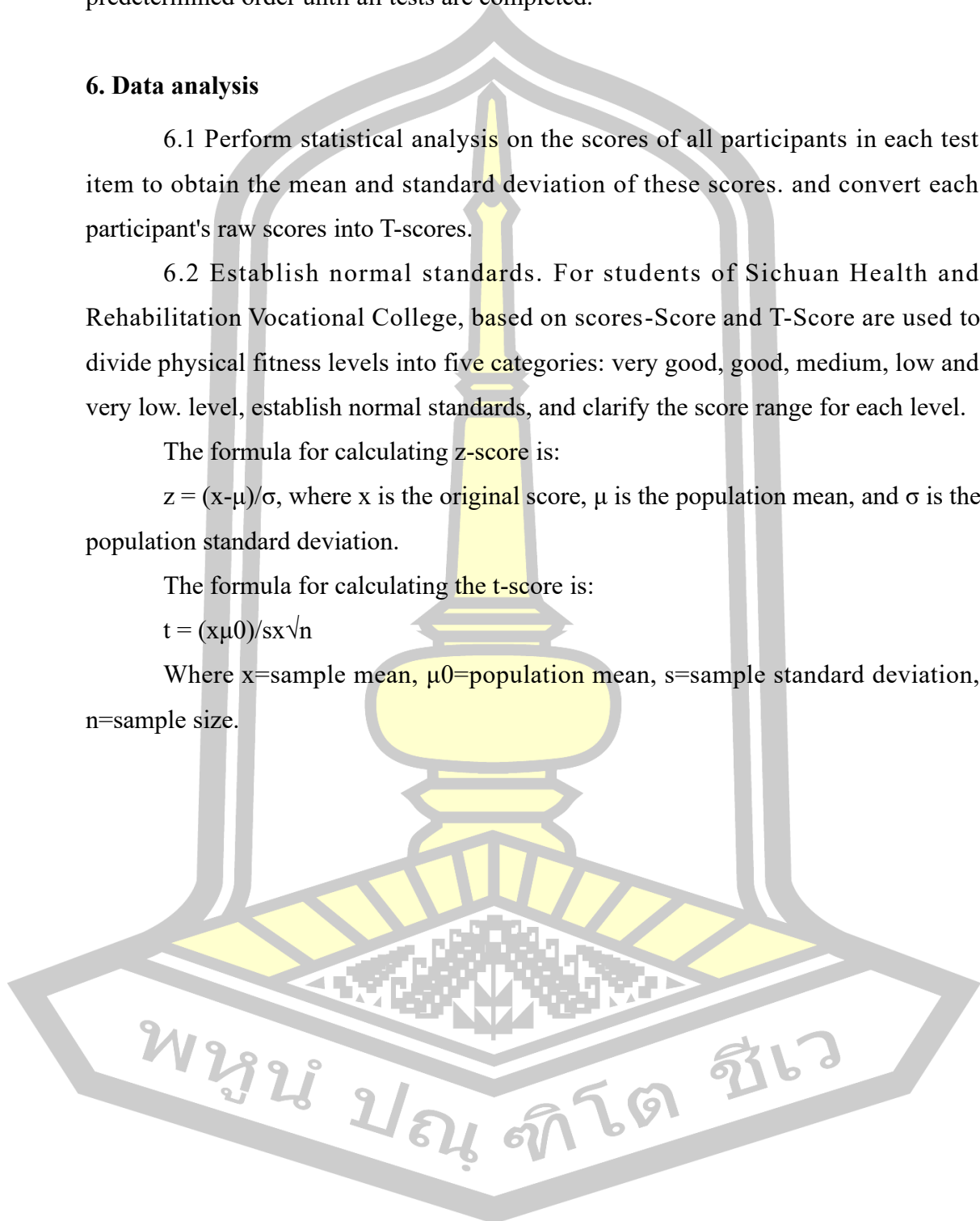
The formula for calculating z-score is:

$z = (x - \mu) / \sigma$, where x is the original score, μ is the population mean, and σ is the population standard deviation.

The formula for calculating the t-score is:

$$t = (x - \mu_0) / s_x \sqrt{n}$$

Where x =sample mean, μ_0 =population mean, s =sample standard deviation, n =sample size.



CHAPTER IV FINDINGS OF THE STUDY

The first part shows the mean and standard deviation of the 6 test items, including 3 minutes step up and down (steps per minute), push up 1 minute (repetitions), sit - ups 30 sec.(repetitions), push up 1 minute (repetitions), sit - ups 30 sec. (repetitions), back extension (cm), shuttle run (seconds), and leg strength (repetitions).

The second part describes the normal fitness standard and physical fitness level of the students of Sichuan Health and Rehabilitation Vocational College.

Table 3 Shows the mean and standard deviation of the item skills of the students of Sichuan Vocational College of Health and Rehabilitation.

Item	Male(n=347)		Female(n=903)	
	\bar{X}	S.D.	\bar{X}	S.D.
3 Minutes Step Up and Down (steps per minute)	53.12	5.14	45.27	5.19
Push Up 1 Minute (repetitions)	37.67	7.12	31.45	7.42
Sit - Ups 30 Sec. (repetitions)	31.45	6.18	28.36	6.44
Back Extension(cm)	43.20	8.14	40.12	8.52
Shuttle Run(seconds)	12.61	1.73	13.84	2.02
Leg Strength(repetitions)	32.91	7.33	26.35	7.67

As shown in Table 3, the physical fitness of students at Sichuan Health and Rehabilitation Vocational College is as follows: In the 3 minutes step up and down (steps per minute), the average value of male is 53.12, and the standard deviation is 2.14; the average value of female is 45.27, and the standard deviation is 3.19. In push

up 1 minute(repetitions), the average value of male is 37.67 times/minute, and the standard deviation is 4.12; the average value of female is 31.45 times/minute, and the standard deviation is 4.42. In sit - ups 30 sec.(repetitions), the average value of male is 31.45 times, and the standard deviation is 3.18; the average value of female is 28.36 times, and the standard deviation is 3.44. In back extension(cm), the average value of male reaches 43.20 , and the standard deviation is 5.14; the average value of female is 40.12 , and the standard deviation is 5.52. In the shuttle run (seconds), the average completion time for male was 12.61 seconds, with a standard deviation of 1.73; the average time for female was 13.84 seconds, with a standard deviation of 2.02. In terms of leg strength(repetitions), the average for male was 32.91, with a standard deviation of 4.33; the average for female was 26.35, with a standard deviation of 4.67.

Part 2 The normal standards and physical fitness levels of students at Sichuan Health and Rehabilitation Vocational College are introduce

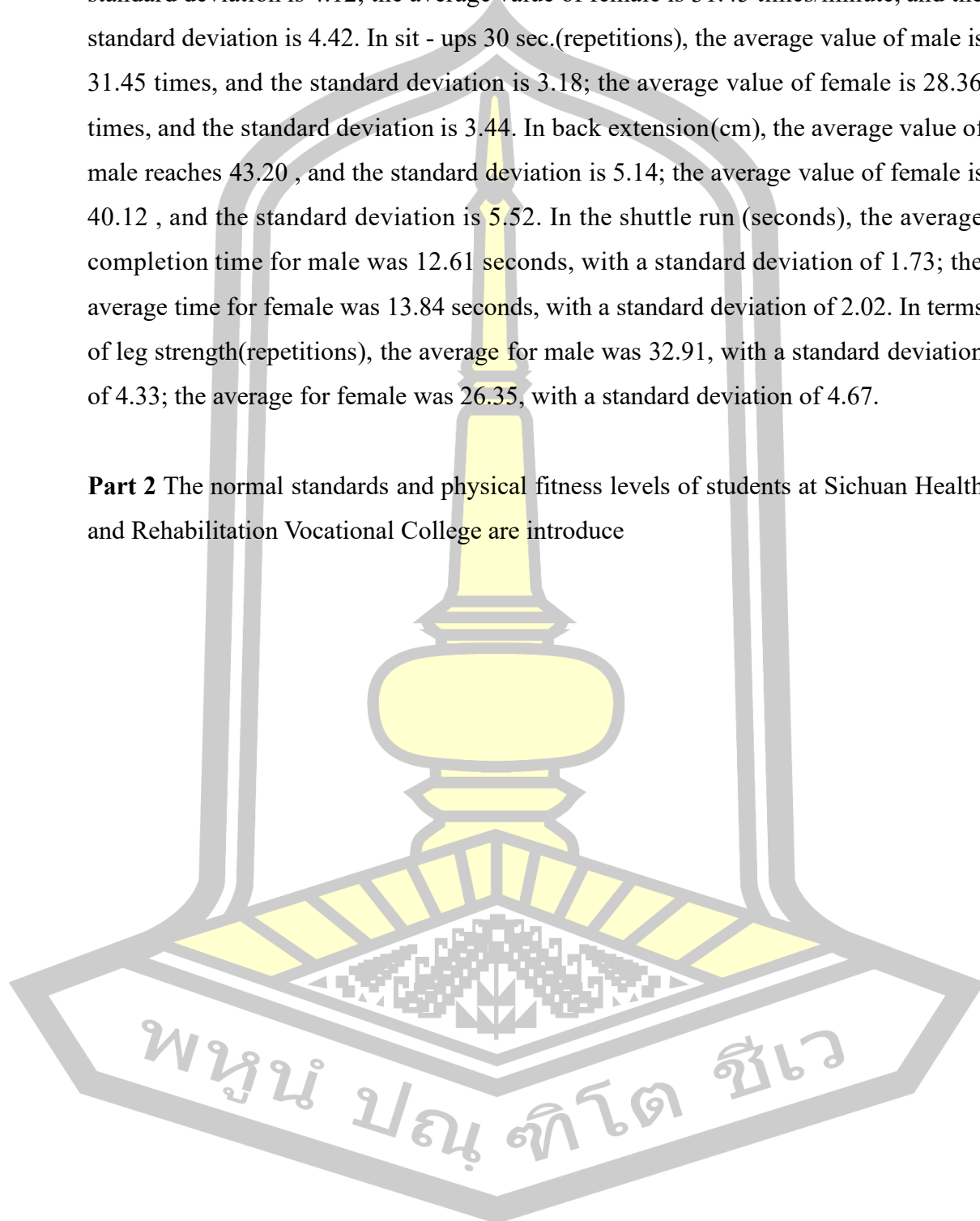


Table 4 Shows Raw score and T Score Cardio Respiratory (3 Minutes Step test:time per minute) for 18-19 years old male (n=116)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Cardio Respiratory	66.16	75.71	58.15	60.45	55.16	54.76	49.73	44.41	47.86	40.85
	65.73	74.89	58.03	60.22	55.02	54.49	49.61	44.18	47.74	40.62
	64.16	71.90	57.95	60.07	54.86	54.18	49.48	43.94	47.66	40.47
	63.35	70.36	57.94	60.05	54.79	54.05	49.15	43.31	47.39	39.95
	62.57	68.87	57.88	59.94	54.67	53.82	49.09	43.19	47.29	39.76
	61.87	67.54	57.64	59.48	54.43	53.37	48.87	42.77	47.03	39.27
	61.37	66.59	57.53	59.27	54.21	52.95	48.82	42.68	46.99	39.19
	60.94	65.77	57.37	58.97	54.05	52.64	48.42	41.92	46.86	38.94
	60.18	64.32	57.26	58.76	53.97	52.49	48.38	41.84	46.65	38.54
	59.72	63.44	57.26	58.76	53.78	52.13	48.35	41.78	46.33	37.93
	59.42	62.87	57.08	58.41	53.76	52.09			45.92	37.15
	59.35	62.74	56.79	57.86	53.72	52.01			45.85	37.02
	58.67	61.44	56.35	57.02	53.71	51.99			45.74	36.81
			56.26	56.85	53.69	51.96			45.66	36.66
			56.15	56.64	53.65	51.88			44.66	34.75
			56.02	56.39	53.33	51.27			44.66	34.75
			55.91	56.19	53.21	51.04			44.42	34.30
			55.74	55.86	53.04	50.72			44.18	33.84
			55.67	55.73	53.01	50.66			44.11	33.70
			55.66	55.71	52.99	50.62			43.4	32.35
		55.6	55.59	52.95	50.55			41.74	29.19	
		55.42	55.25	52.91	50.47			41.19	28.14	
		55.3	55.02	52.88	50.41			38.82	23.63	
				52.77	50.20					
				52.71	50.09					

				52.68	50.03				
				52.65	49.97				
				52.4	49.50				
				52.25	49.21				
				52.04	48.81				
				51.97	48.68				
				51.39	47.57				
				51.2	47.21				
				51.18	47.17				
				51.09	47.00				
				51.04	46.91				
				50.98	46.79				
				50.86	46.56				
				50.81	46.47				
				50.54	45.95				
				50.38	45.65				
				50.36	45.61				
				50.19	45.29				
				50.11	45.14				
				50.1	45.12				
				50.08	45.08				

From Table 4, it was found that the raw score and T Score of Cardio Respiratory, namely Percentage of 18-19 years old male (n=116) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 58.67-66.16 is between T Score of 61.44-75.71, which is very good

Raw score of 55.3-58.15 is between T Score of 55.02-60.45, which is good

Raw score of 50.08-55.16 is between T Score of 50.62-54.49, which is Average

Raw score of 48.35-49.73 is between T Score of 41.78-44.41, which is Poor

Raw score of 38.82-47.86 is between T Score of 32.35-40.85, which is very

Poor

Table 5 Shows Raw score and T Score Muscular Endurance (Push Up 1 Minute:time per minute) and endurance muscles for 18-19 years old male (n=116)

Item	Very good		Good		Average		Poor		Very poor		
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	
Muscular Endurance	53	74.74	43	60.68	38	53.65	32	45.21	28	39.59	
	51	71.92	42	59.27	37	52.24	31	43.81	27	38.18	
	49	69.11	41	57.87	36	50.84	30	42.40	26	33.97	
	47	66.30	40	56.46	35	49.43	29	41.00	24	32.56	
	46	64.89	39	55.05	34	48.02			18	25.53	
	45	63.49				33	46.62				
	44	62.08									

From Table 5, it was found that the raw score and T Score of Muscular Endurance, namely Percentage of muscles 18-19 years old male (n=116) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 44-53 is between T Score of 62.08-74.74, which is very good

Raw score of 39-43 is between T Score of 55.05-60.68, which is good

Raw score of 33-38 is between T Score of 46.62-53.65, which is Average

Raw score of 29-32 is between T Score of 41.00-45.21, which is Poor

Raw score of 18-28 is between T Score of 25.53-39.59, which is very Poor



Table 6 Shows Raw score and T Score Muscular Endurance (Sit - Ups 30 Sec. :time per minute) for 18-19 years old male (n=116)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Muscular Endurance	48	75.60	38	60.25	35	55.64	28	44.89	25	40.28
	47	74.07	37	60.25	34	54.10	27	43.35	24	38.75
	44	69.46	36	57.17	33	52.57	26	41.82	23	37.21
	42	66.39			32	51.03			22	35.68
	41	64.85			31	49.50			21	34.14
	40	63.32			30	47.96			20	32.61
	39	61.78			29	46.43			19	31.07
									18	29.54

From Table 6, it was found that the raw score and T Score of Muscular Endurance, namely Percentage of muscles 18-19 years old male (n=116) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 39-48 is between T Score of 61.78-75.60, which is very good

Raw score of 36-38 is between T Score of 57.17-60.25, which is good

Raw score of 29-35 is between T Score of 46.43-55.64, which is Average

Raw score of 26-28 is between T Score of 41.28-44.89, which is Poor

Raw score of 18-25 is between T Score of 29.54-40.28, which is very Poor

Table 7 Shows Raw score and T Score Flexibility (Back Extension:cm) for 18-19 years old male (n=116)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Flexibility	61.44	72.32	51.39	60.52	47.20	55.60	38.78	45.72	33.88	39.97
	58.85	69.28	51.22	60.32	46.79	55.12	38.14	44.97	33.58	39.62
	57.77	68.01	51.15	60.24	46.78	55.11	37.82	44.60	33.51	39.54
	56.60	66.64	51.15	60.24	46.45	54.72	37.80	44.57	32.64	38.52
	56.58	66.61	51.09	60.17	46.36	54.62	37.64	44.38	32.03	37.80
	56.16	66.12	49.86	58.73	46.26	54.50	37.54	44.27	31.96	37.72
	55.55	65.41	49.72	58.56	46.18	54.41	37.01	43.64	31.25	36.88
	55.42	65.25	49.46	58.26	46.08	54.29	37.01	43.64	30.83	36.39
	55.31	65.12	49.21	57.96	45.97	54.16	36.94	43.56	30.44	35.93
	54.22	63.84	48.56	57.20	45.96	54.15	36.84	43.44	29.32	34.62
	53.75	63.29	48.33	56.93	45.83	54.00	36.65	43.22	28.69	33.88
	52.86	62.25	48.24	56.83	45.80	53.96	35.96	42.41	28.60	33.77
	52.58	61.92	48.24	56.83	45.35	53.43	35.05	41.34	27.72	32.74
	52.54	61.87	47.86	56.38	45.20	53.26	34.94	41.21	26.83	31.70
	52.46	61.78	47.80	56.31	45.07	53.10	34.91	41.18	26.55	31.37
	52.13	61.39			44.83	52.82	34.81	41.06	24.01	28.39
	52.07	61.32			44.72	52.69	34.79	41.04	22.61	26.74
					44.47	52.40	34.70	40.93	11.85	14.11
					44.45	52.38	34.50	40.70		
					44.24	52.13	33.94	40.04		
				44.09	51.95					
				43.96	51.80					
				43.86	51.68					
				42.92	50.58					
				42.86	50.51					

					42.85	50.50				
					42.70	50.32				
					42.67	50.29				
					42.56	50.16				
					42.55	50.15				
					42.46	50.04				
					42.11	49.63				
					41.82	49.29				
					41.75	49.21				
					41.46	48.87				
					41.19	48.55				
					41.17	48.53				
					41.12	48.47				
					41.11	48.46				
					41.10	48.44				
					40.85	48.15				
					40.09	47.26				
					40.09	47.26				
					39.71	46.81				
					39.45	46.51				
					39.15	46.16				

From Table 7, it was found that the raw score and T Score of the Flexibility., namely Percentage of muscles 18-19 years old male (n=116) students at Sichuan Health and Rehabilitation Vocational College are as follow:

Raw score of 52.07-61.44 is between T Score of 61.32-72.32, which is very good

Raw score of 47.80-51.39 is between T Score of 56.31-60.52, which is good

Raw score of 39.15-47.20 is between T Score of 46.16-55.60, which is Average

Raw score of 33.94-38.78 is between T Score of 40.04-45.72, which is Poor

Raw score of 11.85-33.88 is between T Score of 14.11-39.97, which is very Poor

Table 8 Shows Raw score and T Score Agility (Shuttle Run:seconds) for 18-19 years old male (116 Per)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Agility	7.01	28.42	10.33	40.88	11.66	46.25	13.36	54.86	14.03	58.26
	7.68	32.53	10.47	41.29	11.67	46.30	13.39	55.02	14.24	59.32
	7.85	32.68	10.50	41.34	11.68	46.36	13.64	56.28	14.33	59.78
	8.14	34.05	10.60	42.10	11.70	46.46	13.79	57.04	14.37	59.98
	8.95	35.62	10.69	42.15	11.72	46.56	13.80	57.09	14.46	60.44
	8.98	36.48	10.84	42.40	11.75	46.71	13.85	57.35	14.49	60.59
	9.25	36.98	10.85	42.66	11.95	47.72	13.88	57.50	14.51	60.69
	9.56	38.35	10.90	43.06	12.07	48.33	13.97	57.95	14.59	61.10
	9.73	39.36	10.95	43.37	12.08	48.38			14.80	62.16
	9.83	39.42	11.03	43.47	12.14	48.69			14.98	63.07
	10.10	39.47	11.08	43.52	12.17	48.84			15.04	63.37
	10.30	39.52	11.09	43.52	12.26	49.29			15.09	63.63
	10.31	40.23	11.11	44.03	12.60	51.02			15.11	63.73
	10.32	40.38	11.12	44.08	12.61	51.07			15.23	64.34
			11.22	44.48	12.62	51.12			15.25	64.44
			11.23	44.78	12.63	51.17			15.28	64.59
			11.24	45.09	12.70	51.52			15.35	64.95
			11.31	45.09	12.71	51.57			15.58	66.11
			11.37	45.70	12.74	51.72			15.70	66.72
			11.43	45.70	12.78	51.93			15.99	68.19
					12.78	51.93			16.27	69.61
					12.79	51.98			16.46	70.57
					12.81	52.08			16.63	71.43
				12.87	52.38			17.44	75.53	
				13.00	53.04					
				13.04	53.24					

					13.05	53.29				
					13.13	53.70				
					13.15	53.80				
					13.23	54.21				

From Table 8, it was found that the raw score and T Score of Agility., namely Percentage of 18-19 years old male (116 Per) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 7.01-10.32 is between T Score of 28.42-40.38, which is very good

Raw score of 10.33-11.43 is between T Score of 40.88-45.70, which is good

Raw score of 11.66-13.23 is between T Score of 46.25-54.21, which is Average

Raw score of 13.36-13.97 is between T Score of 54.86-57.95, which is Poor

Raw score of 14.03-17.44 is between T Score of 58.26-75.53, which is very Poor

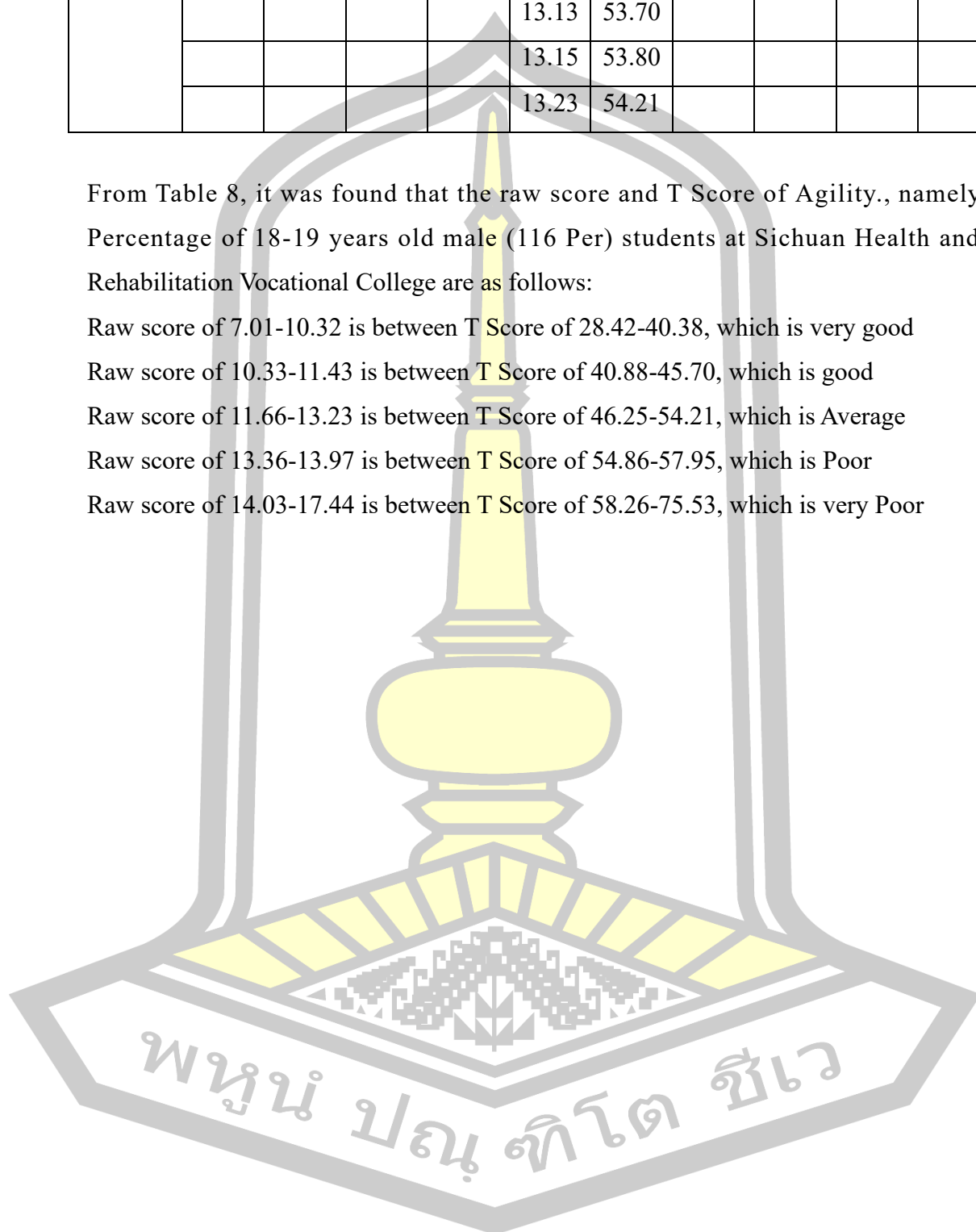


Table 9 Shows Raw score and T Score Muscular Strength (Leg Strength : kilogram)
for 18-19 years old male (n=116)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Muscular Strength	50.46	71.29	42.38	61.34	37.89	55.81	29.75	45.78	25.74	40.84
	46.08	65.90	42.2	61.12	37.52	55.35	29.72	45.74	25.21	40.19
	45.95	65.74	42.07	60.96	37.5	55.33	29.69	45.71	24.97	39.89
	45.68	65.40	41.77	60.59	37.43	55.24	28.85	44.67	24.97	39.89
	44.66	64.15	41.72	60.53	37.4	55.20	28.79	44.60	24.33	39.11
	44.46	63.90	41.6	60.38	37.1	54.84	28.74	44.54	24.02	38.72
	44.09	63.45	41.44	60.18	37.04	54.76	28.73	44.53	23.92	38.60
	44.08	63.43	40.99	59.63	37.01	54.72	28.41	44.13	23.69	38.32
	43.65	62.90	40.47	58.99	36.95	54.65	28.41	43.64	23.33	37.87
	43.15	62.29	40.37	58.86	36.8	54.47	28.01	42.97	23.16	37.66
			39.92	58.31	36.56	54.17	27.47	42.97	22.05	36.30
			39.66	57.99	36.43	54.01	27.47	42.97	20.71	34.65
			39.58	57.89	36.38	53.95	27.47	42.69	19.73	33.44
			39.56	57.87	36	53.48	27.24	42.51	19.57	33.24
			39.14	57.35	35.99	53.47	27.09	42.01	18.98	32.52
			38.92	57.08	35.94	53.41	26.69	41.94	18.8	32.29
			38.68	56.78	35.45	52.80	26.63	41.03	16.07	28.93
			38.43	56.47	34.89	52.11	25.89	41.00	16.03	28.88
			38.38	56.41	34.59	51.74				
			38.24	56.24	34.38	51.48				
		38.15	56.13	34.27	51.35					
				34.25	51.32					
				33.7	50.65					
				33.68	50.62					
				33.64	50.57					
				33.55	50.46					

					33.46	50.35				
					33.03	49.82				
					32.77	49.50				
					32.74	49.46				
					32.42	49.07				
					32.4	49.05				
					32.16	48.75				
					32.14	48.73				
					31.9	48.43				
					31.54	47.99				
					31.48	47.91				
					31.33	47.73				
					31.1	47.44				
					31.01	47.33				
					30.96	47.27				
					30.96	47.27				
					30.86	47.15				
					30.85	47.14				
					30.47	46.67				
					30.16	46.29				
					30.07	46.18				
					29.97	46.05				

From Table 9, it was found that the raw score and T Score of Muscular Strength, namely Percentage of 18-19 years old male (n=116) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 43.15-50.46 is between T Score of 62.29-71.29, which is very good

Raw score of 38.15-42.38 is between T Score of 56.13-61.34, which is good

Raw score of 29.97-37.89 is between T Score of 46.67-55.81, which is Average

Raw score of 25.89-29.75 is between T Score of 41.00-45.78, which is Poor

Raw score of 16.03-25.74 is between T Score of 28.88-40.84, which is very Poor

Table 10 Shows Raw score and T Score Cardio Respiratory (3 Minutes Step test : time per minute) for 19-20 years old male (n=116)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Cardio Respiratory	66.16	75.71	58.15	60.45	55.74	55.86	50.54	45.95	47.86	40.85
	65.73	74.89	58.03	60.22	55.67	55.73	50.38	45.65	47.74	40.62
	64.16	71.90	57.95	60.07	55.66	55.71	50.36	45.61	47.66	40.47
	63.35	70.36	57.94	60.05	55.60	55.59	50.19	45.29	47.39	39.95
	62.57	68.87	57.88	59.94	55.42	55.25	50.11	45.14	47.29	39.76
	61.87	67.54	57.64	59.48	55.30	55.02	50.1	45.12	47.03	39.27
	61.37	66.59	57.53	59.27	55.16	54.76	50.08	45.08	46.99	39.19
	60.94	65.77	57.37	58.97	55.02	54.49	49.73	44.41	46.86	38.94
	60.18	64.32	57.26	58.76	54.86	54.18	49.61	44.18	46.65	38.54
	59.72	63.44	57.26	58.76	54.79	54.05	49.48	43.94	46.33	37.93
	59.42	62.87	57.08	58.41	54.67	53.82	49.15	43.31	45.92	37.15
	59.35	62.74	56.79	57.86	54.43	53.37	49.09	43.19	45.85	37.02
	58.67	61.44	56.35	57.02	54.21	52.95	48.87	42.77	45.74	36.81
			56.26	56.85	54.05	52.64	48.82	42.68	45.66	36.66
			56.15	56.64	53.97	52.49	48.42	41.92	44.66	34.75
			56.02	56.39	53.78	52.13	48.38	41.84	44.42	34.30
			55.91	56.19	53.76	52.09	48.35	41.78	44.18	33.84
					53.72	52.01			44.11	33.70
					53.71	51.99			43.4	32.35
					53.69	51.96			41.74	29.19
				53.65	51.88			41.19	28.14	
				53.33	51.27			38.82	23.63	
				53.21	51.04					
				53.04	50.72					
				53.01	50.66					

					52.99	50.62				
					52.95	50.55				
					52.91	50.47				
					52.88	50.41				
					52.77	50.20				
					52.71	50.09				
					52.68	50.03				
					52.65	49.97				
					52.40	49.50				
					52.25	49.21				
					52.04	48.81				
					51.97	48.68				
					51.39	47.57				
					51.20	47.21				
					51.18	47.17				
					51.09	47.00				
					51.04	46.91				
					50.98	46.79				
					50.89	46.62				
					50.86	46.56				
					50.81	46.47				

From Table 10, it was found that the raw score and T Score of Cardio Respiratory, namely Percentage of 19-20 years old male (n=116) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 58.67-66.16 is between T Score of 61.44-75.71, which is very good

Raw score of 55.91-58.15 is between T Score of 56.19-60.45, which is good

Raw score of 50.81-55.74 is between T Score of 46.47-55.86, which is Average

Raw score of 48.35-50.54 is between T Score of 41.78-45.95, which is Poor

Raw score of 38.82-47.86 is between T Score of 23.63– 40.85, which is very Poor

Table 11 Shows Raw score and T Score Muscular Endurance (Push Up 1 Minute : time per minute) for 19-20 years old male (n=116)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Muscular Endurance	54	75.55	43	60.60	38	53.81	33	45.65	28	40.22
	50	70.11	42	59.24	37	52.45	32	45.65	27	38.86
	49	68.75	41	57.88	36	51.09	31	44.30	26	37.50
	48	67.40	40	56.52	35	49.73	30	42.94	25	36.14
	47	66.04	39	55.17	34	48.37	29	41.58	24	34.78
	46	64.68							22	32.07
	45	63.32							19	27.99
	44	61.96								

From Table 11, it was found that the raw score and T Score of Muscular Endurance, namely Percentage of muscles 19-20 years old male (n=116) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 44-54 is between T Score of 61.96-75.55, which is very good

Raw score of 39-43 is between T Score of 55.17-60.60, which is good

Raw score of 34-38 is between T Score of 47.01-53.81, which is Average

Raw score of 29-33 is between T Score of 41.58-45.65, which is Poor

Raw score of 19-28 is between T Score of 27.99-40.22, which is very Poor

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Table 12 Shows Raw score and T Score Muscular Endurance (Sit - Ups 30 Sec. : time per minute) for 19-20 years old male (n=116)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Muscular	48	74.59	39	60.78	35	54.63	29	45.42	26	40.81
Endurance	47	73.06	38	59.24	34	53.10	28	43.88	25	39.28
	44	68.45	37	57.70	33	51.56	27	42.35	24	37.74
	43	66.92	36	56.17	32	50.03			23	36.21
	42	65.38			31	48.49			22	34.67
	40	62.31			30	46.96			18	28.53
									14	22.39

From Table 12, it was found that the raw score and T Score of Muscular Endurance., namely Percentage of 19-20 years old male (n=116) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 40-48 is between T Score of 62.31-74.59, which is very good

Raw score of 36-39 is between T Score of 56.17-60.78, which is good

Raw score of 30-35 is between T Score of 46.96-54.63, which is Average

Raw score of 27-29 is between T Score of 42.35-45.42, which is Poor

Raw score of 14-26 is between T Score of 22.39– 40.81, which is very Poor



Table 13 Shows Raw score and T Score Flexibility (Back Extension : cm) for 19-20 years old male (n=116)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Flexibility	61.79	70.43	53.74	60.98	49.49	55.99	40.57	45.52	35.70	39.81
	60.18	68.54	53.35	60.52	48.67	55.03	40.41	45.33	34.68	38.61
	58.47	66.53	53.25	60.40	48.51	54.84	40.16	45.04	34.34	38.21
	58.21	66.23	52.37	59.37	48.33	54.63	39.80	44.62	33.88	37.67
	57.44	65.32	52.1	59.05	48.19	54.47	39.65	44.44	33.51	37.23
	56.86	64.64	51.99	58.93	48.10	54.36	39.37	44.11	33.29	36.98
	56.06	63.70	51.86	58.77	47.97	54.21	39.03	43.71	32.70	36.28
	55.96	63.59	51.62	58.49	47.90	54.12	38.99	43.67	32.65	36.23
	55.15	62.63	51.59	58.46	47.87	54.09	38.50	43.09	31.86	35.30
	54.44	61.80	51.36	58.19	47.60	53.77	38.38	42.95	31.02	34.31
	54.21	61.53	51.04	57.81	47.15	53.24	38.17	42.70	30.74	33.98
			50.97	57.73	47.10	53.19	37.68	42.13	30.24	33.40
			50.69	57.40	46.71	52.73	37.43	41.84	28.62	31.49
			50.63	57.33	46.61	52.61	37.24	41.61	27.42	30.09
			50.44	57.11	46.36	52.32	36.34	40.56	22.88	24.76
			50.34	56.99	46.26	52.20	35.98	40.13	20.04	21.42
			50.31	56.95	46.22	52.15				
			50.17	56.79	45.94	51.82				
			49.99	56.58	45.82	51.68				
			49.61	56.13	45.65	51.48				
		49.59	56.11	45.42	51.21					
				45.36	51.14					
				44.88	50.58					
				44.86	50.56					
				44.73	50.40					

					44.67	50.33				
					44.63	50.29				
					44.47	50.10				
					44.42	50.04				
					44.31	49.91				
					44.30	49.90				
					44.15	49.72				
					43.95	49.49				
					43.45	48.90				
					43.24	48.66				
					43.14	48.54				
					43.09	48.48				
					43.09	48.48				
					47.73					
					47.65					
					47.65					
					47.59					
					47.22					
					47.11					
					46.86					
					46.66					
					46.44					
					46.32					

From Table 13, it was found that the raw score and T Score of Flexibility., namely Percentage of muscles 19-20 years old male (n=116) students at Sichuan Health and Rehabilitation Vocational College are as follow:

Raw score of 54.21-61.79 is between T Score of 61.53-70.43, which is very good

Raw score of 49.59-53.74 is between T Score of 56.11-60.98, which is good

Raw score of 41.25-49.49 is between T Score of 46.32-55.99, which is Average

Raw score of 35.98-40.57 is between T Score of 40.13-45.52, which is Poor

Raw score of 20.04-35.70 is between T Score of 21.42-39.81 , which is very Poor

Table 14 Shows Raw score and T Score Agility (Shuttle Run : seconds) for 19-20 years old male (n=116)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Agility	17.03	70.65	15.27	61.93	14.06	55.93	12.03	45.88	11.04	40.97
	16.73	69.16	15.26	61.88	14.03	55.78	11.99	45.68	10.97	40.62
	16.47	67.87	15.17	61.43	13.98	55.54	11.98	45.63	10.94	40.48
	16.09	65.99	15.09	61.03	13.89	55.09	11.94	45.43	10.92	40.38
	15.91	65.10	15.01	60.64	13.84	54.84	11.88	45.13	10.86	40.08
	15.47	62.92	14.98	60.49	13.83	54.79	11.84	44.93	10.66	39.09
	15.38	62.47	14.79	59.55	13.82	54.74	11.73	44.39	10.61	38.84
			14.78	59.50	13.74	54.35	11.71	44.29	10.38	37.70
			14.59	58.56	13.73	54.30	11.68	44.14	10.31	37.35
			14.53	58.26	13.67	54.00	11.62	43.84	9.93	35.47
			14.52	58.21	13.63	53.80	11.61	43.79	9.48	33.24
			14.35	57.37	13.58	53.55	11.55	43.50	9.16	31.66
			14.34	57.32	13.48	53.06	11.35	42.51	9.13	31.51
			14.14	56.33	13.43	52.81	11.31	42.31		
			14.11	56.18	13.40	52.66	11.30	42.26		
					13.36	52.46	11.28	42.16		
					13.35	52.41	11.27	42.11		
					13.29	52.12	11.22	41.86		
					13.25	51.92	11.12	41.37		
					13.22	51.77	11.09	41.22		
				13.21	51.72	11.08	41.17			
				13.14	51.37					
				13.13	51.32					

				13.11	51.23				
				13.00	50.68				
				12.98	50.58				
				12.97	50.53				
				12.96	50.48				
				12.88	50.09				
				12.83	49.84				
				12.76	49.49				
				12.64	48.90				
				12.63	48.85				
				12.61	48.75				
				12.58	48.60				
				12.56	48.50				
				12.55	48.45				
				12.53	48.35				
				12.46	48.01				
				12.44	47.91				
				12.41	47.76				
				12.38	47.61				
				12.35	47.46				
				12.31	47.26				
				12.29	47.16				
				12.23	46.87				
				12.21	46.77				
				12.16	46.52				
				12.10	46.22				
				12.06	46.02				

From Table 14, it was found that the raw score and T Score of Agility., namely Percentage of 19-20 years old male (n=116) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 15.38-17.03 is between T Score of 62.47-70.65, which is very good

Raw score of 14.11-15.27 is between T Score of 56.18-61.93, which is good

Raw score of 12.06-14.06 is between T Score of 46.02-55.93, which is Average

Raw score of 11.08-12.03 is between T Score of 41.17-45.88, which is Poor

Raw score of 9.13-11.04 is between T Score of 31.51-40.97 , which is very Poor



Table 15 Shows Raw score and T Score Muscular Strength (Leg Strength : kilogram) for 19-20 years old male (n=116)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Muscular Strength	54.56	75.90	42.84	61.46	38.03	55.54	30.22	45.92	26.03	40.76
	48.66	68.63	42.71	61.30	37.93	55.42	29.74	45.33	25.79	40.46
	47.03	66.63	41.89	60.29	37.86	55.33	29.01	44.43	25.32	39.88
	46.84	66.39	40.95	59.14	37.79	55.24	28.76	44.12	25.08	39.59
	45.53	64.78	40.83	58.99	37.76	55.21	28.61	43.94	24.55	38.93
	45.17	64.33	40.76	58.90	37.56	54.96	28.54	43.85	24.22	38.53
	44.90	64.00	40.46	58.53	37.25	54.58	28.48	43.78	24.14	38.43
	44.37	63.35	40.4	58.46	36.92	54.17	28.31	43.57	23.74	37.94
	44.17	63.10	40.27	58.30	36.76	53.98	28.26	43.50	23.58	37.74
	44.15	63.08	40.11	58.10	36.32	53.43	28.2	43.43	23.07	37.11
			39.63	57.51	36.28	53.38	28.09	43.30	22.92	36.93
			39.56	57.42	36.18	53.26	27.81	42.95	22.45	36.35
			39.54	57.40	36.08	53.14	27.38	42.42	22.29	36.15
			39.27	57.07	36.05	53.10	27.27	42.29	21.85	35.61
			39.22	57.01	35.96	52.99	26.71	41.60	21.64	35.35
			38.87	56.57	35.91	52.93			21.62	35.33
			38.77	56.45	35.86	52.87			20.57	34.03
			38.56	56.19	35.77	52.76			19.88	33.18
					35.73	52.71			17.65	30.44
					35.22	52.08			15.40	27.66
				35.19	52.04					
				34.91	51.70					
				34.79	51.55					
				34.61	51.33					
				34.52	51.22					

					34.41	51.08				
					34.31	50.96				
					34.24	50.87				
					34.07	50.66				
					33.87	50.42				
					33.73	50.24				
					33.23	49.63				
					33.19	49.58				
					33.10	49.47				
					32.62	48.88				
					32.60	48.85				
					32.53	48.76				
					32.44	48.65				
					32.14	48.28				
					32.05	48.17				
					32.04	48.16				
					32.01	48.12				
					31.95	48.05				
					31.76	47.82				
					31.10	47.00				
					30.99	46.87				
					30.92	46.78				
					30.86	46.71				
					30.38	46.12				
					30.31	46.03				

From Table 15, it was found that the raw score and T Score of Muscular Strength, namely Percentage of 19-20 years old male (n=116) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 44.15-54.56 is between T Score of 63.08-75.90, which is very good

Raw score of 38.56-42.84 is between T Score of 56.19-61.46, which is good

Raw score of 30.31-38.03 is between T Score of 46.03-55.54, which is Average

Raw score of 26.71-30.22 is between T Score of 41.60-45.92, which is Poor

Raw score of 15.40-26.03 is between T Score of 27.66-40.76 , which is very Poor

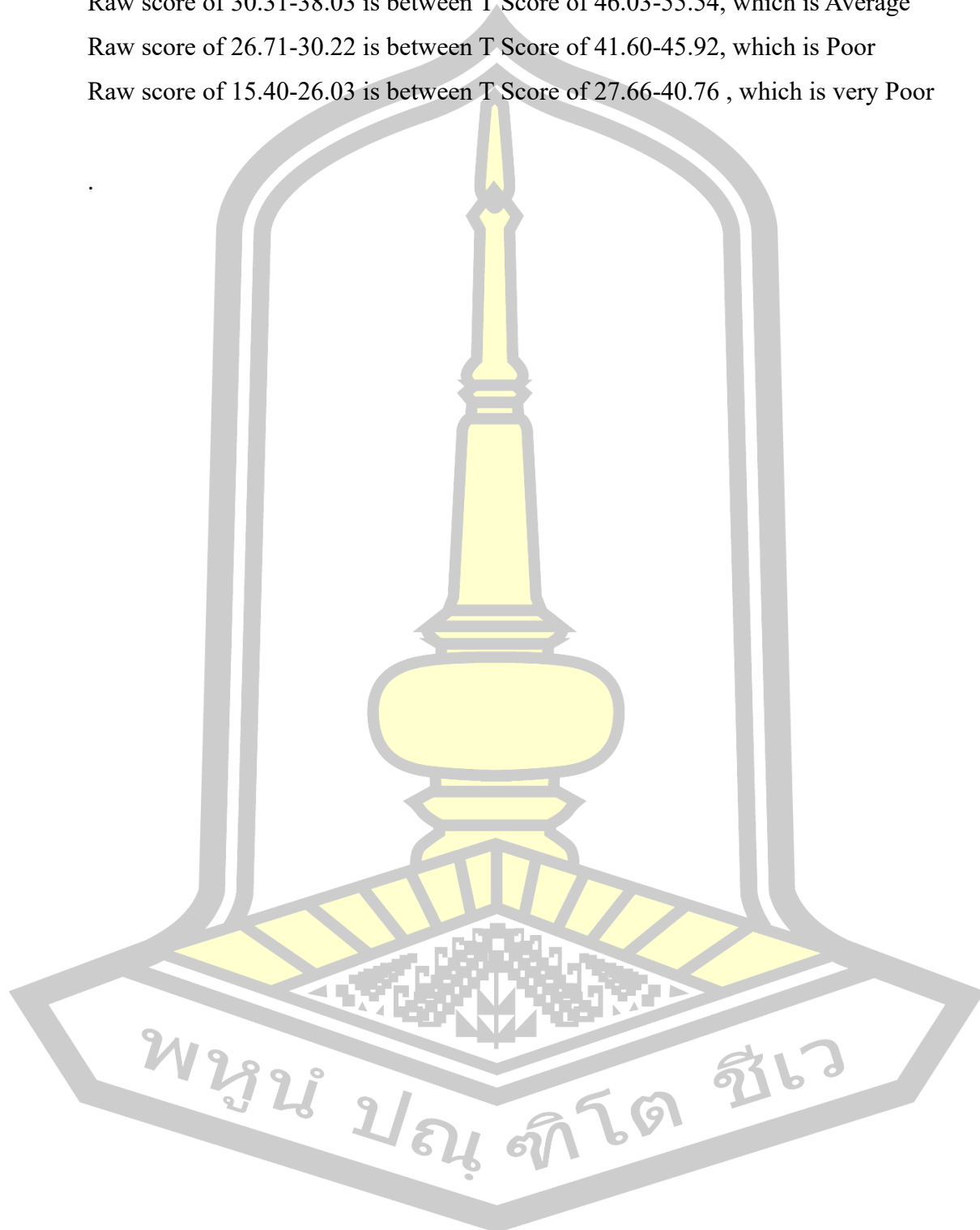


Table 16 Shows Raw score and T Score Cardio Respiratory (3 Minutes Step test : time per minute) for 20-21 years old male (n=115)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Cardio	66.28	75.01	58.81	60.78	55.91	55.26	51.02	45.94	48.22	40.60
Respiratory	62.91	68.59	58.66	60.49	55.50	54.47	50.71	45.35	47.95	40.09
	62.84	68.46	58.60	60.38	55.41	54.30	50.67	45.27	47.84	39.88
	62.15	67.14	58.50	60.19	55.32	54.13	50.57	45.08	47.51	39.25
	62.13	67.11	58.40	60.00	55.17	53.85	50.47	44.89	46.52	37.37
	61.69	66.27	57.98	59.20	55.00	53.52	50.41	44.78	46.11	36.59
	61.58	66.06	57.91	59.07	54.81	53.16	50.09	44.17	46.05	36.47
	61.55	66.00	57.75	58.76	54.80	53.14	49.78	43.58	45.71	35.82
	60.39	63.79	57.68	58.63	54.60	52.76	49.72	43.46	44.42	33.37
	60.04	63.12	57.41	58.11	54.59	52.74	49.52	43.08	44.29	33.12
	59.95	62.95	57.24	57.79	54.51	52.59	49.41	42.87	44.20	32.95
	59.85	62.76	56.85	57.05	54.37	52.32	49.07	42.22	43.80	32.18
	59.65	62.38	56.81	56.97	54.23	52.05	49.05	42.19	43.65	31.90
	59.51	62.11	56.65	56.67	53.88	51.39	48.99	42.07	43.51	31.63
	59.46	62.02	56.64	56.65	53.86	51.35	48.96	42.01	43.13	30.91
			56.50	56.38	53.85	51.33	48.75	41.61	43.01	30.68
			56.34	56.07	53.77	51.18	48.54	41.21	41.92	28.60
					53.69	51.03	48.43	41.01	40.91	26.68
					53.69	51.03				
					53.66	50.97				
					53.64	50.93				
					53.38	50.44				
					53.37	50.42				
					53.37	50.42				
					53.28	50.25				

					53.28	50.25				
					53.12	49.94				
					53.12	49.94				
					53.11	49.92				
					52.97	49.65				
					52.88	49.48				
					52.84	49.41				
					52.76	49.25				
					52.60	48.95				
					52.58	48.91				
					52.43	48.63				
					51.82	47.46				
					51.71	47.25				
					51.44	46.74				
					51.32	46.51				
					51.21	46.30				
					51.15	46.19				

From Table 16, it was found that the raw score and T Score of Cardio Respiratory, namely Percentage of 20-21 years old male (n=115) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 59.46-66.28 is between T Score of 62.02-75.01, which is very good

Raw score of 56.34-58.81 is between T Score of 56.07- 60.78, which is good

Raw score of 51.15-55.91 is between T Score of 46.19 -55.26, which is Average

Raw score of 48.43-51.02 is between T Score of 41.01-45.94, which is Poor

Raw score of 40.91-48.22 is between T Score of 26.76-40.60 , which is very Poor

Table 17 Shows Raw score and T Score Muscular Endurance (Push Up 1 Minute : time per minute) for 20-21 years old male (n=115)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Muscular Endurance	56	76.60	44	60.29	40	54.86	33	45.34	29	39.91
	55	75.24	43	58.93	39	53.50	32	43.99	28	38.55
	53	72.52	42	57.57	38	52.14	31	42.63	27	37.19
	52	71.16	41	56.22	37	50.78	30	41.27	26	35.83
	51	69.80			36	49.42			23	31.76
	50	68.44			35	48.06			22	30.40
	48	65.73			34	46.70			21	29.04
	47	64.37							19	26.32
	46	63.01								
	45	61.65								

From Table 17, it was found that the raw score and T Score of Muscular Endurance, namely Percentage of muscles 20-21 years old male (n=115) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 45-56 is between T Score of 61.65-76.60, which is very good

Raw score of 41-44 is between T Score of 56.22-60.29, which is good

Raw score of 34-40 is between T Score of 46.70-54.86, which is Average

Raw score of 30-33 is between T Score of 41.27-45.34, which is Poor

Raw score of 19-29 is between T Score of 26.32– 39.91, which is very Poor

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Table 18 Shows Raw score and T Score Muscular Endurance (Sit - Ups 30 Sec. : time per minute) for 20-21 years old male (n=115)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Muscular Endurance	49	77.57	38	60.68	34	54.54	28	45.33	25	40.72
	44	69.89	37	59.15	33	53.00	27	43.79	24	39.18
	42	66.82	36	57.61	32	51.47	26	42.26	23	37.65
	41	65.29	35	56.08	31	49.93			22	36.11
	39	62.22			30	48.40			21	34.58
					29	46.86			19	31.51
									18	29.97
									17	28.44
									16	26.90
									14	23.83

From Table 18, it was found that the raw score and T Score of Muscular Endurance., namely Percentage of 20-21 years old male (n=115) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 39-49 is between T Score of 62.22 -77.57, which is very good

Raw score of 35-38 is between T Score of 56.08-60.68, which is good

Raw score of 29-34 is between T Score of 46.86-54.54, which is Average

Raw score of 26-28 is between T Score of 42.26-45.33, which is Poor

Raw score of 14-25 is between T Score of 23.83-40.72 , which is very Poor

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Table 19 Shows Raw score and T Score Flexibility (Back Extension : cm) for 20-21 years old male (n=115)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Flexibility	68.04	79.66	51.86	60.67	47.35	55.37	39.18	45.79	33.97	39.67
	63.62	74.47	51.69	60.47	47.23	55.23	38.97	45.54	33.90	39.59
	59.18	69.26	51.56	60.32	47.18	55.18	38.68	45.20	33.81	39.48
	57.38	67.15	51.42	60.15	46.92	54.87	38.33	44.79	33.39	38.99
	57.15	66.88	51.00	59.66	46.87	54.81	38.23	44.67	33.13	38.68
	55.79	65.28	49.97	58.45	46.71	54.62	38.08	44.49	32.99	38.52
	55.53	64.98	49.85	58.31	46.53	54.41	37.83	44.20	32.92	38.44
	55.32	64.73	49.65	58.07	45.91	53.68	37.62	43.95	32.60	38.06
	55.16	64.54	49.49	57.89	45.43	53.12	37.51	43.83	31.97	37.32
	54.64	63.93	48.58	56.82	45.26	52.92	37.46	43.77	31.72	37.03
	54.08	63.27	48.49	56.71	45.21	52.86	37.34	43.63	31.44	36.70
	53.86	63.02	48.30	56.49	45.02	52.64	36.85	43.05	30.99	36.17
	52.32	61.21	47.66	55.74	44.97	52.58	36.62	42.78	30.98	36.16
	52.30	61.18	47.56	55.62	44.86	52.45	36.43	42.56	29.27	34.15
			47.55	55.61	44.67	52.23	36.20	42.29	29.15	34.01
			47.52	55.57	44.65	52.21	36.09	42.16	27.24	31.77
					44.44	51.96	36.06	42.12	27.08	31.58
					44.30	51.79	36.03	42.09		
					44.05	51.50	35.49	41.45		
					44.03	51.48	35.43	41.38		
				43.86	51.28	34.94	40.81			
				43.49	50.84	34.94	40.81			
				43.22	50.53	34.42	40.20			
				42.89	50.14					
				42.63	49.83					

					42.25	49.39				
					42.23	49.37				
					42.19	49.32				
					42.17	49.29				
					42.01	49.11				
					41.90	48.98				
					41.40	48.39				
					41.22	48.18				
					41.07	48.00				
					40.96	47.87				
					40.74	47.62				
					40.66	47.52				
					40.65	47.51				
					40.50	47.33				
					40.22	47.01				
					40.16	46.94				
					40.08	46.84				
					39.86	46.58				
					39.47	46.13				
					39.42	46.07				

From Table 19, it was found that the raw score and T Score of Flexibility., namely Percentage of muscles 20-21 years old male (n=115) students at Sichuan Health and Rehabilitation Vocational College are as follow:

Raw score of 52.30-68.04 is between T Score of 61.18-79.66, which is very good

Raw score of 47.52-51.86 is between T Score of 55.57-60.67, which is good

Raw score of 39.42-47.35 is between T Score of 46.07-55.37, which is Average

Raw score of 34.42-39.18 is between T Score of 40.20-45.79, which is Poor

Raw score of 27.08-33.97 is between T Score of 31.58-39.67, which is very Poor

Table 20 Shows Raw score and T Score Agility (Shuttle Run : seconds) for 20-21 years old male (n=115)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Agility	7.70	73.42	10.05	61.83	11.25	55.44	13.18	45.93	14.63	40.92
	8.42	70.70	10.06	60.79	11.34	54.99	13.31	45.48	14.65	39.53
	9.10	66.19	10.24	60.74	11.44	54.45	13.35	45.43	14.66	39.39
	9.36	65.40	10.41	60.44	11.45	54.40	13.37	45.38	14.72	38.54
	9.55	65.35	10.44	60.39	11.54	54.20	13.39	45.33	14.73	37.65
	9.80	62.22	10.72	60.29	11.58	54.20	13.40	45.18	14.94	37.60
			10.77	59.50	11.61	54.15	13.44	44.54	15.02	36.36
			10.80	59.25	11.62	54.05	13.45	44.49	15.65	35.13
			10.87	59.25	11.63	53.95	13.56	43.99	15.66	34.18
			10.91	59.15	11.64	53.75	13.65	43.55	15.82	32.90
			11.10	58.56	11.73	53.11	13.84	43.45	16.73	29.53
			11.11	57.72	11.73	53.11	13.90	43.45	17.28	25.96
			11.12	57.32	11.82	52.96	13.91	43.35		
			11.13	57.17	11.87	52.86	13.99	43.35		
			11.21	57.12	12.00	52.76	14.00	42.95		
			11.23	56.38	12.03	52.27	14.03	42.90		
					12.08	52.12	14.11	42.85		
					12.20	52.12	14.28	42.80		
					12.27	52.07	14.40	41.86		
					12.31	52.07	14.42	41.67		
				12.33	51.87	14.47	41.17			
				12.43	51.18					
				12.45	51.03					
				12.54	50.93					
				12.56	50.78					

					12.61	50.68				
					12.67	48.90				
					12.68	48.80				
					12.69	48.60				
					12.71	47.66				
					12.74	47.41				
					12.76	47.26				
					12.79	46.62				
					12.93	46.37				

From Table 20, it was found that the raw score and T Score of Agility., namely Percentage of 20-21 years old male (n=115) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 7.70-9.80 is between T Score of 62.22-73.42, which is very good

Raw score of 10.05-11.23 is between T Score of 56.38-61.83, which is good

Raw score of 11.25-12.93 is between T Score of 46.37-55.44, which is Average

Raw score of 13.18-14.47 is between T Score of 41.17-45.93, which is Poor

Raw score of 14.63-17.28 is between T Score of 25.96-40.92, which is very Poor



Table 21 Shows Raw score and T Score Muscular Strength (Leg Strength : kilogram) for 20-21 years old male (n=115)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Muscular Strength	56.78	80.52	41.64	61.88	36.58	55.64	28.58	45.79	24.51	40.77
	48.26	70.03	41.46	61.65	36.34	55.35	28.43	45.60	23.75	39.84
	44.97	65.98	41.37	61.54	36.02	54.95	28.21	45.33	23.72	39.80
	44.00	64.78	41.14	61.26	35.98	54.90	28.10	45.20	23.56	39.60
	43.46	64.12	40.96	61.04	35.87	54.77	27.82	44.85	23.55	39.59
	43.36	63.99	40.42	60.37	35.76	54.63	27.66	44.65	23.48	39.51
	43.31	63.93	39.93	59.77	35.67	54.52	27.50	44.46	22.90	38.79
	42.68	63.16	39.81	59.62	35.55	54.37	27.33	44.25	22.70	38.54
	42.41	62.82	39.56	59.31	35.53	54.35	27.14	44.01	22.36	38.13
	42.30	62.69	39.00	58.62	35.48	54.29	27.06	43.92	21.89	37.55
	41.98	62.29	38.63	58.17	35.44	54.24	26.29	42.97	21.52	37.09
	41.96	62.27	38.59	58.12	35.04	53.75	26.21	42.87	20.99	36.44
	41.79	62.06	38.36	57.83	34.94	53.62	26.20	42.86	20.64	36.01
			37.89	57.26	34.88	53.55	26.16	42.81	20.12	35.37
			37.68	57.00	34.72	53.35	26.07	42.70	19.94	35.14
			37.50	56.78	34.53	53.12	25.73	42.28	19.80	34.97
			37.28	56.50	34.51	53.09	25.32	41.77	18.87	33.83
					33.88	52.32	25.17	41.59	17.54	32.19
					33.81	52.23	25.13	41.54	14.81	28.83
					33.76	52.17	25.10	41.50	14.50	28.44
				33.67	52.06	24.95	41.32			
				33.66	52.05	24.76	41.08			
				33.27	51.56					
				32.70	50.86					
				32.51	50.63					

					32.13	50.16				
					31.98	49.98				
					31.67	49.59				
					31.65	49.57				
					31.62	49.53				
					31.24	49.06				
					31.16	48.97				
					31.10	48.89				
					31.06	48.84				
					30.99	48.76				
					30.96	48.72				
					30.77	48.49				
					30.76	48.47				
					30.72	48.42				
					30.10	47.66				
					29.62	47.07				
					28.97	46.27				
					28.81	46.07				

From Table 21, it was found that the raw score and T Score of Muscular Strength., namely Percentage of 20-21 years old male (n=115) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 41.79-56.78 is between T Score of 62.06-80.52, which is very good

Raw score of 37.28-41.64 is between T Score of 56.50-61.88, which is good

Raw score of 28.81-36.58 is between T Score of 46.07-55.64, which is Average

Raw score of 24.76-28.58 is between T Score of 41.08-45.79, which is Poor

Raw score of 14.50-24.51 is between T Score of 28.44-40.77, which is very Poor

Table 22 Shows Raw score and T Score Cardio Respiratory (3 Minutes Step test : time per minute) for 18-19 years old female (n=301)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Cardio Respiratory	60.64	80.01	50.51	60.71	48.02	55.96	42.72	45.87	39.64	40.00
	57.84	74.67	50.50	60.69	48.01	55.94	42.67	45.77	39.57	39.87
	56.68	72.46	50.48	60.65	47.95	55.83	42.67	45.66	39.57	39.85
	56.46	72.04	50.44	60.57	47.86	55.66	42.67	45.62	39.56	39.73
	55.66	70.52	50.35	60.40	47.83	55.60	42.61	45.35	39.50	39.71
	54.81	68.90	50.23	60.17	47.81	55.56	42.59	45.30	39.49	39.60
	54.57	68.44	50.19	60.10	47.79	55.53	42.45	45.30	39.43	39.54
	54.40	68.12	50.17	60.06	47.77	55.49	42.42	45.01	39.40	39.31
	54.11	67.57	50.06	59.85	47.67	55.30	42.42	44.99	39.28	39.22
	53.91	67.19	50.04	59.81	47.64	55.24	42.27	44.90	39.23	39.12
	53.88	67.13	50.03	59.79	47.60	55.16	42.26	44.80	39.18	38.68
	53.71	66.80	49.93	59.60	47.46	54.90	42.21	44.72	38.95	38.65
	53.54	66.48	49.90	59.55	47.38	54.74	42.16	44.51	38.93	38.61
	53.36	66.14	49.88	59.51	47.34	54.67	42.12	44.42	38.91	38.61
	53.10	65.64	49.86	59.47	47.32	54.63	42.01	44.19	38.91	38.59
	53.02	65.49	49.83	59.41	47.21	54.42	41.96	44.04	38.90	38.25
	52.96	65.38	49.80	59.36	47.16	54.33	41.84	43.87	38.72	38.13
	52.70	64.88	49.77	59.30	47.11	54.23	41.76	43.79	38.66	38.13
	52.61	64.71	49.59	58.96	47.10	54.21	41.67	43.75	38.66	37.96
	52.55	64.59	49.55	58.88	47.07	54.15	41.63	43.68	38.57	37.87
52.44	64.38	49.43	58.65	47.01	54.04	41.61	43.37	38.52	37.14	
52.10	63.74	49.38	58.55	46.92	53.87	41.57	43.35	38.14	37.12	
51.99	63.53	49.36	58.52	46.90	53.83	41.41	43.24	38.13	37.10	
51.85	63.26	49.28	58.36	46.85	53.73	41.4	43.14	38.12	37.01	
51.84	63.24	49.16	58.14	46.84	53.72	41.34	43.12	38.07	36.34	

51.63	62.84	49.14	58.10	46.78	53.60	41.29	43.03	37.72	36.25
51.55	62.69	49.08	57.98	46.78	53.51	41.28	42.99	37.67	36.25
51.54	62.67	49.07	57.96	46.73	53.47	41.23	42.88	37.67	36.11
51.29	62.19	48.99	57.81	46.71	53.39	41.21	42.67	37.60	35.41
51.54	62.67	48.92	57.68	46.67	53.24	41.15	42.38	37.23	35.08
51.29	62.19	48.91	57.66	46.59	53.22	41.04	42.38	37.06	34.87
51.24	62.10	48.91	57.62	46.58	53.18	40.89	42.29	36.95	34.80
50.99	61.62	48.89	57.53	46.56	53.16	40.89	42.19	36.91	34.42
50.81	61.28	48.84	57.51	46.55	53.07	40.84	42.19	36.71	34.17
50.79	61.24	48.83	57.49	46.50	53.05	40.79	41.94	36.58	33.06
50.72	61.11	48.82	57.18	46.49	52.88	40.79	41.90	36.00	32.28
50.68	61.03	48.66	56.52	46.49	52.57	40.66	41.66	35.59	32.21
		48.31	56.40	46.4	52.55	40.64	41.56	35.55	32.19
		48.25	56.35	46.24	52.50	40.51	41.39	35.54	31.10
		48.22	56.12	46.23	52.46	40.46	41.22	34.97	30.72
		48.10	56.10	46.20	52.36	40.37	41.18	34.77	30.53
		48.09	56.00	46.18	52.31	40.28	41.14	34.67	30.30
				46.13	52.27	40.26	41.08	34.55	30.02
				46.10	52.15	40.24	40.82	34.40	29.69
				46.08	52.08	40.21	40.48	34.23	26.62
				46.02	51.91			32.62	25.23
				45.98	51.89			31.89	24.89
				45.89	51.87			31.71	21.77
				45.88	51.75			24.85	11.82
				45.87	51.72				
				45.81	51.66				
				45.79	51.64				
				45.76	51.60				
				45.75	51.43				
				45.73	51.41				
				45.54	51.12				

				45.53	51.03				
				45.48	50.97				
				45.43	50.90				
				45.40	50.80				
				45.36	50.69				
				45.31	50.19				
				45.31	50.15				
				45.25	49.92				
				44.99	49.89				
				44.97	49.83				
				44.85	49.79				
				44.83	49.77				
				44.80	49.56				
				44.78	49.49				
				44.77	49.30				
				44.66	49.24				
				44.62	49.12				
				44.62	49.01				
				44.52	48.99				
				44.49	48.93				
				44.43	48.90				
				44.43	48.84				
				44.37	48.74				
				44.36	48.57				
				44.33	48.46				
				44.31	48.36				
				44.28	48.31				
				44.23	48.23				
				44.14	48.15				
				44.08	48.10				
				44.08	47.89				

				44.03	47.77				
				44.00	47.68				
				43.96	47.54				
				43.92	47.49				
				43.89	47.47				
				43.78	47.37				
				43.72	47.35				
				43.60	47.30				
				43.57	47.16				
				43.56	47.03				
				43.56	46.90				
				43.51	46.84				
				43.50	46.80				
				43.50	46.70				
				43.40	46.50				
				43.33	46.29				
				43.26	46.21				
				43.21	46.13				

From Table 22, it was found that the raw score and T Score of Cardio Respiratory, namely Percentage of 18-19 years old Female (n=301) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 50.68-60.64 is between T Score of 61.03-80.01, which is very good

Raw score of 48.09-50.51 is between T Score of 56.00-60.71, which is good

Raw score of 43.21-48.02 is between T Score of 46.13-55.96, which is Average

Raw score of 40.21-42.72 is between T Score of 40.48-45.87, which is Poor

Raw score of 30.07-39.64 is between T Score of 11.82-40.00, which is very Poor

Table 23 Shows Raw score and T Score Muscular Endurance (Push Up 1 Minute : time per minute) for 18-19 years old Female (n=301)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Muscular Endurance	56.00	79.85	42.00	60.16	38.00	54.54	31.00	44.70	27.00	39.08
	54.00	77.03	41.00	58.76	37.00	53.13	30.00	43.29	26.00	37.67
	53.00	75.63	40.00	57.35	36.00	51.73	29.00	41.89	25.00	36.26
	52.00	74.22	39.00	55.95	35.00	50.32	28.00	40.48	24.00	34.86
	51.00	72.82			34.00	48.92			23.00	33.45
	50.00	71.41			33.00	47.51			22.00	32.05
	49.00	70.00			32.00	46.10			20.00	29.23
	48.00	68.60							19.00	27.83
	47.00	67.19							17.00	25.02
	46.00	65.79								
	45.00	64.38								
	44.00	62.97								
	43.00	61.57								

From Table 23, it was found that the raw score and T Score of Muscular Endurance, namely Percentage of muscles 18-19 years old Female (n=301) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 43.00-56.00 is between T Score of 61.57-79.85, which is very good

Raw score of 39.00-42.00 is between T Score of 55.95-60.16, which is good

Raw score of 32.00-38.00 is between T Score of 46.10-54.54, which is Average

Raw score of 28.00-31.00 is between T Score of 40.48-44.70, which is Poor

Raw score of 17.00-27.00 is between T Score of 25.02-39.08, which is very Poor

Table 24 Shows Raw score and T Score Muscular Endurance (Sit - Ups 30 Sec. : time per minute) muscles. for 18-19 years old Female (n=301)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Muscular Endurance	46	76.25	36	60.89	32	54.75	27	45.54	23	40.93
	44	73.18	35	59.36	31	53.21	26	44.00	22	39.39
	42	70.10	34	57.82	30	51.68	25	42.47	21	37.86
	41	68.57	33	56.28	29	50.14	24	40.93	20	36.32
	40	67.03			28	47.07			19	34.79
	39	65.50							18	33.25
	38	63.96							17	31.72
	37	62.43							16	30.18
									15	28.65
									14	27.11
									13	27.11
									10	20.97

From Table 24, it was found that the raw score and T Score of Muscular Endurance., namely Percentage of muscles 18-19 years old Female (n=301) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 37-46 is between T Score of 62.43-76.25, which is very good

Raw score of 33-36 is between T Score of 56.28-60.89, which is good

Raw score of 28-32 is between T Score of 47.07-54.75, which is Average

Raw score of 24-27 is between T Score of 40.93-45.54, which is Poor

Raw score of 10-23 is between T Score of 20.97-40.93, which is very Poor

Table 25 Shows Raw score and T Score Flexibility (Back Extension : cm) for 18-19 years old Female (n=301)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Flexibility	61.09	74.93	48.98	60.72	44.81	55.83	36.40	45.95	31.03	39.65
	60.18	73.87	48.95	60.68	44.63	55.61	36.34	45.88	30.97	39.58
	59.38	72.93	48.93	60.66	44.46	55.41	36.30	45.84	30.79	39.37
	59.16	72.67	48.91	60.64	44.45	55.40	36.25	45.78	30.54	39.08
	57.81	71.08	48.88	60.60	44.43	55.38	36.13	45.64	30.53	39.06
	57.53	70.76	48.87	60.59	44.31	55.24	36.05	45.54	30.48	39.01
	57.52	70.74	48.85	60.57	43.97	54.84	36.02	45.51	30.30	38.79
	57.44	70.65	48.77	60.47	43.90	54.76	35.88	45.34	29.80	38.21
	56.76	69.85	48.72	60.41	43.83	54.68	35.80	45.25	29.52	37.88
	56.57	69.63	48.67	60.36	43.65	54.46	35.52	44.92	29.30	37.62
	56.30	69.31	48.63	60.31	43.60	54.41	35.28	44.64	29.30	37.62
	55.59	68.48	48.29	59.91	43.59	54.39	35.23	44.58	29.29	37.61
	55.26	68.09	48.28	59.90	43.54	54.33	35.20	44.55	28.99	37.26
	54.68	67.41	48.27	59.89	43.13	53.85	35.20	44.55	28.91	37.16
	54.24	66.89	48.24	59.85	43.04	53.75	35.07	44.39	28.77	37.00
	54.09	66.72	48.21	59.82	42.94	53.63	34.86	44.15	28.66	36.87
	53.43	65.94	48.05	59.63	42.87	53.55	34.81	44.09	28.40	36.56
	52.53	64.89	47.46	58.94	42.85	53.53	34.53	43.76	28.25	36.39
	52.28	64.59	47.30	58.75	42.82	53.49	34.35	43.55	28.11	36.22
	51.80	64.03	47.16	58.58	42.59	53.22	34.34	43.54	27.84	35.91
	51.70	63.91	46.80	58.16	42.46	53.07	34.17	43.34	27.77	35.82
	51.37	63.53	46.73	58.08	42.43	53.03	34.10	43.25	27.73	35.78
	51.10	63.21	46.60	57.93	42.37	52.96	34.05	43.20	27.72	35.77
	50.89	62.96	46.48	57.79	42.26	52.83	33.97	43.10	27.58	35.60
	50.87	62.94	46.43	57.73	42.23	52.80	33.93	43.06	27.38	35.37
	50.84	62.90	46.42	57.72	42.22	52.79	33.83	42.94	26.93	34.84

50.52	62.53	46.39	57.68	42.16	52.72	33.74	42.83	26.25	34.04
50.34	62.32	46.32	57.60	42.15	52.70	33.73	42.82	26.14	33.91
50.3	62.27	46.26	57.53	42.12	52.67	33.68	42.76	25.56	33.23
50.29	62.26	46.22	57.48	42.02	52.55	33.65	42.73	25.23	32.84
50.24	62.20	46.15	57.40	42.01	52.54	33.55	42.61	25.04	32.62
50.21	62.16	46.04	57.27	42.00	52.53	33.43	42.47	24.13	31.55
50.21	62.16	45.95	57.16	41.99	52.52	33.41	42.44	23.89	31.27
50.16	62.11	45.94	57.15	41.92	52.43	33.23	42.23	23.63	30.97
50.15	62.09	45.80	56.99	41.88	52.39	33.21	42.21	23.19	30.45
49.86	61.75	45.54	56.68	41.84	52.34	33.19	42.19	23.04	30.27
49.81	61.69	45.44	56.57	41.84	52.34	33.08	42.06	22.75	29.93
49.65	61.51	45.39	56.51	41.80	52.29	33.03	42.00	22.19	29.28
49.60	61.45	45.26	56.35	41.73	52.21	32.91	41.86	21.88	28.91
49.59	61.44	45.18	56.26	41.64	52.10	32.83	41.76	21.05	27.94
49.51	61.34	45.13	56.20	41.50	51.94	32.75	41.67	20.99	27.87
49.41	61.22	45.11	56.18	41.49	51.93	32.71	41.62	20.66	27.48
49.37	61.18	45.08	56.14	41.47	51.91	32.67	41.58	19.14	25.70
49.35	61.15	45.06	56.12	41.43	51.86	32.52	41.40	18.26	24.66
49.30	61.10	45.03	56.08	41.41	51.83	32.39	41.25	18.06	24.43
		45.01	56.06	41.16	51.54	32.31	41.15	16.88	23.04
		44.99	56.04	41.15	51.53	32.14	40.95		
		44.96	56.00	41.11	51.48	32.11	40.92		
				41.05	51.41	32.08	40.88		
				41.04	51.40	32.05	40.85		
				40.93	51.27	31.94	40.72		
				40.51	50.78	31.79	40.54		
				40.24	50.46	31.78	40.53		
				39.90	50.06				
				39.80	49.95				
				39.73	49.86				
				39.72	49.85				

				39.70	49.83				
				39.69	49.82				
				39.65	49.77				
				39.16	49.19				
				39.09	49.11				
				38.89	48.88				
				38.80	48.77				
				38.69	48.64				
				38.65	48.60				
				38.62	48.56				
				38.59	48.52				
				38.53	48.45				
				38.52	48.44				
				38.51	48.43				
				38.47	48.38				
				38.39	48.29				
				38.30	48.18				
				38.27	48.15				
				38.23	48.10				
				38.16	48.02				
				37.96	47.79				
				37.91	47.73				
				37.83	47.63				
				37.72	47.50				
				37.70	47.48				
				37.63	47.40				
				37.55	47.30				
				37.49	47.23				
				37.40	47.13				
				37.37	47.09				
				37.33	47.05				

					37.30	47.01				
					37.27	46.98				
					37.23	46.93				
					37.16	46.85				
					37.14	46.82				
					37.04	46.71				
					37.03	46.69				
					36.87	46.51				
					36.84	46.47				
					36.78	46.40				
					36.65	46.25				
					36.54	46.12				
					36.47	46.04				

From Table 25, it was found that the raw score and T Score of Flexibility., namely Percentage of muscles 18-19 years old Female (n=301) students at Sichuan Health and Rehabilitation Vocational College are as follow:

Raw score of 49.30-61.09 is between T Score of 61.10-70.65, which is very good

Raw score of 44.96-48.98 is between T Score of 56.00-60.47, which is good

Raw score of 36.47-44.81 is between T Score of 46.04-54.84, which is Average

Raw score of 31.78-36.40 is between T Score of 40.53-45.34, which is Poor

Raw score of 16.88-31.03 is between T Score of 23.04-38.21, which is very Poor

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Table 26 Shows Raw score and T Score Agility (Shuttle Run : seconds) for 18-19 years old Female (n=301)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Agility	7.75	14.13	11.21	39.62	12.40	48.39	15.63	72.18	18.74	95.10
	9.15	24.44	11.24	39.84	12.41	48.46				
	9.46	26.73	11.25	39.91	12.43	48.61				
	9.68	28.35	11.26	39.99	12.46	48.83				
	9.71	28.57	11.32	40.43	12.47	48.90				
	9.91	30.04	11.32	40.43	12.54	49.42				
	10.22	32.33	11.38	40.87	12.56	49.57				
	10.38	33.50	11.39	40.95	12.57	49.64				
	10.47	34.17	11.40	41.02	12.58	49.71				
	10.47	34.17	11.46	41.46	12.60	49.86				
	10.48	34.24	11.53	41.98	12.62	50.01				
	10.55	34.76	11.60	42.49	12.62	50.01				
	10.58	34.98	11.60	42.49	12.62	50.01				
	10.69	35.79	11.64	42.79	12.63	50.08				
	10.70	35.86	11.67	43.01	12.67	50.38				
	10.75	36.23	11.67	43.01	12.68	50.45				
	10.80	36.60	11.68	43.08	12.69	50.52				
	10.81	36.67	11.74	43.52	12.69	50.52				
	10.83	36.82	11.76	43.67	12.69	50.52				
	10.86	37.04	11.76	43.67	12.72	50.74				
10.88	37.19	11.86	44.41	12.72	50.74					
10.96	37.78	11.94	45.00	12.73	50.82					
		11.99	45.37	12.75	50.96					
		12.06	45.88	12.75	50.96					
		12.09	46.10	12.76	51.04					

		12.09	46.10	12.79	51.26				
		12.13	46.40	12.80	51.33				
		12.15	46.54	12.81	51.41				
		12.23	47.13	12.85	51.70				
		12.23	47.13	12.86	51.78				
		12.24	47.21	12.89	52.00				
		12.25	47.28	12.89	52.00				
		12.27	47.43	12.92	52.22				
		12.28	47.50	12.92	52.22				
		12.28	47.50	12.94	52.36				
		12.29	47.58	12.95	52.44				
		12.30	47.65	13.00	52.81				
		12.30	47.65	13.02	52.95				
		12.31	47.72	13.02	52.95				
		12.36	48.09	13.03	53.03				
		12.36	48.09	13.08	53.40				
		12.38	48.24	13.08	53.40				
		12.39	48.31	13.13	53.76				
				13.15	53.91				
				13.18	54.13				
				13.20	54.28				
				13.26	54.72				
				13.31	55.09				
				13.32	55.16				
				13.33	55.24				
				13.33	55.24				
				13.33	55.24				
				13.35	55.39				
				13.36	55.46				
				13.38	55.61				
				13.39	55.68				

				13.40	55.75				
				13.60	57.23				
				13.60	57.23				
				13.62	57.37				
				13.64	57.52				
				13.64	57.52				
				13.69	57.89				
				13.73	58.18				
				13.74	58.26				
				13.76	58.41				
				13.77	58.48				
				13.84	59.00				
				13.84	59.00				
				13.84	59.00				
				13.94	59.73				
				13.95	59.81				
				13.98	60.03				
				13.99	60.10				
				13.99	60.10				
				14.03	60.40				
				14.04	60.47				
				14.06	60.62				
				14.06	60.62				
				14.07	60.69				
				14.08	60.76				
				14.12	61.06				
				14.14	61.21				
				14.16	61.35				
				14.17	61.43				
				14.18	61.50				
				14.19	61.57				

					14.21	61.72				
					14.23	61.87				
					14.26	62.09				
					14.26	62.09				
					14.27	62.16				
					14.29	62.31				
					14.29	62.31				
					14.32	62.53				
					14.33	62.61				
					14.35	62.75				
					14.36	62.83				
					14.38	62.97				

From Table 26, it was found that the raw score and T Score of Agility., namely Percentage of 18-19 years old Female (n=301) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 7.75-10.96 is between T Score of 14.13-37.78, which is very good

Raw score of 11.21-12.39 is between T Score of 39.62-48.31, which is good

Raw score of 12.40-14.38 is between T Score of 48.39-62.97, which is Average

Raw score of 15.63 is between T Score of 72.18, which is Poor

Raw score of 18.74 is between T Score of 95.10, which is very Poor



Table 27 Shows Raw score and T Score Muscular Strength (Leg Strength : kilogram)
for 18-19 years old Female (n=301)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Muscular Strength	48.53	76.93	36.38	61.97	31.50	55.95	23.34	45.90	19.33	40.96
	45.03	72.62	36.18	61.72	31.49	55.94	23.32	45.88	19.28	40.90
	44.50	71.97	36.16	61.69	31.48	55.93	23.17	45.69	19.15	40.74
	42.55	69.57	36.11	61.63	31.44	55.88	23.17	45.69	19.14	40.73
	42.23	69.17	35.70	61.13	31.11	55.47	23.15	45.67	18.96	40.51
	42.21	69.15	35.54	60.93	30.95	55.28	23.12	45.63	18.94	40.48
	42.14	69.06	35.14	60.44	30.90	55.22	23.08	45.58	18.93	40.47
	41.82	68.67	35.09	60.38	30.71	54.98	23.08	45.58	18.93	40.47
	41.76	68.59	35.05	60.33	30.69	54.96	22.95	45.42	18.90	40.43
	41.23	67.94	34.96	60.22	30.60	54.85	22.81	45.25	18.88	40.41
	40.70	67.29	34.69	59.88	30.49	54.71	22.78	45.21	18.33	39.73
	40.58	67.14	34.57	59.74	30.47	54.69	22.65	45.05	18.32	39.72
	39.86	66.25	34.48	59.62	30.40	54.60	22.49	44.86	18.21	39.58
	39.84	66.23	34.15	59.22	30.37	54.56	22.48	44.84	18.01	39.34
	39.53	65.85	34.03	59.07	30.19	54.34	22.47	44.83	17.94	39.25
	39.23	65.48	33.99	59.02	30.09	54.22	22.44	44.79	17.42	38.61
	39.15	65.38	33.87	58.87	30.03	54.14	22.43	44.78	17.33	38.50
	39.07	65.28	33.84	58.84	29.99	54.09	22.36	44.70	17.18	38.31
	39.00	65.19	33.65	58.60	29.94	54.03	22.28	44.60	16.68	37.70
	38.79	64.93	33.54	58.47	29.87	53.95	22.23	44.54	16.66	37.67
	37.80	63.71	33.32	58.20	29.75	53.80	22.17	44.46	16.54	37.53
	37.65	63.53	33.24	58.10	29.74	53.79	22.12	44.40	16.40	37.35
	37.60	63.47	33.23	58.09	29.71	53.75	22.08	44.35	16.17	37.07
	37.37	63.18	33.15	57.99	29.62	53.64	21.91	44.14	15.97	36.82
	37.00	62.73	33.03	57.84	29.60	53.61	21.77	43.97	15.87	36.70
	36.98	62.70	33.03	57.84	29.52	53.52	21.69	43.87	15.79	36.60

36.89	62.59	33.01	57.81	29.48	53.47	21.66	43.83	15.36	36.07
36.87	62.57	32.89	57.67	29.40	53.37	21.64	43.81	15.35	36.06
36.73	62.40	32.81	57.57	29.30	53.24	21.53	43.67	15.11	35.76
36.43	62.03	32.74	57.48	29.24	53.17	21.30	43.39	14.85	35.44
		32.68	57.41	29.18	53.10	21.22	43.29	14.27	34.73
		32.64	57.36	29.09	52.99	21.12	43.17	14.11	34.53
		32.58	57.28	29.08	52.97	21.04	43.07	13.57	33.87
		32.33	56.98	28.98	52.85	21.03	43.06	12.59	32.66
		32.17	56.78	28.97	52.84	20.95	42.96	12.52	32.57
		32.14	56.74	28.90	52.75	20.93	42.93	11.80	31.69
		32.02	56.59	28.88	52.73	20.93	42.93	11.40	31.19
		31.99	56.56	28.77	52.59	20.83	42.81	11.33	31.11
		31.90	56.45	28.74	52.55	20.64	42.58	10.98	30.68
		31.79	56.31	28.66	52.46	20.51	42.42	10.91	30.59
		31.66	56.15	28.62	52.41	20.42	42.31	9.97	29.43
		31.65	56.14	28.61	52.39	20.33	42.19	9.30	28.61
		31.64	56.13	28.55	52.32	20.29	42.15	9.26	28.56
				28.52	52.28	20.27	42.12	9.06	28.31
				28.50	52.26	20.18	42.01	9.00	28.24
				28.46	52.21	20.17	42.00	8.24	27.30
				28.44	52.18	20.05	41.85	5.91	24.43
				28.41	52.15	19.88	41.64		
				28.35	52.07	19.64	41.35		
				28.34	52.06	19.62	41.32		
				28.30	52.01	19.57	41.26		
				28.28	51.99	19.54	41.22		
				28.24	51.82	19.44	41.10		
				28.22	51.77	19.43	41.09		
				28.14	51.59				
				28.10	51.56				
				27.94	51.41				

				27.93	51.32				
				27.86	51.31				
				27.81	51.27				
				27.74	51.21				
				27.73	51.10				
				27.70	51.06				
				27.65	51.04				
				27.56	51.01				
				27.53	50.88				
				27.51	50.76				
				27.49	50.63				
				27.38	50.62				
				27.28	50.46				
				27.18	50.42				
				27.17	50.41				
				27.12	50.18				
				27.04	50.16				
				27.01	50.14				
				27.00	50.14				
				26.81	50.09				
				26.80	50.02				
				26.78	50.00				
				26.74	49.61				
				26.68	49.27				
				26.67	49.25				
				26.63	49.22				
				26.35	48.93				
				26.07	48.88				
				26.06	48.81				
				26.03	48.77				
				25.80	48.42				

					25.76	48.38				
					25.70	48.22				
					25.67	47.98				
					25.38	47.87				
					25.35	47.87				
					25.22	47.79				
					25.03	47.73				
					24.94	47.48				
					24.94	47.47				
					24.87	47.39				
					24.82	47.36				
					24.82	47.28				
					24.62	47.26				
					24.61	47.15				
					24.55	47.13				
					24.52	46.80				
					24.46	46.74				
					24.44	46.73				
					24.35	46.70				
					24.34	46.60				
					24.07	46.36				
					24.02	46.35				

From Table 27, it was found that the raw score and T Score of Muscular Strength, namely Percentage of 18-19 years old Female (n=301) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 36.43-48.53 is between T Score of 62.03-76.93, which is very good

Raw score of 31.64-36.38 is between T Score of 56.13-61.97, which is good

Raw score of 24.02-31.50 is between T Score of 46.08-55.95, which is Average

Raw score of 19.43-23.34 is between T Score of 45.90-45.90, which is Poor

Raw score of 5.91-19.33 is between T Score of 24.43-40.96, which is very Poor

Table 28 Shows Raw score and T Score Cardio Respiratory (3 Minutes Step test : time per minute) for 19-20 years old Female (n=301)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Cardio Respiratory	62.36	82.34	50.97	60.64	48.49	55.92	43.24	45.91	40.63	40.94
	57.98	73.99	50.92	60.54	48.41	55.76	43.16	45.76	40.62	40.92
	56.70	71.56	50.82	60.35	48.36	55.67	43.15	45.74	40.54	40.77
	56.02	70.26	50.67	60.07	48.30	55.55	43.11	45.67	40.47	40.64
	55.79	69.82	50.63	59.99	48.26	55.48	43.09	45.63	40.46	40.62
	55.41	69.10	50.63	59.99	48.21	55.38	43.05	45.55	40.45	40.60
	55.29	68.87	50.54	59.82	48.19	55.34	43.01	45.47	40.43	40.56
	55.25	68.79	50.40	59.55	48.18	55.32	42.98	45.42	40.42	40.54
	55.02	68.36	50.34	59.44	48.08	55.13	42.96	45.38	40.36	40.43
	53.83	66.09	50.29	59.34	47.88	54.75	42.84	45.15	40.31	40.33
	53.75	65.94	50.24	59.25	47.62	54.26	42.80	45.07	40.30	40.31
	53.73	65.90	50.16	59.10	47.59	54.20	42.77	45.02	40.22	40.16
	53.55	65.56	50.11	59.00	47.57	54.16	42.76	45.00	40.11	39.95
	53.51	65.48	50.03	58.85	47.42	53.88	42.68	44.85	40.08	39.89
	53.38	65.23	49.95	58.70	47.36	53.76	42.61	44.71	40.01	39.76
	53.34	65.15	49.85	58.51	47.32	53.69	42.57	44.64	39.96	39.66
	53.33	65.14	49.84	58.49	47.30	53.65	42.46	44.43	39.93	39.61
	53.30	65.08	49.83	58.47	47.28	53.61	42.45	44.41	39.9	39.55
	53.24	64.96	49.77	58.35	47.27	53.59	42.38	44.27	39.82	39.40
	53.23	64.95	49.73	58.28	47.25	53.55	42.32	44.16	39.56	38.90
53.18	64.85	49.69	58.20	47.10	53.27	42.30	44.12	39.38	38.56	
52.86	64.24	49.68	58.18	47.07	53.21	42.28	44.08	39.34	38.48	
52.82	64.16	49.66	58.14	47.03	53.13	42.23	43.99	39.33	38.46	
52.77	64.07	49.65	58.12	46.85	52.79	42.13	43.80	39.24	38.29	
52.69	63.92	49.58	57.99	46.84	52.77	42.10	43.74	39.19	38.20	
52.64	63.82	49.56	57.95	46.83	52.75	42.06	43.66	39.10	38.03	

52.61	63.76	49.32	57.50	46.82	52.73	42.04	43.63	39.08	37.99
52.55	63.65	49.07	57.02	46.67	52.45	41.95	43.46	39.05	37.93
52.47	63.50	49.03	56.94	46.66	52.43	41.80	43.17	38.84	37.53
52.46	63.48	49.02	56.92	46.56	52.24	41.79	43.15	38.72	37.30
52.40	63.36	48.97	56.83	46.50	52.12	41.75	43.07	38.71	37.28
52.21	63.00	48.91	56.72	46.47	52.07	41.71	43.00	38.66	37.19
52.14	62.87	48.90	56.70	46.45	52.03	41.41	42.43	38.53	36.94
52.11	62.81	48.81	56.52	46.42	51.97	41.39	42.39	38.42	36.73
52.09	62.77	48.80	56.51	46.40	51.93	41.37	42.35	38.37	36.63
52.05	62.70	48.69	56.30	46.27	51.69	41.20	42.03	38.33	36.56
52.03	62.66	48.66	56.24	46.22	51.59	41.17	41.97	38.28	36.46
51.98	62.56	48.64	56.20	46.16	51.48	41.15	41.93	38.22	36.35
51.86	62.34	48.59	56.11	46.11	51.38	41.10	41.84	38.22	36.35
51.78	62.18	48.58	56.09	46.10	51.36	41.04	41.72	38.09	36.10
51.75	62.13	48.56	56.05	46.07	51.30	41.00	41.65	37.93	35.80
51.74	62.11			46.06	51.29	40.89	41.44	37.69	35.34
51.51	61.67			46.04	51.25	40.85	41.36	37.6	35.17
51.50	61.65			46.03	51.23	40.83	41.32	37.52	35.02
51.3	61.27			45.95	51.08	40.71	41.09	37.33	34.65
51.21	61.10			45.94	51.06	40.69	41.05	37.33	34.65
51.17	61.02			45.92	51.02	40.66	41.00	37.3	34.60
				45.88	50.94			37.24	34.48
				45.76	50.71			37.16	34.33
				45.73	50.66			37.04	34.10
				45.70	50.60			37.01	34.04
				45.61	50.43			36.94	33.91
				45.60	50.41			36.71	33.47
				45.59	50.39			36.65	33.36
				45.57	50.35			36.46	33.00
				45.56	50.33			35.96	32.04
				45.40	50.03			35.87	31.87

				45.35	49.93			35.60	31.36
				45.28	49.80			35.59	31.34
				45.26	49.76			34.96	30.14
				45.25	49.74			33.68	27.70
				45.24	49.72			32.89	26.19
				45.09	49.44				
				45.00	49.27				
				44.98	49.23				
				44.97	49.21				
				44.96	49.19				
				44.78	48.85				
				44.65	48.60				
				44.63	48.56				
				44.61	48.52				
				44.61	48.52				
				44.48	48.28				
				44.43	48.18				
				44.39	48.10				
				44.23	47.80				
				44.20	47.74				
				44.18	47.70				
				44.14	47.63				
				44.07	47.49				
				43.78	46.94				
				43.76	46.90				
				43.71	46.81				
				43.69	46.77				
				43.68	46.75				
				43.60	46.60				
				43.50	46.41				
				43.41	46.24				

From Table 28, it was found that the raw score and T Score of Cardio Respiratory, namely Percentage of 19-20 years old Female (n=301) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 51.17-62.36 is between T Score of 61.02-82.34, which is very good

Raw score of 48.56-50.97 is between T Score of 56.05-60.64, which is good

Raw score of 48.49-43.41-48.56 is between T Score of 46.24-55.92, which is Average

Raw score of 40.66-43.24 is between T Score of 41.00-45.91, which is Poor

Raw score of 32.89-40.64 is between T Score of 26.19-40.94, which is very Poor

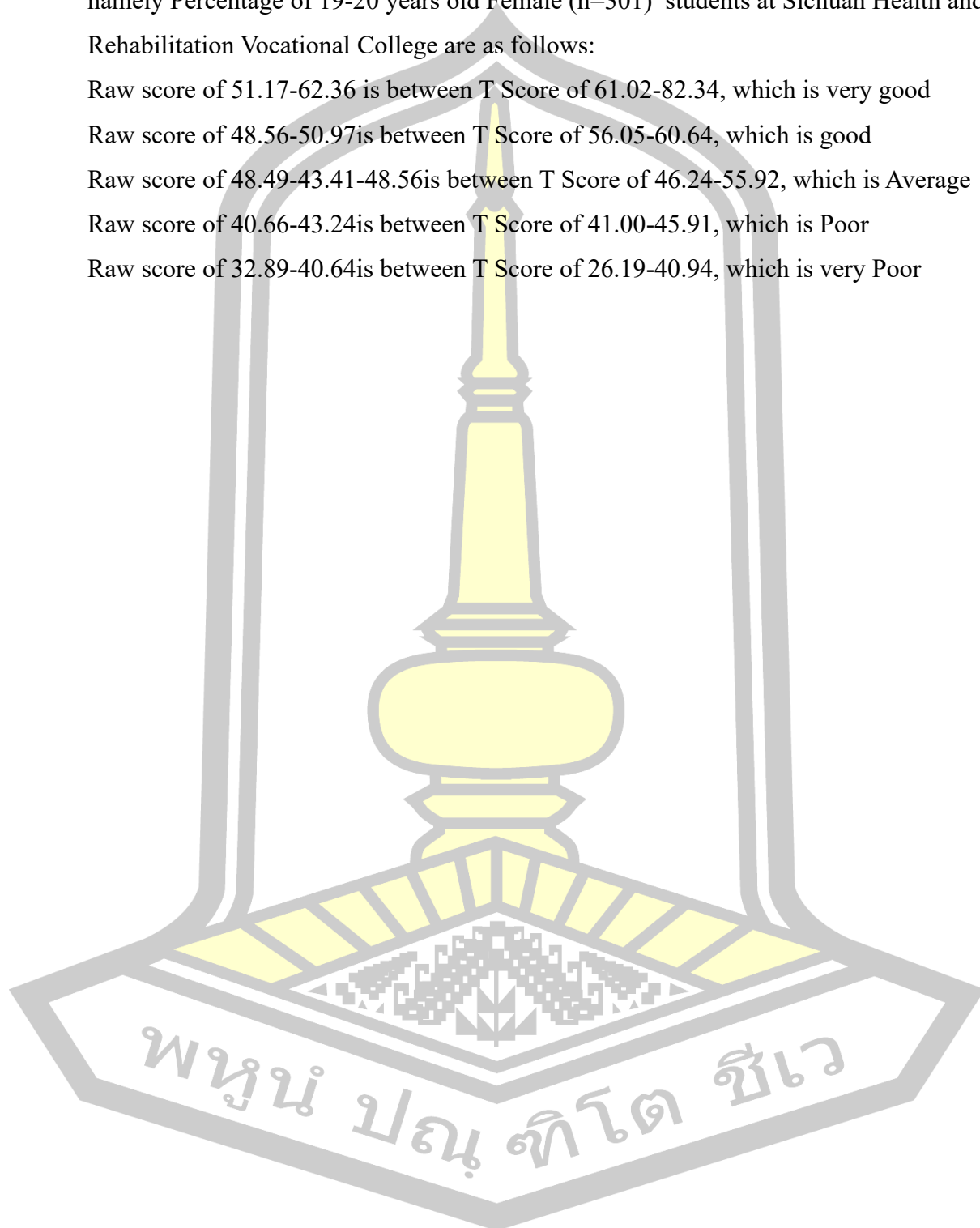


Table 29 Shows Raw score and T Score Muscular Endurance (Push Up 1 Minute : time per minute) for 19-20 years old Female (n=301)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Muscular Endurance	55	78.68	41	59.65	37	54.22	33	44.70	30	40.63
	53	75.96	40	58.29	36	52.86	32	43.35	29	39.27
	52	74.60	39	56.93	35	51.50	31	41.99	28	37.91
	49	70.52	38	55.58	34	50.14			27	36.55
	48	69.16				48.78			26	35.19
	47	67.80				47.42			25	33.83
	46	66.45				46.06			24	32.48
	45	65.09							23	31.12
	44	63.73							18	28.40
	43	62.37							13	21.60
	42	61.01								

From Table 29, it was found that the raw score and T Score of upper body strength and endurance , namely Percentage of muscles 19-20 years old Female (n=301) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 42-55 is between T Score of 61.01-78.68, which is very good

Raw score of 38-41 is between T Score of 55.58-59.65, which is good

Raw score of 34-37 is between T Score of 46.06-54.22, which is Average

Raw score of 31-33 is between T Score of 41.99-44.70, which is Poor

Raw score of 13-30 is between T Score of 21.60-40.63 , which is very Poor

Table 30 Shows Raw score and T Score Muscular Endurance (Sit - Ups 30 Sec. : time per minute) for 19-20 years old Female (n=301)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Muscular Endurance	35	80.14	30	58.65	27	50.97	24	43.29	19	34.08
	34	75.54	29	54.04	26	47.90	23	41.76	18	32.54
	33	70.93	28	52.50	25	44.83	22	38.69	17	31.01
	32	66.32					21	37.15	16	29.47
	31	61.72					20	35.61	15	27.94
									14	26.40
									12	23.33

From Table 30, it was found that the raw score and T Score of Muscular Endurance., namely Percentage of 19-20 years old Female (n=301) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 31-35 is between T Score of 61.72- 80.14, which is very good

Raw score of 28-30 is between T Score of 58.65-52.50, which is good

Raw score of 25-27 is between T Score of 44.83-50.97, which is Average

Raw score of 20-24 is between T Score of 35.61-43.29, which is Poor

Raw score of 12-19 is between T Score of 23.33-34.08 , which is very Poor

Table 31 Shows Raw score and T Score Flexibility (Back Extension : cm) for 19-20 years old Female (n=301)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Flexibility	62.45	76.33	49.44	60.99	45.41	55.97	37.11	45.77	33.43	39.96
	61.24	74.91	49.41	60.90	45.41	55.74	37.05	45.65	33.42	39.95
	61.00	74.62	49.38	60.68	45.32	55.68	37.00	45.60	33.41	39.92
	58.93	72.20	49.31	60.55	45.31	55.54	37.00	45.57	33.04	39.91
	56.81	69.71	49.12	60.53	45.26	55.50	36.96	45.48	32.87	39.67
	55.74	68.45	49.01	60.31	45.22	55.48	36.89	45.46	32.79	39.66
	55.17	67.78	48.99	60.23	45.11	55.42	36.87	45.43	32.64	39.65
	55.12	67.72	48.80	59.79	44.91	55.30	36.82	45.42	32.64	39.62
	55.10	67.70	48.74	59.62	44.86	55.03	36.82	45.25	32.14	39.58
	54.80	67.35	48.36	59.61	44.74	54.94	36.79	45.18	32.13	39.56
	54.78	67.32	48.22	59.28	44.71	54.92	36.77	45.12	32.09	39.22
	54.72	67.25	48.21	59.27	44.69	54.80	36.69	45.03	32.07	39.04
	54.08	66.50	47.93	59.14	44.64	54.79	36.42	45.00	31.99	39.00
	53.99	66.40	47.92	58.72	44.54	54.78	36.42	44.89	31.99	38.68
	53.86	66.24	47.81	58.69	44.31	54.66	36.31	44.84	31.84	38.56
	53.00	65.23	47.45	58.59	44.23	54.44	36.27	44.75	31.66	38.47
	52.74	64.93	47.42	58.57	44.21	54.38	36.25	44.69	31.55	38.18
	52.23	64.33	47.34	58.17	44.11	54.01	36.17	44.64	31.54	38.14
	51.93	63.98	47.32	58.15	44.10	53.94	36.15	44.35	31.52	37.60
	51.85	63.89	46.98	58.12	44.09	53.87	36.13	44.17	31.47	37.22
	51.76	63.78	46.96	57.99	43.99	53.86	36.12	43.52	31.46	36.57
	51.72	63.73	46.94	57.98	43.80	53.72	35.97	43.45	31.43	35.69
	51.70	63.71	46.83	57.97	43.80	53.63	35.97	43.37	31.42	35.35
	51.41	63.37	46.83	57.91	43.75	53.54	35.91	43.20	31.22	35.30
	51.20	63.12	46.82	57.85	43.44	53.51	35.86	43.17	31.21	34.92
	51.17	63.09	46.81	57.84	43.38	53.49	35.86	42.49	31.20	34.86

	50.41	62.19	46.76	57.76	43.32	53.47	35.79	42.46	31.18	34.40
	50.32	62.09	46.71	57.31	43.31	53.37	35.76	42.37	31.14	34.21
	50.29	62.05	46.70	57.29	43.19	53.24	35.67	42.26	31.13	33.99
	49.99	61.70	46.63	57.24	43.11	53.10	35.62	42.25	30.84	33.51
	49.98	61.69	46.25	57.19	43.04	53.02	35.55	42.24	30.68	33.16
			46.25	57.18	43.01	52.78	35.50	41.81	30.65	33.02
			46.23	57.07	42.99	52.53	35.45	41.61	30.38	32.90
			46.19	57.00	42.98	52.49	35.21	41.51	30.27	32.39
			46.15	56.94	42.89	52.43	35.05	41.34	30.20	32.12
			46.14	56.90	42.78	52.39	34.50	40.75	29.95	31.98
			46.04	56.84	42.78	52.36	34.44	40.74	29.92	31.87
			45.98	56.82	42.66	52.30	34.37	40.69	29.46	31.82
			45.93	56.73	42.59	52.19	34.23	40.67	29.13	31.27
			45.90	56.65	42.39	52.16	34.20	40.57	28.58	30.68
			45.85	56.33	42.18	52.09	33.62	40.40	27.83	30.37
			45.83	56.22	42.14	52.03	33.60	40.19	27.54	29.87
			45.75	56.21	42.09	51.91	33.52	40.06	27.50	28.98
			45.75	56.15	42.06	51.80	33.52	40.05	27.17	28.66
			45.69	56.10	42.03	51.67	33.43	40.02	27.12	27.49
					41.98	51.60			26.73	27.42
					41.89	51.48			26.57	27.01
					41.86	51.35			26.38	23.36
					41.80	51.33			25.97	21.17
					41.75	51.31				
					41.65	51.30				
					41.55	51.22				
					41.44	51.10				
					41.38	50.83				
					41.28	50.76				
					41.17	50.67				
					41.15	50.66				

				41.14	50.61				
				41.13	50.59				
				41.06	50.29				
				40.96	50.19				
				40.73	50.12				
				40.67	49.94				
				40.59	49.89				
				40.58	49.82				
				40.54	49.72				
				40.52	49.64				
				40.27	49.59				
				40.18	49.55				
				40.12	49.32				
				39.97	49.26				
				39.93	49.12				
				39.87	49.10				
				39.78	48.90				
				39.71	48.87				
				39.67	48.78				
				39.64	48.76				
				39.44	48.61				
				39.39	48.56				
				39.27	48.52				
				39.25	48.37				
				39.08	48.32				
				39.06	48.29				
				38.98	47.97				
				38.98	47.92				
				38.96	47.72				
				38.84	47.49				
				38.79	47.42				

					38.76	47.38				
					38.63	47.23				
					38.59	47.14				
					38.56	47.12				
					38.29	47.01				
					38.25	46.92				
					38.08	46.58				
					37.88	46.51				
					37.82	46.45				
					37.82	46.41				
					37.79	46.33				
					37.66	46.30				
					37.58	46.24				
					37.57	46.21				
					37.47	46.18				
					37.40	46.09				

From Table 31, it was found that the raw score and T Score of Flexibility., namely Percentage of muscles 19-20 years old Female (n=301) students at Sichuan Health and Rehabilitation Vocational College are as follow:

Raw score of 49.98-62.45 is between T Score of 61.69-76.33, which is very good

Raw score of 45.69-49.98 is between T Score of 56.10-60.99, which is good

Raw score of 37.4-49.44 is between T Score of 46.09-55.97, which is Average

Raw score of 33.43-37.11 is between T Score of 40.02-45.77, which is Poor

Raw score of 25.97-33.43 is between T Score of 21.17-39.96, which is very Poor

Table 32 Shows Raw score and T Score Agility (Shuttle Run : seconds) for 19-20 years old Female (n=301)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Agility	19.67	79.75	16.08	61.96	14.87	55.97	12.83	45.86	11.84	40.96
	18.76	75.24	16.08	61.96	14.85	55.87	12.81	45.76	11.83	40.91
	18.30	72.96	16.06	61.86	14.83	55.77	12.78	45.61	11.82	40.86
	17.86	70.78	16.05	61.81	14.80	55.62	12.77	45.56	11.80	40.76
	17.64	69.69	15.99	61.51	14.79	55.57	12.76	45.51	11.80	40.76
	17.57	69.34	15.98	61.47	14.78	55.52	12.71	45.27	11.77	40.61
	17.50	69.00	15.88	60.97	14.76	55.42	12.69	45.17	11.72	40.36
	17.43	68.65	15.86	60.87	14.74	55.32	12.68	45.12	11.70	40.26
	17.39	68.45	15.84	60.77	14.63	54.78	12.61	44.77	11.69	40.21
	17.29	67.95	15.84	60.77	14.62	54.73	12.60	44.72	11.67	40.11
	17.26	67.81	15.83	60.72	14.61	54.68	12.59	44.67	11.60	39.77
	17.06	66.82	15.8	60.57	14.60	54.63	12.57	44.57	11.58	39.67
	16.76	65.33	15.79	60.52	14.58	54.53	12.53	44.37	11.55	39.52
	16.76	65.33	15.76	60.38	14.57	54.48	12.49	44.18	11.54	39.47
	16.75	65.28	15.76	60.38	14.56	54.43	12.47	44.08	11.50	39.27
	16.75	65.28	15.73	60.23	14.52	54.23	12.46	44.03	11.43	38.92
	16.71	65.08	15.73	60.23	14.52	54.18	12.45	43.98	11.39	38.73
	16.66	64.83	15.72	60.18	14.51	54.08	12.40	43.73	11.34	38.48
	16.61	64.59	15.71	60.13	14.49	54.08	12.33	43.38	11.30	38.28
	16.60	64.54	15.66	59.88	14.46	53.93	12.28	43.13	11.23	37.93
16.53	64.19	15.61	59.63	14.45	53.89	12.24	42.94	11.22	37.88	
16.51	64.09	15.56	59.38	14.43	53.79	12.22	42.84	11.19	37.73	

16.49	63.99	15.54	59.29	14.42	53.74	12.19	42.69	11.12	37.39
16.49	63.99	15.48	58.99	14.40	53.64	12.13	42.39	11.11	37.34
16.43	63.69	15.46	58.89	14.38	53.54	12.10	42.24	11.09	37.24
16.37	63.40	15.45	58.84	14.36	53.44	12.05	42.00	11.04	36.99
16.36	63.35	15.42	58.69	14.35	53.39	12.04	41.95	11.02	36.89
16.36	63.35	15.40	58.59	14.31	53.19	12.03	41.90	11.01	36.84
16.35	63.30	15.39	58.54	14.30	53.14	11.95	41.50	10.97	36.65
16.34	63.25	15.36	58.39	14.26	52.94	11.94	41.45	10.92	36.40
16.33	63.20	15.34	58.29	14.25	52.89	11.93	41.40	10.88	36.20
16.32	63.15	15.29	58.05	14.23	52.80	11.91	41.30	10.87	36.15
16.32	63.15	15.27	57.95	14.22	52.75	11.89	41.20	10.81	35.85
16.28	62.95	15.26	57.90	14.21	52.70	11.88	41.15	10.80	35.80
16.22	62.65	15.25	57.85	14.20	52.65	11.86	41.05	10.75	35.56
16.09	62.01	15.25	57.85	14.19	52.60			10.71	35.36
		15.23	57.75	14.17	52.50			10.70	35.31
		15.23	57.75	14.13	52.30			10.65	35.06
		15.14	57.30	14.11	52.20			10.60	34.81
		15.11	57.15	14.06	51.95			10.56	34.61
		15.10	57.11	14.04	51.85			10.54	34.51
		15.06	56.91	13.96	51.46			10.45	34.07
		15.02	56.71	13.95	51.41			10.39	33.77
		15.00	56.61	13.94	51.36			10.38	33.72
		14.98	56.51	13.91	51.21			10.36	33.62
		14.97	56.46	13.78	50.57			10.34	33.52
		14.96	56.41	13.76	50.47			10.33	33.47
		14.94	56.31	13.75	50.42			10.21	32.88
		14.93	56.26	13.74	50.37			10.12	32.43
		14.92	56.21	13.71	50.22			9.88	31.25

			14.89	56.07	13.69	50.12			9.79	30.80
			14.88	56.02	13.67	50.02			9.77	30.70
					13.66	49.97			9.65	30.11
					13.63	49.82			9.33	28.52
					13.61	49.72			9.09	27.33
					13.60	49.67			8.82	25.99
					13.56	49.48			8.54	24.61
					13.50	49.18			8.18	22.82
					13.48	49.08				
					13.47	49.03				
					13.46	48.98				
					13.40	48.68				
					13.38	48.58				
					13.37	48.53				
					13.36	48.49				
					13.33	48.34				
					13.33	48.29				
					13.32	48.24				
					13.31	48.24				
					13.29	48.14				
					13.26	47.99				
					13.24	47.89				
					13.20	47.69				
					12.92	47.69				
					12.88	47.64				
					12.86	47.54				
					13.14	47.40				
					13.11	47.25				

					13.06	47.00				
					12.99	46.65				
					12.92	46.31				
					12.88	46.11				
					12.86	46.01				

From Table 32, it was found that the raw score and T Score of Agility., namely Percentage of 19-20 years old Female (n=301) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 16.09-19.67 is between T Score of 62.01-79.75, which is very good

Raw score of 14.88-16.08 is between T Score of 56.02-61.96, which is good

Raw score of 12.86-14.87 is between T Score of 46.01-55.97, which is Average

Raw score of 11.86-12.83 is between T Score of 41.05-45.86, which is Poor

Raw score of 8.18-11.84 is between T Score of 22.82-40.96, which is very Poor

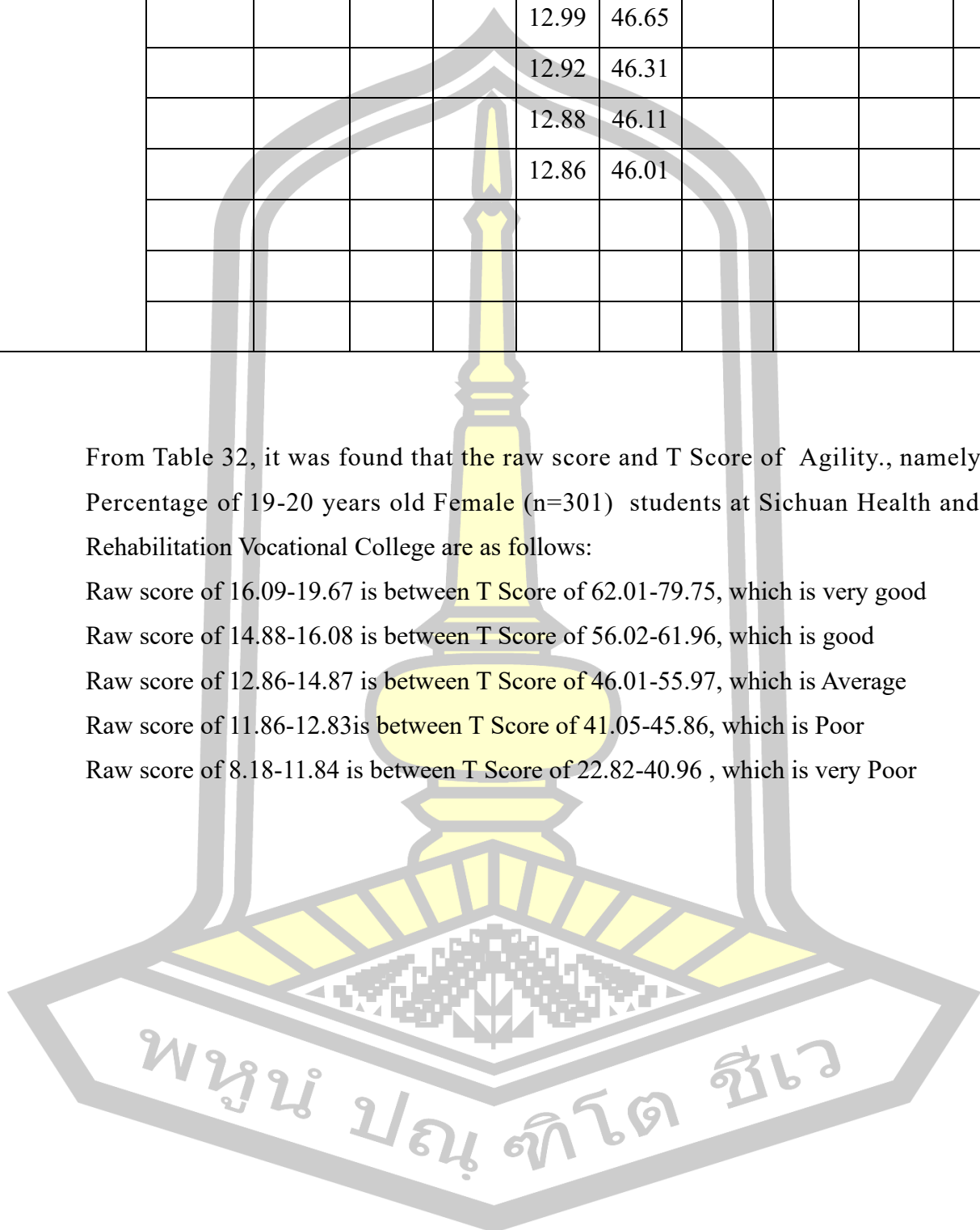


Table 33 Shows Raw score and T Score Muscular Strength (Leg Strength : kilogram) for 19-20 years old Female (n=301)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Muscular Strength	48.92	78.33	35.67	62.01	30.56	55.72	22.64	45.96	18.52	40.89
	47.78	76.93	35.57	61.89	30.54	55.69	22.59	45.90	18.5	40.86
	47.49	76.57	35.51	61.81	30.45	55.58	22.58	45.89	18.49	40.85
	44.10	72.39	35.14	61.36	30.39	55.51	22.54	45.84	18.46	40.81
	43.96	72.22	34.33	60.36	30.33	55.43	22.46	45.74	18.37	40.70
	43.57	71.74	34.33	60.36	30.21	55.28	22.37	45.63	18.35	40.68
	43.12	71.19	34.32	60.35	30.2	55.27	22.07	45.26	18.34	40.66
	42.72	70.69	34.26	60.27	30.15	55.21	22.04	45.22	18.27	40.58
	41.81	69.57	34.25	60.26	29.77	54.74	21.97	45.13	18.15	40.43
	41.14	68.75	34.20	60.20	29.33	54.20	21.89	45.04	17.97	40.21
	39.38	66.58	34.14	60.13	29.3	54.16	21.78	44.90	17.71	39.89
	38.84	65.92	34.09	60.06	29.27	54.13	21.61	44.69	17.7	39.88
	38.29	65.24	33.95	59.89	29.26	54.11	21.60	44.68	17.68	39.85
	38.12	65.03	33.74	59.63	29.18	54.02	21.58	44.65	17.67	39.84
	37.89	64.75	33.38	59.19	29.17	54.00	21.52	44.58	17.56	39.70
	37.78	64.61	33.28	59.07	29.12	53.94	21.47	44.52	17.56	39.70
	37.73	64.55	33.21	58.98	29.06	53.87	21.36	44.38	17.5	39.63
	37.26	63.97	33.00	58.72	29.05	53.86	21.27	44.27	17.39	39.49
	37.20	63.90	32.97	58.68	29.00	53.79	21.08	44.04	16.89	38.88
	37.09	63.76	32.91	58.61	28.9	53.67	21.06	44.01	16.81	38.78
	37.08	63.75	32.82	58.50	28.84	53.60	21.01	43.95	16.59	38.51
	37.01	63.66	32.79	58.46	28.68	53.40	20.87	43.78	16.33	38.19
	36.94	63.57	32.61	58.24	28.67	53.39	20.83	43.73	16.2	38.03
	36.85	63.46	32.48	58.08	28.64	53.35	20.74	43.62	15.99	37.77
36.85	63.46	32.45	58.04	28.6	53.30	20.69	43.56	15.97	37.74	
36.77	63.37	32.41	57.99	28.56	53.25	20.41	43.21	15.73	37.45	

	36.62	63.18	32.36	57.93	28.55	53.24	20.12	42.86	15.72	37.44
	36.49	63.02	32.36	57.93	28.5	53.18	19.96	42.66	15.7	37.41
	36.46	62.98	32.3	57.86	28.48	53.15	19.95	42.65	15.58	37.26
	36.38	62.89	31.96	57.44	28.35	52.99	19.77	42.42	15.27	36.88
	36.06	62.49	31.92	57.39	28.25	52.87	19.56	42.17	15.05	36.61
	35.90	62.29	31.87	57.33	28.18	52.78	19.55	42.15	15.03	36.59
	35.74	62.10	31.85	57.31	27.68	52.17	19.48	42.07	14.95	36.49
			31.74	57.17	27.65	52.13	19.47	42.06	14.72	36.20
			31.72	57.14	27.63	52.11	19.43	42.01	14.69	36.17
			31.68	57.10	27.6	52.07	19.39	41.96	14.66	36.13
			31.63	57.03	27.6	52.07	19.38	41.94	13.7	34.95
			31.48	56.85	27.56	52.02	19.2	41.72	13.45	34.64
			31.43	56.79	27.39	51.81	18.90	41.35	12.68	33.69
			31.35	56.69	27.27	51.66	18.86	41.30	12.54	33.52
			31.32	56.65	27.25	51.64	18.72	41.13	12.53	33.51
			31.30	56.63	27.23	51.61	18.70	41.11	11.67	32.45
			31.04	56.31	27.18	51.55	18.67	41.07	11.23	31.91
			30.98	56.23	27.16	51.53	18.64	41.03	10.91	31.51
			30.97	56.22	27.13	51.49			10.55	31.07
			30.89	56.12	27.12	51.48			10.23	30.67
			30.87	56.10	27.11	51.47			8.06	28.00
			30.86	56.09	27.01	51.34			6.31	25.84
			30.79	56.00	26.94	51.26			6.13	25.62
					26.84	51.13			5.69	25.08
					26.77	51.05			1.84	20.34
					26.76	51.04				
					26.71	50.97				
					26.67	50.92				
					26.66	50.91				
					26.64	50.89				
					26.62	50.86				

				26.15	50.28				
				26.1	50.22				
				26.05	50.16				
				25.92	50.00				
				25.91	49.99				
				25.9	49.98				
				25.88	49.95				
				25.86	49.93				
				25.77	49.82				
				25.71	49.74				
				25.63	49.64				
				25.62	49.63				
				25.57	49.57				
				25.53	49.52				
				25.51	49.50				
				25.47	49.45				
				25.37	49.32				
				25.25	49.18				
				25.23	49.15				
				25.21	49.13				
				25.14	49.04				
				25.06	48.94				
				25.02	48.89				
				24.89	48.73				
				24.86	48.69				
				24.86	48.69				
				24.84	48.67				
				24.8	48.62				
				24.79	48.61				
				24.78	48.60				
				24.66	48.45				

					24.65	48.44				
					24.54	48.30				
					24.49	48.24				
					24.39	48.12				
					24.28	47.98				
					24.23	47.92				
					24.15	47.82				
					24.09	47.75				
					24.06	47.71				
					24.01	47.65				
					23.99	47.62				
					23.89	47.50				
					23.78	47.36				
					23.59	47.13				
					23.51	47.03				
					23.48	46.99				
					23.14	46.58				
					23.07	46.49				
					23.01	46.42				
					23.00	46.40				

From Table 33, it was found that the raw score and T Score of Muscular Strength, namely Percentage of 19-20 years old Female (n=301) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 35.74-48.92 is between T Score of 62.10-78.33, which is very good

Raw score of 30.79-35.67 is between T Score of 56.00-62.01, which is good

Raw score of 23-30.56 is between T Score of 46.40-55.72, which is Average

Raw score of 18.64-22.6 is between T Score of 45.96-45.96, which is Poor

Raw score of 1.84-18.52 is between T Score of 40.86-40.89, which is very Poor

Table 34 Shows Raw score and T Score Cardio Respiratory (3 Minutes Step test : time per minute) for 20-21 years old Female (n=301)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Cardio Respiratory	57.66	73.13	51.25	60.92	48.64	55.94	43.37	45.90	40.72	40.85
	57.52	72.86	51.19	60.80	48.44	55.56	43.36	45.88	40.67	40.76
	57.46	72.75	51.11	60.65	48.37	55.43	43.35	45.87	40.60	40.63
	57.46	72.75	51.08	60.59	48.32	55.33	43.27	45.71	40.54	40.51
	56.37	70.67	51.04	60.52	48.30	55.30	43.18	45.54	40.47	40.38
	55.91	69.79	51.00	60.44	48.26	55.22	43.17	45.52	40.46	40.36
	55.66	69.32	50.92	60.29	48.25	55.20	43.13	45.45	40.44	40.32
	55.46	68.94	50.90	60.25	48.24	55.18	43.07	45.33	40.42	40.28
	55.35	68.73	50.86	60.17	48.21	55.12	42.95	45.10	40.34	40.13
	54.65	67.39	50.85	60.15	48.19	55.09	42.94	45.08	40.29	40.04
	54.48	67.07	50.82	60.10	48.16	55.03	42.91	45.03	40.20	39.86
	54.41	66.94	50.78	60.02	48.02	54.76	42.88	44.97	40.08	39.64
	54.38	66.88	50.68	59.83	47.96	54.65	42.83	44.87	39.79	39.08
	54.35	66.82	50.64	59.75	47.89	54.51	42.74	44.70	39.78	39.06
	54.21	66.56	50.62	59.72	47.89	54.51	42.68	44.59	39.63	38.78
	53.95	66.06	50.62	59.72	47.88	54.50	42.49	44.23	39.61	38.74
	53.94	66.04	50.6	59.68	47.85	54.44	42.48	44.21	39.53	38.59
	53.53	65.26	50.53	59.54	47.81	54.36	42.43	44.11	39.51	38.55
	53.48	65.16	50.48	59.45	47.73	54.21	42.36	43.98	39.48	38.49
	53.40	65.01	50.46	59.41	47.56	53.89	42.29	43.85	39.38	38.30
53.35	64.92	50.39	59.28	47.53	53.83	42.28	43.83	39.35	38.24	
53.07	64.38	50.37	59.24	47.32	53.43	42.21	43.69	39.24	38.04	
52.77	63.81	50.22	58.95	47.20	53.20	42.12	43.52	39.15	37.86	
52.66	63.60	50.16	58.84	47.19	53.18	42.08	43.45	38.99	37.56	
52.62	63.53	50.13	58.78	47.17	53.14	42.06	43.41	38.98	37.54	
52.58	63.45	50.03	58.59	47.05	52.91	42.01	43.31	38.91	37.41	

52.53	63.35	50.02	58.57	47.04	52.90	41.95	43.20	38.87	37.33
52.51	63.32	49.99	58.52	47.01	52.84	41.93	43.16	38.72	37.04
52.13	62.59	49.99	58.52	46.99	52.80	41.76	42.84	38.68	36.97
51.82	62.00	49.92	58.38	46.98	52.78	41.72	42.76	38.59	36.80
51.74	61.85	49.87	58.29	46.95	52.72	41.65	42.63	38.38	36.40
51.66	61.70	49.82	58.19	46.92	52.67	41.56	42.46	38.35	36.34
51.59	61.56	49.75	58.06	46.89	52.61	41.43	42.21	38.35	36.34
51.57	61.53	49.67	57.91	46.83	52.50	41.21	41.79	38.26	36.17
51.37	61.14	49.60	57.77	46.82	52.48	41.03	41.45	38.11	35.88
		49.57	57.72	46.79	52.42	40.99	41.37	38.10	35.86
		49.47	57.52	46.78	52.40	40.93	41.25	38.03	35.73
		49.46	57.51	46.68	52.21	40.92	41.24	37.85	35.39
		49.46	57.51	46.57	52.00	40.91	41.22	37.81	35.31
		49.43	57.45	46.56	51.98	40.86	41.12	37.80	35.29
		49.37	57.33	46.40	51.68			37.76	35.22
		49.33	57.26	46.38	51.64			37.46	34.64
		49.23	57.07	46.38	51.64			37.46	34.64
		49.20	57.01	46.38	51.64			37.36	34.45
		49.15	56.92	46.37	51.62			37.34	34.42
		49.13	56.88	46.29	51.47			37.28	34.30
		49.13	56.88	46.29	51.47			37.20	34.15
		49.12	56.86	46.28	51.45			37.01	33.79
		48.98	56.59	46.25	51.39			36.54	32.89
		48.97	56.57	46.18	51.26			36.39	32.61
		48.88	56.40	46.14	51.18			35.84	31.56
		48.83	56.31	46.09	51.09			35.69	31.27
		48.69	56.04	46.08	51.07			35.49	30.89
				46.00	50.91			35.03	30.01
				45.99	50.89			33.72	27.52
				45.96	50.84			33.62	27.33
				45.95	50.82			33.06	26.26

				45.95	50.82			32.99	26.13
				45.90	50.72			29.82	20.09
				45.85	50.63				
				45.81	50.55				
				45.76	50.46				
				45.75	50.44				
				45.66	50.27				
				45.65	50.25				
				45.61	50.17				
				45.38	49.73				
				45.33	49.64				
				45.31	49.60				
				45.30	49.58				
				45.25	49.49				
				45.25	49.49				
				45.22	49.43				
				45.18	49.35				
				45.12	49.24				
				44.99	48.99				
				44.98	48.97				
				44.96	48.93				
				44.96	48.93				
				44.90	48.82				
				44.88	48.78				
				44.87	48.76				
				44.85	48.72				
				44.85	48.72				
				44.78	48.59				
				44.76	48.55				
				44.75	48.53				
				44.73	48.49				

				44.69	48.42				
				44.69	48.42				
				44.59	48.23				
				44.58	48.21				
				44.51	48.08				
				44.49	48.04				
				44.29	47.66				
				44.24	47.56				
				44.15	47.39				
				44.14	47.37				
				44.12	47.33				
				44.01	47.12				
				43.97	47.05				
				43.86	46.84				
				43.78	46.68				
				43.77	46.67				
				43.73	46.59				
				43.70	46.53				
				43.61	46.36				
				43.59	46.32				
				43.58	46.30				
				43.57	46.28				
				43.48	46.11				

From Table 34, it was found that the raw score and T Score of Cardio Respiratory, namely Percentage of 20-21 years old Female (n=301) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 51.37-57.66 is between T Score of 61.14-73.13, which is very good

Raw score of 48.69-51.25 is between T Score of 56.04-60.92, which is good

Raw score of 43.48-48.64 is between T Score of 46.11-55.94, which is Average

Raw score of 40.86-43.37 is between T Score of 41.12-45.90, which is Poor

Raw score of 29.82-40.72 is between T Score of 40.85, which is very Poor

Table 35 Shows Raw score and T Score Muscular Endurance (Push Up 1 Minute : time per minute) for 20-21 years old Female (n=301)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Muscular Endurance	60.00	84.42	42.00	59.96	38.00	54.53	31.00	45.02	28.00	40.94
	54.00	76.27	41.00	58.60	37.00	53.17	30.00	43.66	27.00	39.58
	53.00	74.91	40.00	57.25	36.00	51.81	29.00	42.30	26.00	38.22
	52.00	73.55	39.00	55.89	35.00	50.45			25.00	36.86
	51.00	72.19			34.00	49.09			24.00	35.50
	50.00	70.83			33.00	47.73			23.00	34.15
	48.00	68.12			32.00	46.37			22.00	32.79
	47.00	66.76							21.00	31.43
	46.00	65.40							20.00	30.07
	45.00	64.04							19.00	28.71
	44.00	62.68							18.00	27.35
	43.00	61.32							14.00	21.92
									13.00	20.56

From Table 35, it was found that the raw score and T Score of Muscular Endurance, namely Percentage of muscles 20-21 years old Female n=(301) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 43.00-60.00 is between T Score of 61.32-84.42, which is very good

Raw score of 39.00-42.00 is between T Score of 55.89-59.96, which is good

Raw score of 32.00-38.00 is between T Score of 46.37-54.53, which is Average

Raw score of 29.00-31.00 is between T Score of 42.30-45.02, which is Poor

Raw score of 13.00-28.00 is between T Score of 20.56-40.94, which is very Poor

Table 36 Shows Raw score and T Score Muscular Endurance (Sit - Ups 30 Sec. : time per minute) for 20-21 years old Female (n=301)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Muscular Endurance	45.00	76.43	34.00	59.53	31.00	54.93	25.00	45.71	21.00	39.57
	44.00	74.89	33.00	58.00	30.00	53.39	24.00	44.18	20.00	38.04
	43.00	73.35	32.00	56.46	29.00	51.86	23.00	42.64	19.00	36.50
	42.00	71.82			28.00	50.32	22.00	41.11	18.00	34.97
	40.00	68.75			27.00	48.79			17.00	33.43
	39.00	67.21			26.00	47.25			16.00	31.90
	38.00	65.68							15.00	30.36
	37.00	64.14							14.00	28.82
	36.00	62.61							13.00	27.29
	35.00	61.07							12.00	25.75

From Table 36, it was found that the raw score and T Score of Muscular Endurance., namely Percentage of 20-21 years old Female (n=301) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 35.00-45.00 is between T Score of 61.07-76.43, which is very good

Raw score of 32.00-34.00 is between T Score of 56.46-59.53, which is good

Raw score of 26.00-31.00 is between T Score of 47.25-54.93, which is Average

Raw score of 22.00-25.00 is between T Score of 41.11-45.71, which is Poor

Raw score of 12.00-21.00 is between T Score of 52.75- 39.57 , which is very Poor

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Table 37 Shows Raw score and T Score Flexibility (Back Extension : cm) for 20-21 years old Female (n=301)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Flexibility	58.83	71.51	49.81	60.92	45.52	55.88	37.01	45.89	31.85	39.84
	58.76	71.42	49.73	60.82	45.42	55.77	36.98	45.86	31.74	39.71
	58.50	71.12	49.71	60.80	45.38	55.72	36.87	45.73	31.72	39.69
	58.42	71.02	49.68	60.77	45.20	55.51	36.85	45.71	31.70	39.66
	58.40	71.00	49.43	60.47	45.19	55.50	36.82	45.67	31.68	39.64
	58.08	70.63	49.34	60.37	45.17	55.47	36.66	45.48	31.66	39.61
	58.05	70.59	49.30	60.32	45.13	55.43	36.52	45.32	31.64	39.59
	57.81	70.31	49.22	60.23	44.93	55.19	36.49	45.28	31.39	39.30
	56.57	68.85	49.13	60.12	44.70	54.92	36.37	45.14	31.17	39.04
	56.12	68.32	48.94	59.90	44.66	54.87	36.34	45.11	31.08	38.93
	55.49	67.59	48.83	59.77	44.65	54.86	36.29	45.05	30.81	38.62
	54.87	66.86	48.71	59.63	44.40	54.57	36.26	45.01	30.19	37.89
	54.63	66.58	48.67	59.58	44.33	54.49	36.22	44.97	29.84	37.48
	54.18	66.05	48.60	59.50	44.24	54.38	36.18	44.92	29.77	37.40
	54.11	65.97	48.57	59.46	44.23	54.37	36.12	44.85	29.74	37.36
	53.71	65.50	48.51	59.39	44.09	54.20	36.03	44.74	29.73	37.35
	53.58	65.34	48.45	59.32	44.06	54.17	35.96	44.66	29.67	37.28
	53.39	65.12	48.43	59.30	43.90	53.98	35.82	44.50	29.37	36.93
	53.27	64.98	48.08	58.89	43.88	53.96	35.81	44.49	29.16	36.68
	53.00	64.66	48.07	58.88	43.84	53.91	35.79	44.46	29.14	36.66
52.59	64.18	47.99	58.78	43.76	53.82	35.76	44.43	28.80	36.26	
52.55	64.13	47.93	58.71	43.64	53.68	35.69	44.35	28.62	36.05	
52.40	63.96	47.86	58.63	43.63	53.66	35.46	44.08	28.56	35.98	
52.09	63.59	47.84	58.61	43.61	53.64	35.45	44.06	28.42	35.81	
52.06	63.56	47.79	58.55	43.57	53.59	35.36	43.96	28.38	35.76	

51.94	63.42	47.62	58.35	43.55	53.57	35.34	43.93	28.06	35.39
51.62	63.04	47.59	58.31	43.45	53.45	35.11	43.66	27.95	35.26
51.59	63.01	47.38	58.07	43.24	53.21	35.09	43.64	27.32	34.52
51.27	62.63	47.33	58.01	43.00	52.93	35.03	43.57	26.77	33.88
51.05	62.37	47.29	57.96	42.94	52.85	35.02	43.56	26.75	33.85
50.73	62.00	47.18	57.83	42.92	52.83	34.96	43.49	26.74	33.84
50.15	61.32	47.13	57.77	42.85	52.75	34.91	43.43	26.53	33.59
		47.01	57.63	42.71	52.58	34.70	43.18	26.14	33.14
		46.93	57.54	42.63	52.49	34.58	43.04	25.84	32.78
		46.80	57.39	42.56	52.41	34.57	43.03	25.34	32.20
		46.68	57.24	42.52	52.36	34.51	42.96	25.33	32.18
		46.67	57.23	42.51	52.35	34.48	42.92	25.14	31.96
		46.61	57.16	42.46	52.29	34.41	42.84	23.93	30.54
		46.53	57.07	42.30	52.10	34.39	42.82	23.36	29.87
		46.51	57.04	42.23	52.02	34.36	42.78	22.33	28.66
		46.35	56.86	42.20	51.99	34.33	42.75	21.97	28.24
		46.20	56.68	42.07	51.83	34.23	42.63	21.77	28.01
		46.15	56.62	41.88	51.61	34.08	42.46	20.44	26.45
		46.14	56.61	41.76	51.47	33.92	42.27	19.48	25.32
		46.13	56.60	41.75	51.46	33.89	42.23	15.24	20.34
		46.09	56.55	41.66	51.35	33.77	42.09		
		46.08	56.54	41.58	51.26	33.76	42.08		
		45.97	56.41	41.57	51.25	33.62	41.92		
		45.94	56.38	41.48	51.14	33.49	41.76		
		45.93	56.36	41.45	51.11	33.25	41.48		
		45.85	56.27	41.44	51.09	33.19	41.41		
		45.80	56.21	41.30	50.93	33.11	41.32		
		45.72	56.12	41.24	50.86	32.68	40.81		
		45.65	56.04	41.13	50.73	32.60	40.72		
				41.01	50.59	32.55	40.66		
				40.68	50.20	32.52	40.62		

				40.60	50.11	32.50	40.60		
				40.51	50.00	32.40	40.48		
				40.48	49.97	32.36	40.44		
				40.41	49.89	32.12	40.15		
				40.31	49.77	32.01	40.03		
				40.29	49.74				
				40.28	49.73				
				40.18	49.62				
				39.97	49.37				
				39.94	49.33				
				39.88	49.26				
				39.84	49.22				
				39.75	49.11				
				39.74	49.10				
				39.73	49.09				
				39.64	48.98				
				39.47	48.78				
				39.30	48.58				
				39.25	48.52				
				39.23	48.50				
				39.17	48.43				
				39.09	48.34				
				39.02	48.25				
				38.91	48.12				
				38.86	48.07				
				38.69	47.87				
				38.55	47.70				
				38.43	47.56				
				38.38	47.50				
				38.10	47.17				
				38.00	47.06				

					37.96	47.01				
					37.83	46.86				
					37.78	46.80				
					37.69	46.69				
					37.66	46.66				
					37.62	46.61				
					37.53	46.50				
					37.45	46.41				
					37.34	46.28				
					37.25	46.18				
					37.21	46.13				

From Table 37, it was found that the raw score and T Score of Flexibility., namely Percentage of muscles 20-21 years old Female (n=301) students at Sichuan Health and Rehabilitation Vocational College are as follow:

Raw score of 50.15-58.83 is between T Score of 61.32-71.51, which is very good

Raw score of 45.65-49.81 is between T Score of 56.04-60.92, which is good

Raw score of 37.21-45.52 is between T Score of 55.88-55.88, which is Average

Raw score of 32.01-37.01 is between T Score of 40.03-45.89, which is Poor

Raw score of 15.24-31.85 is between T Score of 36.93-39.71, which is very Poor



Table 38 Shows Raw score and T Score Agility (Shuttle Run : seconds) for 20-21years old Female (n=301)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Agility	19.98	79.94	16.35	61.96	15.11	55.81	13.07	45.71	12.08	40.80
	19.65	78.31	16.34	61.91	15.10	55.77	13.06	45.66	12.02	40.51
	19.28	76.47	16.29	61.66	15.08	55.67	13.05	45.61	12.01	40.46
	19.24	76.27	16.27	61.56	15.04	55.47	13.04	45.56	12.00	40.41
	18.39	72.06	16.22	61.31	15.00	55.27	13.02	45.46	11.92	40.01
	18.11	70.68	16.21	61.26	14.99	55.22	12.95	45.11	11.84	39.61
	18.10	70.63	16.19	61.16	14.96	55.07	12.88	44.77	11.83	39.57
	17.92	69.74	16.18	61.12	14.92	54.87	12.84	44.57	11.82	39.52
	17.72	68.74	16.15	60.97	14.91	54.82	12.80	44.37	11.76	39.22
	17.69	68.60	16.12	60.82	14.85	54.53	12.78	44.27	11.72	39.02
	17.34	66.86	16.08	60.62	14.84	54.48	12.72	43.97	11.67	38.77
	17.28	66.56	16.01	60.27	14.77	54.13	12.70	43.88	11.64	38.62
	17.19	66.12	15.97	60.08	14.74	53.98	12.68	43.78	11.63	38.57
	17.03	65.33	15.96	60.03	14.72	53.88	12.61	43.43	11.60	38.43
	17.01	65.23	15.95	59.98	14.71	53.83	12.60	43.38	11.56	38.23
	16.99	65.13	15.94	59.93	14.68	53.68	12.58	43.28	11.54	38.13
	16.94	64.88	15.92	59.83	14.66	53.59	12.56	43.18	11.53	38.08
	16.84	64.39	15.91	59.78	14.64	53.49	12.53	43.03	11.50	37.93
	16.77	64.04	15.84	59.43	14.63	53.44	12.49	42.83	11.40	37.43
	16.76	63.99	15.83	59.38	14.59	53.24	12.48	42.79	11.28	36.84
16.71	63.74	15.81	59.28	14.56	53.09	12.46	42.69	11.25	36.69	
16.70	63.69	15.79	59.18	14.53	52.94	12.44	42.59	11.22	36.54	
16.68	63.59	15.74	58.94	14.52	52.89	12.43	42.54	11.21	36.49	
16.59	63.15	15.68	58.64	14.47	52.64	12.42	42.49	11.10	35.95	
16.57	63.05	15.68	58.64	14.46	52.59	12.41	42.44	11.08	35.85	

16.56	63.00	15.64	58.44	14.44	52.50	12.38	42.29	11.01	35.50
16.53	62.85	15.59	58.19	14.42	52.40	12.36	42.19	10.69	33.92
16.53	62.85	15.58	58.14	14.41	52.35	12.34	42.09	10.63	33.62
16.49	62.65	15.56	58.04	14.40	52.30	12.32	41.99	10.58	33.37
16.46	62.50	15.43	57.40	14.39	52.25	12.31	41.94	10.50	32.98
16.46	62.50	15.43	57.40	14.39	52.25	12.30	41.89	10.46	32.78
16.44	62.40	15.41	57.30	14.36	52.10	12.29	41.84	10.45	32.73
16.36	62.01	15.39	57.20	14.33	51.95	12.28	41.79	10.41	32.53
		15.38	57.15	14.31	51.85	12.25	41.65	10.25	31.74
		15.37	57.10	14.27	51.65	12.23	41.55	10.19	31.44
		15.36	57.05	14.26	51.60	12.22	41.50	10.08	30.90
		15.33	56.90	14.20	51.31	12.21	41.45	10.05	30.75
		15.32	56.85	14.19	51.26	12.18	41.30	9.95	30.25
		15.29	56.71	14.18	51.21	12.17	41.25	9.93	30.15
		15.28	56.66	14.15	51.06	12.14	41.10	9.65	28.77
		15.24	56.46	14.13	50.96			9.61	28.57
		15.23	56.41	14.12	50.91			9.31	27.08
		15.21	56.31	14.11	50.86			9.17	26.39
		15.20	56.26	14.10	50.81			8.66	23.86
		15.17	56.11	14.09	50.76			8.42	22.67
		15.16	56.06	14.07	50.66				
		15.16		14.05	50.56				
				14.03	50.46				
				14.01	50.37				
				13.94	50.02				
				13.75	49.08				
				13.69	48.78				
				13.68	48.73				
				13.67	48.68				
				13.65	48.58				
				13.63	48.48				

					13.62	48.43				
					13.58	48.23				
					13.56	48.14				
					13.53	47.99				
					13.52	47.94				
					13.51	47.89				
					13.50	47.84				
					13.48	47.74				
					13.46	47.64				
					13.43	47.49				
					13.41	47.39				
					13.40	47.34				
					13.39	47.29				
					13.34	47.05				
					13.33	47.00				
					13.29	46.80				
					13.29	46.75				
					13.28	46.65				
					13.26	46.55				
					13.24	46.50				
					13.23	46.45				
					13.22	46.45				
					13.21	46.30				
					13.19	46.25				
					13.18	46.25				
					13.17	46.06				
					13.14	46.01				

From Table 38, it was found that the raw score and T Score of Agility., namely Percentage of 20-21 years old Female (n=301) students at Sichuan Health and Rehabilitation Vocational College are as follows:

Raw score of 16.36-19.98 is between T Score of 62.01-79.94, which is very good

Raw score of 15.16-16.35 is between T Score of 56.06-61.96, which is good

Raw score of 13.13-15.11 is between T Score of 46.01-55.81, which is Average

Raw score of 12.14-13.07 is between T Score of 41.10-45.71, which is Poor

Raw score of 8.42-12.08 is between T Score of 22.67-40.80, which is very Poor



Table 39 Shows Raw score and T Score Muscular Strength (Leg Strength : kilogram) for 20-21 years old Female (n=301)

Item	Very good		Good		Average		Poor		Very poor	
	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score	Raw score	T Score
Muscular Strength	51.20	80.45	35.99	61.72	31.3	55.94	23.20	45.96	18.97	40.75
	49.31	78.12	35.75	61.42	31.26	55.89	23.16	45.91	18.96	40.74
	45.78	73.77	35.25	60.80	31.25	55.88	23.13	45.87	18.93	40.70
	43.44	70.89	34.9	60.37	31.17	55.78	22.97	45.68	18.7	40.42
	43.15	70.54	34.64	60.05	31.11	55.70	22.89	45.58	18.62	40.32
	43.13	70.51	34.6	60.00	30.84	55.37	22.87	45.55	18.60	40.29
	42.61	69.87	34.54	59.93	30.65	55.14	22.86	45.54	18.57	40.26
	42.38	69.59	34.29	59.62	30.60	55.08	22.85	45.53	18.51	40.18
	41.98	69.09	34.22	59.54	30.57	55.04	22.69	45.33	18.48	40.15
	40.95	67.83	34.04	59.31	30.56	55.03	22.67	45.31	18.19	39.79
	40.41	67.16	33.99	59.25	30.54	55.00	22.62	45.25	18.14	39.73
	40.22	66.93	33.79	59.01	30.53	54.99	22.57	45.18	18.08	39.65
	39.81	66.42	33.65	58.83	30.48	54.93	22.54	45.15	18.07	39.64
	39.73	66.32	33.6	58.77	30.45	54.89	22.51	45.11	17.95	39.49
	39.66	66.24	33.5	58.65	30.39	54.82	22.49	45.09	17.78	39.28
	39.48	66.01	33.41	58.54	30.33	54.74	22.46	45.05	17.73	39.22
	38.63	64.97	33.2	58.28	30.29	54.69	22.45	45.04	17.58	39.04
	38.62	64.96	33.16	58.23	30.28	54.68	22.45	45.04	17.55	39.00
	38.62	64.96	33.08	58.13	30.2	54.58	22.36	44.93	17.41	38.83
	38.30	64.56	33	58.03	30.19	54.57	22.35	44.91	17.39	38.80
	38.24	64.49	32.99	58.02	30.18	54.56	22.27	44.82	17.39	38.80
	38.17	64.40	32.91	57.92	30.03	54.37	22.17	44.69	17.38	38.79
	37.86	64.02	32.89	57.90	29.95	54.28	22.15	44.67	17.23	38.61
	37.86	64.02	32.86	57.86	29.91	54.23	22.06	44.56	17.21	38.58
	37.72	63.85	32.76	57.74	29.87	54.18	22.04	44.53	17.12	38.47

37.56	63.65	32.39	57.28	29.86	54.16	21.79	44.22	17.11	38.46
37.43	63.49	32.37	57.26	29.78	54.07	21.73	44.15	16.94	38.25
37.39	63.44	32.3	57.17	29.72	53.99	21.73	44.15	16.61	37.84
37.34	63.38	32.27	57.13	29.53	53.76	21.5	43.87	16.58	37.81
37.32	63.35	32.17	57.01	29.45	53.66	21.31	43.63	16.56	37.78
37.02	62.98	32.16	57.00	29.32	53.50	21.14	43.42	16.21	37.35
36.83	62.75	32.08	56.90	29.31	53.49	21.12	43.40	16.12	37.24
36.51	62.36	31.99	56.79	29.27	53.44	21.08	43.35	15.92	36.99
36.50	62.34	31.95	56.74	29.27	53.44	20.94	43.18	15.83	36.88
		31.89	56.67	29.24	53.40	20.75	42.94	15.79	36.83
		31.73	56.47	29.23	53.39	20.74	42.93	15.56	36.55
		31.66	56.38	29.09	53.22	20.52	42.66	15.30	36.23
		31.61	56.32	29.06	53.18	20.41	42.52	15.17	36.07
		31.51	56.20	29.05	53.17	20.35	42.45	14.85	35.68
		31.51	56.20	28.99	53.09	20.35	42.45	14.45	35.18
		31.50	56.18	28.97	53.07	20.15	42.20	14.39	35.11
				28.92	53.01	20.01	42.03	14.25	34.94
				28.90	52.98	19.87	41.86	13.32	33.79
				28.88	52.96	19.85	41.83	13.31	33.78
				28.85	52.92	19.78	41.75	13.31	33.78
				28.77	52.82	19.36	41.23	12.98	33.37
				28.74	52.79			12.81	33.16
				28.68	52.71			12.61	32.92
				28.65	52.67			12.57	32.87
				28.63	52.65			11.56	31.62
				28.59	52.60			11.48	31.52
				28.56	52.56			10.84	30.74
				28.56	52.56			10.60	30.44
				28.53	52.53			9.59	29.20
				28.37	52.33			9.47	29.05
				28.32	52.27			9.14	28.64

					28.31	52.26			8.38	27.71
					28.26	52.19			8.05	27.30
					28.25	52.18				
					28.17	52.08				
					27.91	51.76				
					27.91	51.76				
					27.88	51.73				
					27.86	51.70				
					27.81	51.64				
					27.79	51.61				
					27.78	51.60				
					27.55	51.32				
					27.52	51.28				
					27.45	51.20				
					27.44	51.18				
					27.24	50.94				
					27.22	50.91				
					27.19	50.88				
					26.80	50.40				
					26.74	50.32				
					26.72	50.30				
					26.13	49.57				
					26.13	49.57				
					26.08	49.51				
					25.96	49.36				
					25.87	49.25				
					25.76	49.11				
					25.73	49.08				
					25.65	48.98				
					25.60	48.92				
					25.57	48.88				

				25.54	48.84				
				25.52	48.82				
				25.49	48.78				
				25.48	48.77				
				25.25	48.49				
				25.21	48.44				
				25.17	48.39				
				25.11	48.31				
				25.09	48.29				
				25.07	48.26				
				24.96	48.13				
				24.96	48.13				
				24.85	47.99				
				24.73	47.85				
				24.67	47.77				
				24.52	47.59				
				24.29	47.30				
				24.22	47.22				
				24.16	47.14				
				24.15	47.13				
				24.06	47.02				
				23.93	46.86				
				23.88	46.80				
				23.80	46.70				
				23.72	46.60				
				23.70	46.58				
				23.68	46.55				
				23.66	46.53				
				23.62	46.48				
				23.57	46.42				
				23.52	46.36				

Table 40 Comparison of data using one-way ANOVA Bonferroni test for 18-21 year old males tested in the 3 minutes step up and down

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	46.776	2	23.388	0.883	0.415
Within Groups	9112.332	344	26.489		
Total	9159.109	346			

As shown in Table 40, the analysis of variance for the 3 minutes step up and down test performance among male students aged 18-21 revealed: between-group variation (SS=46.776, df=2, MS=23.388); within-group variation (SS=9,112.332, df=344, MS=26.489). The resulting F-ratio of 0.883 ($p=0.415$) indicates no statistically significant differences in 3 minutes step up and down test performance among these male students ($p>0.05$).

Table 41 Comparison of data using one-way ANOVA Bonferroni test for 18-21 year old females tested in the 3 minutes step up and down

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	66.394	2	33.197	1.235	0.291
Within Groups	24199.313	900	26.888		
Total	24265.707	902			

As shown in Table 41, the analysis of variance for the 3 minutes step up and down test performance among female students aged 18-21 revealed: between-group variation (SS=66.394, df=2, MS=33.197); within-group variation (SS=24,199.313, df=900, MS=26.888). The resulting F-ratio of 1.235 ($p=0.291$) indicates no statistically significant differences in 3 minutes step up and down test performance among these female students ($p>0.05$).

Table 42 Comparison of data using one-way ANOVA Bonferroni test for 18-21 year old males tested in the Push up 1 minute

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	99.683	2	49.842	0.983	0.375
Within Groups	17446.518	344	50.717		
Total	17546.202	346			

As shown in Table 42, the analysis of variance for the push up 1 minute test performance among male students aged 18-21 revealed: between-group variation (SS=99.683, df=2, MS=49.842); within-group variation (SS=17,446.518, df=344, MS=50.717). The resulting F-ratio of 0.983 ($p=0.375$) indicates no statistically significant differences in push up 1 minute test performance among these male students ($p>0.05$).

Table 43 Comparison of data using one-way ANOVA Bonferroni test for 18-21 year old females tested in the Push up 1 minute

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	137.269	2	68.635	1.246	0.288
Within Groups	49583.767	900	55.093		
Total	49721.037	902			

As shown in Table 43, the analysis of variance for the push up 1 minute test performance among female students aged 18-21 revealed: between-group variation (SS=137.269, df=2, MS=68.635); within-group variation (SS=49,583.767, df=900, MS=55.093). The resulting F-ratio of 1.246 ($p=0.288$) indicates no statistically significant differences in push up 1 minute test performance among these female students ($p>0.05$).

Table 44 Comparison of data using one-way ANOVA Bonferroni test for 18-21 year old males tested in the Sit-ups 30 Sec.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	53.666	2	26.833	0.702	0.496
Within Groups	13150.300	344	38.228		
Total	13203.965	346			

As shown in Table 44, the analysis of variance for the sit-ups 30 sec. test performance among male students aged 18-21 revealed: between-group variation (SS=53.666, df=2, MS=26.833); within-group variation (SS=13,150.300, df=344, MS=38.228). The resulting F-ratio of 0.702 ($p=0.496$) indicates no statistically significant differences in sit-ups 30 sec. test performance among these male students ($p>0.05$).

Table 45 Comparison of data using one-way ANOVA Bonferroni test for 18-21 year old females tested in the Sit-ups 30 Sec.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	187.615	2	93.807	2.271	0.104
Within Groups	37177.276	900	41.308		
Total	37364.890	902			

As shown in Table 45, the analysis of variance for the sit-ups 30 sec. test performance among female students aged 18-21 revealed: between-group variation (SS=187.615, df=2, MS=93.807); within-group variation (SS=37,177.276, df=900, MS=41.308). The resulting F-ratio of 2.271 ($p=0.104$) indicates no statistically significant differences in sit-ups 30 sec. test performance among these female students ($p>0.05$).

Table 46 Comparison of data using one-way ANOVA Bonferroni test for 18-21 year old males tested in the Back Extension

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	53.666	2	26.833	0.702	0.496
Within Groups	13150.300	344	38.228		
Total	13203.965	346			

As shown in Table 46, the analysis of variance for the back extension test performance among male students aged 18-21 revealed: between-group variation (SS=253.985, df=2, MS=126.992); within-group variation (SS=22,643.535, df=344, MS=65.824). The resulting F-ratio of 1.929 ($p=0.147$) indicates no statistically significant differences in back extension test performance among these male students ($p>0.05$).

Table 47 Comparison of data using one-way ANOVA Bonferroni test for 18-21 year old females tested in the Back Extension

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	70.722	2	35.361	0.487	0.615
Within Groups	65328.484	900	72.587		
Total	65399.206	902			

As shown in Table 47, the ANOVA results for back extension test performance in female students aged 18-21 showed: between-group sum of squares = 70.722 (df=2), mean square = 35.361; within-group sum of squares = 65,328.484 (df=900), mean square = 72.587; total sum of squares = 65,399.206 (df=902). The analysis produced an F-value of 0.487 ($p=0.615$), demonstrating no statistically significant differences in back extension test performance among these female students ($p>0.05$).

Table 48 Comparison of data using one-way ANOVA Bonferroni test for 18-21 year old males tested in the Shuttle Run

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	12.91	2	6.455	2.159	0.117
Within Groups	1028.557	344	2.99		
Total	1041.467	346			

As shown in Table 48, the ANOVA results for male students aged 18-21 showed: between-group sum of squares = 12.91 (df=2), mean square = 6.455; within-group sum of squares = 1028.557 (df=344), mean square = 2.99; total sum of squares = 1041.467 (df=346). The analysis yielded an F-value of 2.159 (p=0.117), indicating no statistically significant differences in test performance (p>0.05).

Table 49 Comparison of data using one-way ANOVA Bonferroni test for 18-21 year old females tested in the Shuttle Run

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	14.508	2	7.254	1.790	0.168
Within Groups	3647.640	900	4.053		
Total	3662.149	902			

As shown in Table 49, the ANOVA results for female students aged 18-21 showed: between-group variation (SS=14.508, df=2, MS=7.254); within-group variation (SS=3,647.640, df=900, MS=4.053). The analysis produced an F-ratio of 1.790 (p=0.168), demonstrating no significant performance differences (p>0.05).

Table 50 Comparison of data using one-way ANOVA Bonferroni test for 18-21 year old males tested in the Leg Strength

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	148.441	2	74.220	1.386	0.251
Within Groups	18416.780	344	53.537		
Total	18565.220	346			

As shown in Table 50, the analysis of variance for leg strength test performance in male students aged 18-21 revealed: between-group variation (SS=148.441, df=2, MS=74.220); within-group variation (SS=18,416.780, df=344, MS=53.537). The resulting F-ratio of 1.386 (p=0.251) indicates no statistically significant differences in leg strength test performance among these male students (p>0.05).

Table 51 Comparison of data using one-way ANOVA Bonferroni test for 18-21 year old females tested in the Leg Strength

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	148.441	2	74.220	1.386	0.251
Within Groups	18416.780	344	53.537		
Total	18565.220	346			

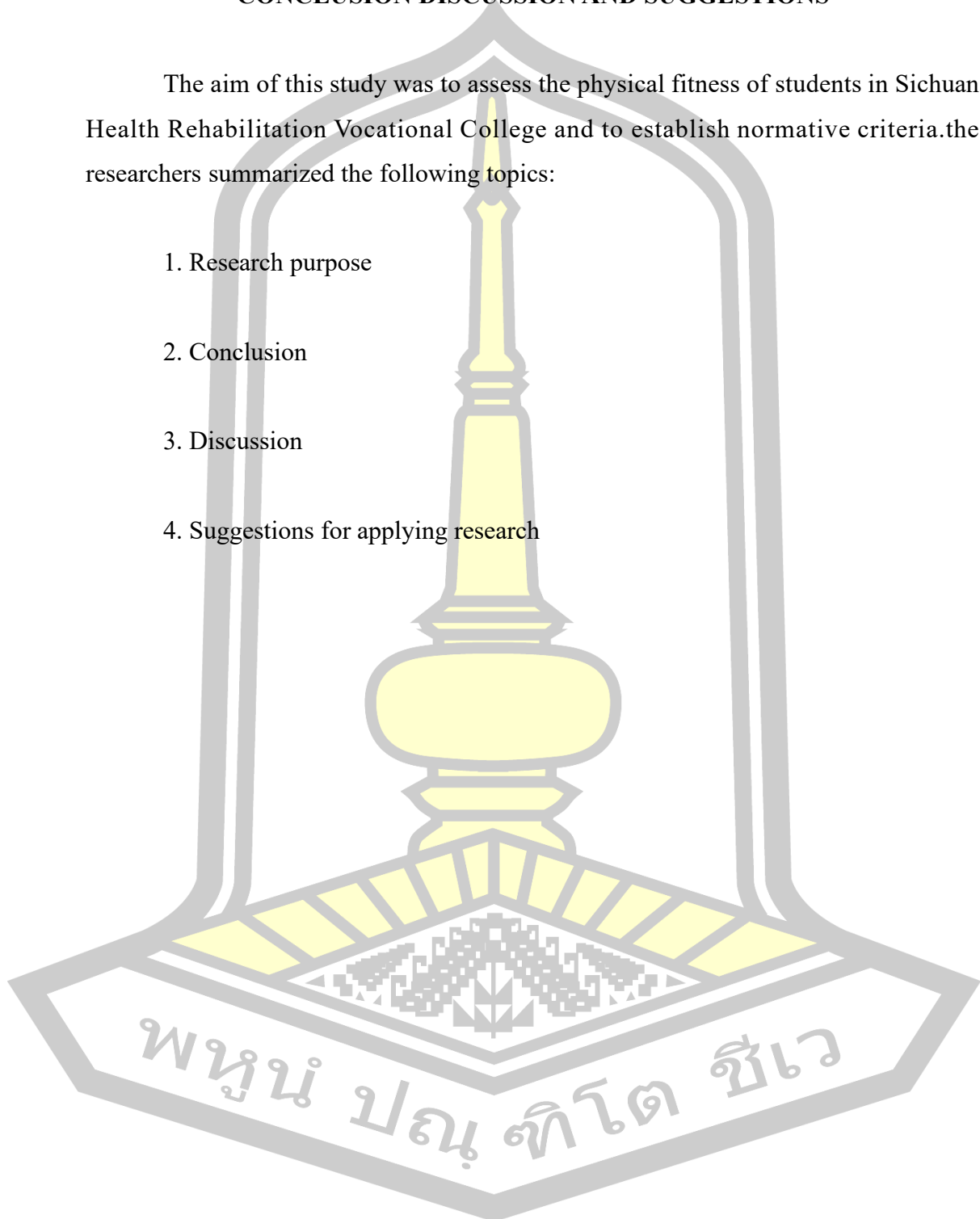
As shown in Table 51, the analysis of variance for the leg strength test performance among female students aged 18-21 revealed: between-group variation (SS=120.5, df=2, MS=60.25); within-group variation (SS=15,300.2, df=300, MS=51.0). The resulting F-ratio of 1.181 (p=0.307) indicates no statistically significant differences in the 30-second sit-up test performance among these female students (p>0.05).

CHAPTER V

CONCLUSION DISCUSSION AND SUGGESTIONS

The aim of this study was to assess the physical fitness of students in Sichuan Health Rehabilitation Vocational College and to establish normative criteria. The researchers summarized the following topics:

1. Research purpose
2. Conclusion
3. Discussion
4. Suggestions for applying research



1. Research purpose

1.1 To study the physical fitness of students in Sichuan Health and Rehabilitation Vocational College.

1.2 To construct normal criteria for physical fitness for students' skills in Sichuan Health and Rehabilitation Vocational College.

2. Conclusion

2.1 Exercise Skills Related Physical Fitness of Students in Sichuan Health Rehabilitation Vocational College: this study conducted several physical fitness tests on students in 18-21 years old, covering 3 minutes step up and down (steps per minute), push up 1 minute (repetitions), sit - ups 30 sec. (repetitions), back extension (cm), shuttle run (seconds), and leg strength (repetitions).

There are six programs. These items comprehensively reflect multiple dimensions of students' physical fitness such as cardiorespiratory endurance, arm and leg muscle strength, explosive power, agility, muscular strength and endurance, and speed. Through in-depth analysis of the test data, we can accurately grasp the physical fitness status of the students and provide a strong basis for the subsequent establishment of normative standards and teaching improvement.

The normative standard of physical fitness of the students of Sichuan Health Rehabilitation Vocational College: taking 3 minutes step up and down (steps per minute) as an example, the standard of “very good” for the first year male students is 61 and above, which means that the students who can achieve this performance are extremely good in cardiorespiratory endurance; while the standard of “very good” for the first year female students is also 61 and above, reflecting the equally high requirements for both male and female students in this program. In the case of boys, the 'very good' standard for Year 1 is 61 and above, meaning that students in this year group who are able to achieve this level of performance are doing extremely well in terms of cardiorespiratory endurance. In push up 1 minute (repetitions), the “very good” standard for boys in Grade 3 was raised to 62 and above, reflecting that the requirement for boys' upper body strength is gradually increasing as the grade level rises; the “very good” standard for girls in Grade 3 was also 62 and above, and the “very good” standard for girls in Grade 3 was also 62 and above, reflecting that the

requirement for boys' upper body strength is gradually increasing as the grade level rises. The “very good” standard for girls in third grade is also 62 and above, indicating that the development trend of boys and girls in this program is somewhat consistent. Through these normative standards, it is possible to have a clear understanding of the performance level of male and female students in different grades in various physical fitness tests, which provides a clear goal and direction for physical education teaching and training.

An analysis of the physical performance of first-grade students, the results of the study showed that the majority of first-grade students, both boys and girls, were at the good and excellent level in all physical fitness tests. This phenomenon is not accidental and is closely related to a number of factors. From the point of view of the curriculum, first-year students have just entered the university, the curriculum activities are rich and diverse, covering all kinds of sports activities at the college and university level. These rich curricular activities provide ample opportunities for students to play sports, enabling them to exercise their physical fitness in different sports programs. In the sports meets organized by the college, the first year students actively participate in various events and through the competitions they not only improve their sports skills but also enhance their physical fitness. Regular daily and after-school physical activity is also an important factor in promoting students' physical fitness in good condition. Dyrstad, Soltvedt and Hallen (2006) in their study pointed out that the frequency of exercise is a key factor influencing the improvement of physical fitness. First year students practice nearly 80% of the curriculum, which means that they have a lot of time to engage in physical education practices. They have physical education classes and extracurricular sports activities several times a week, and these consistent exercise practices allow them to exercise and improve their physical fitness.

Changes in physical fitness of second and third graders are explored. The second and third graders have mostly good and moderate levels of physical fitness. Compared with the first grade students, there are some changes in their physical performance, and there are various possible factors behind this. As the grade level rises, the difficulty of the courses gradually increases, and students need to devote more time and energy to their specialized courses, which leads to a corresponding

decrease in the time they have to participate in physical activities. Some specialized courses require students to do a lot of theoretical study and practical operation, which makes them have no time for physical activity. Second- and third-year students may face more academic and life pressures, which may affect their motivation and initiative to participate in physical activities. They may give up physical activity because they are worried about their academic performance, or they may not have time for physical activity because of trivial matters in their lives .

3. Discussion

The research findings indicate that both male and female students aged 18-19 generally demonstrate "good" to "excellent" performance across various physical fitness tests. This aligns with the results of Jones and Davis (2016) in their Comparative Study of College Students' Physical Fitness Across Different Curriculum Systems, which examined the impact of varied physical education (PE) curricula in multiple universities. Their study found that institutions with a higher proportion of diverse, activity-based PE courses tended to have students with better overall physical fitness. At Sichuan Health and Rehabilitation Vocational College, the well-structured and varied PE curriculum for 18-19-year-olds provides ample opportunities for physical exercise, contributing to their outstanding fitness levels.

In contrast, students aged 19-21 may experience slower improvements in physical fitness, likely due to increased academic workload and reduced time and energy devoted to PE courses. This difference is closely tied to the phased curriculum design: the 18-19 age group emphasizes comprehensive physical development through diverse PE activities, laying a solid foundation for fitness, while older students shift focus toward specialized studies, leaving less time for structured exercise. Notably, 18-19-year-olds benefit from rich extracurricular activities at both departmental and institutional levels.

Regular daily and extracurricular physical activities are proven effective for enhancing health. According to Lee and Kim (2017) in The Influence of Regional Environment on College Students' Sports Participation and Physical Fitness, geographical factors significantly affect students' engagement in physical activities and their fitness outcomes. Regions with favorable natural environments and abundant

sports facilities encourage higher participation. Zigong, like much of Sichuan, features hilly terrain with abundant outdoor spaces such as mountains and parks, offering students natural venues for exercise. This environmental.

For 18-19-year-old students, both male and female, physical fitness levels are predominantly rated as "good" to "excellent," while 19-21-year-old students mostly fall into the "good" to "average" range. These findings align with research by Smith and Johnson (2018), suggesting that curricular arrangements may significantly impact students' physical fitness development.

Particularly notable is the first-year student cohort (18-19 years old), who benefit from a rich variety of curricular and extracurricular activities at both departmental and university levels. Regular participation in structured and leisure-time physical activities proves to be an effective pathway for health promotion. As Brown, Green, and Black (2008) demonstrated, exercise frequency is a critical determinant of physical fitness improvement, with nearly 80% participation rates in practical sessions of sports science programs.

Furthermore, exercise intensity emerges as another key factor influencing fitness disparities. This observation corroborates Williams and Moore's (2010) conclusion that physically active populations consistently demonstrate superior fitness levels compared to their sedentary counterparts.

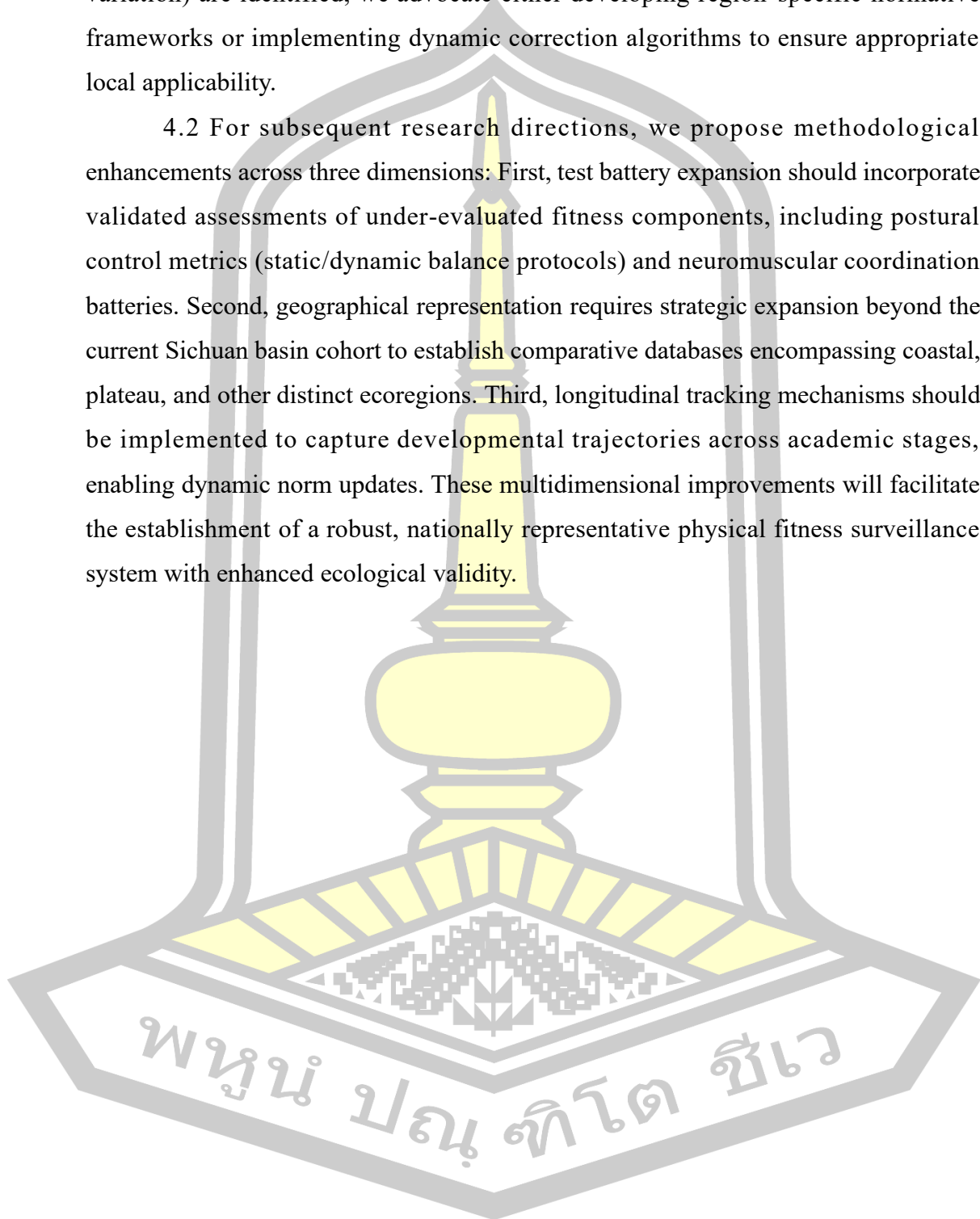
4. Suggestions for applying research

A study on the normative criteria of physical fitness of students in Sichuan Health and Rehabilitation Vocational College obtained the mean and standard deviation of students' physical fitness as well as six normative criteria of physical fitness, based on which the following recommendations were made:

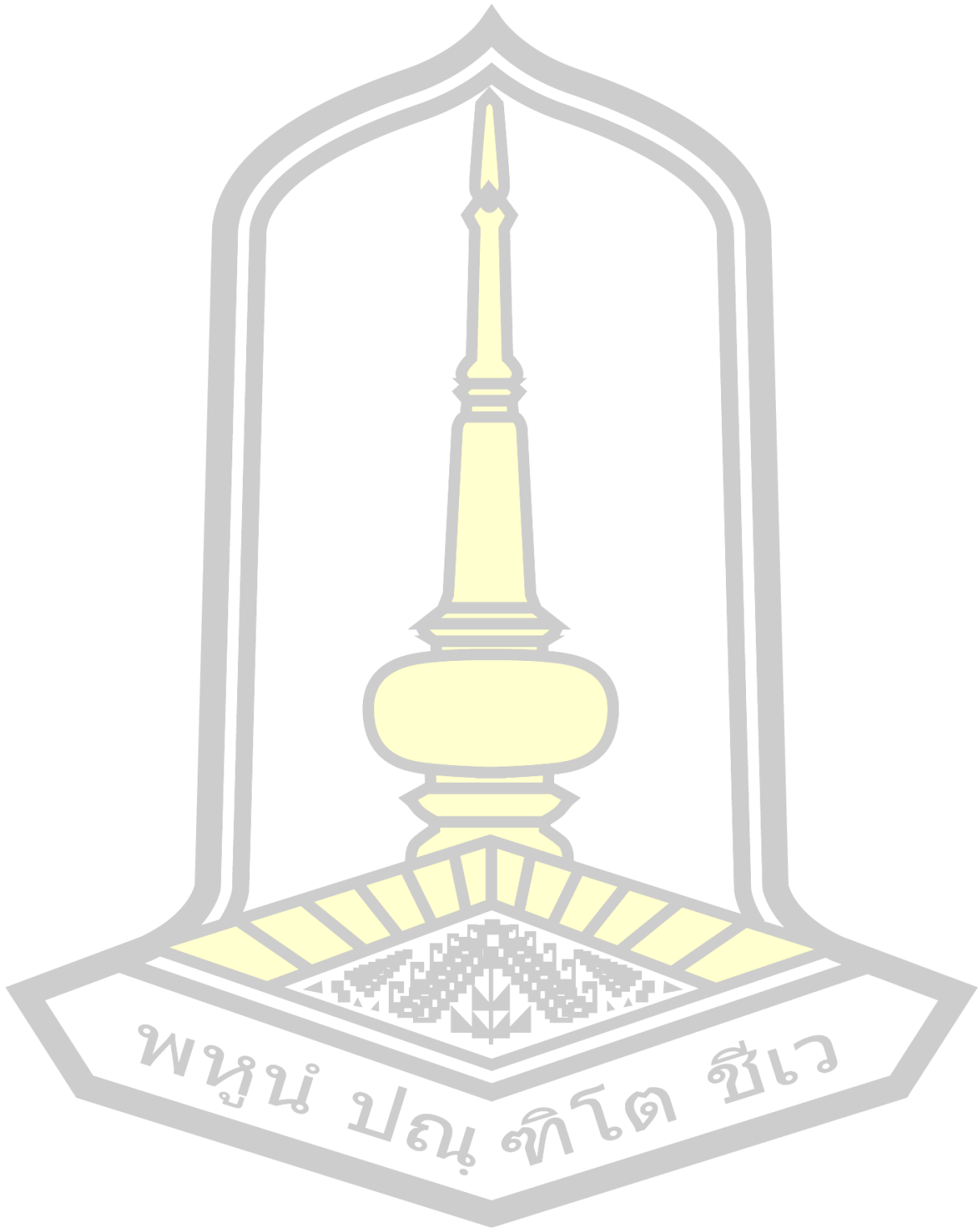
4.1 The findings of this study offer comprehensive and scientifically grounded reference standards for physical education curriculum design, particularly in informing evidence-based adjustments to instructional content and pedagogical approaches. When implementing these normative standards, academic institutions should conduct systematic adaptations accounting for regional demographic characteristics, climatic adaptations, and sociocultural contexts specific to their student populations. A prerequisite step involves comparative analysis between institutional baseline fitness

data and our study cohort parameters - where significant deviations (e.g., >15% SD variation) are identified, we advocate either developing region-specific normative frameworks or implementing dynamic correction algorithms to ensure appropriate local applicability.

4.2 For subsequent research directions, we propose methodological enhancements across three dimensions: First, test battery expansion should incorporate validated assessments of under-evaluated fitness components, including postural control metrics (static/dynamic balance protocols) and neuromuscular coordination batteries. Second, geographical representation requires strategic expansion beyond the current Sichuan basin cohort to establish comparative databases encompassing coastal, plateau, and other distinct ecoregions. Third, longitudinal tracking mechanisms should be implemented to capture developmental trajectories across academic stages, enabling dynamic norm updates. These multidimensional improvements will facilitate the establishment of a robust, nationally representative physical fitness surveillance system with enhanced ecological validity.



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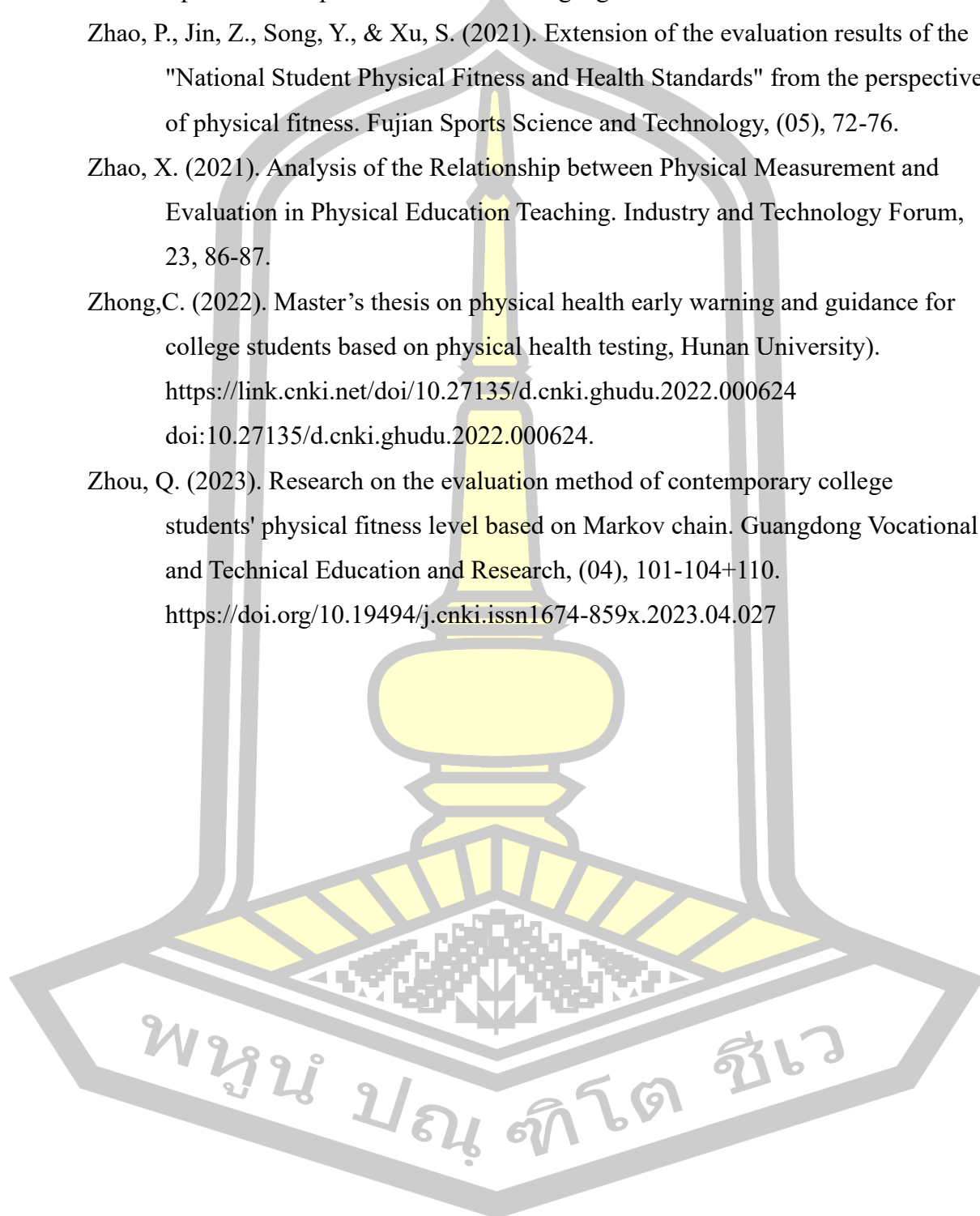
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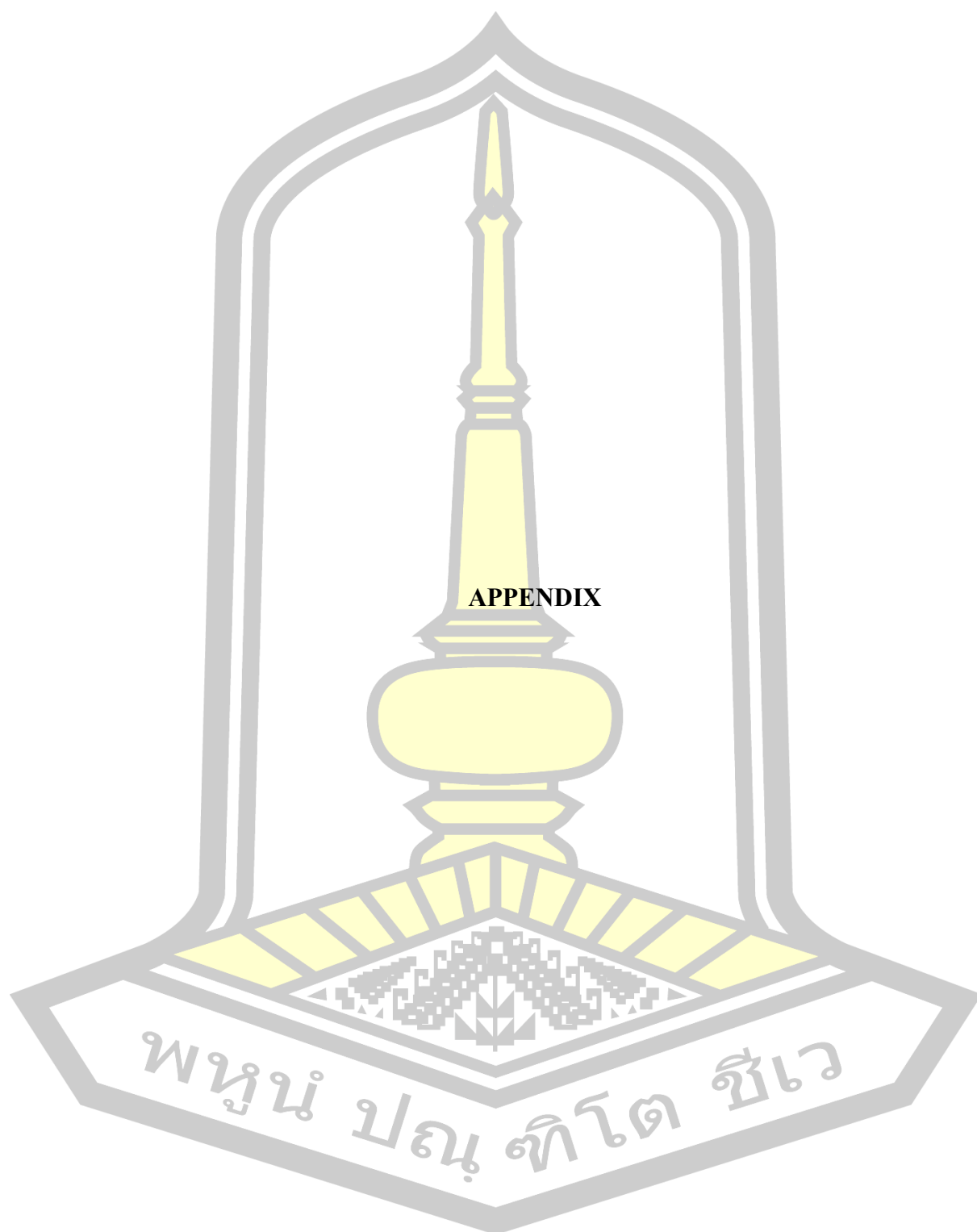
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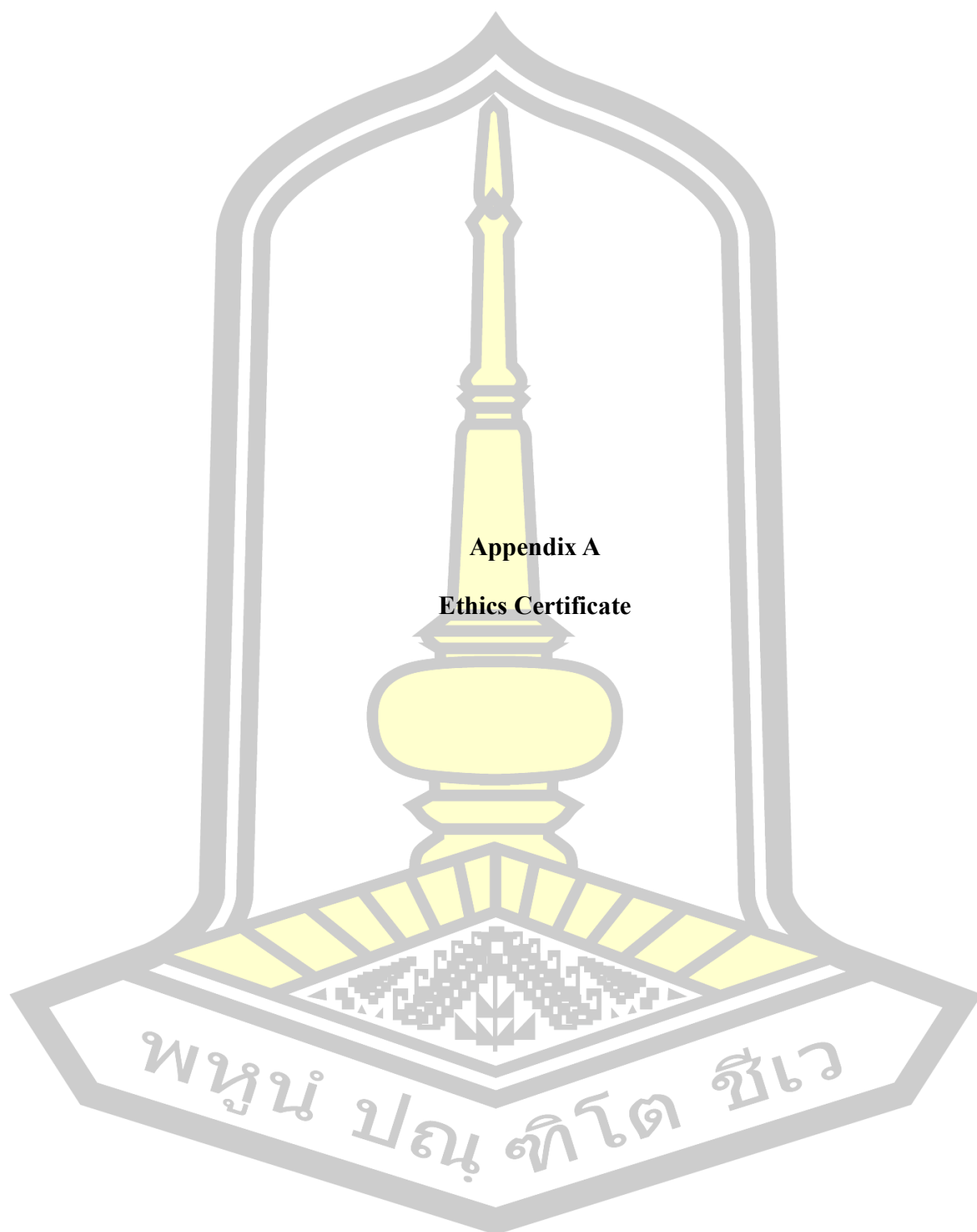
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Appendix A
Ethics Certificate



MAHASARAKHAM UNIVERSITY ETHICS COMMITTEE FOR
RESEARCH INVOLVING HUMAN SUBJECTS

Certificate of Approval

Approval number: 660-558/2024

Title : Construction of physical fitness norms on college students in China.

Principal Investigator : Li Jiajun

Responsible Department : Faculty of Education

Research site : Zigong City, Sichuan Province, China

Review Method : Expedited Review

Date of Manufacture : 31 October 2024

Expire : 30 October 2025

This research application has been reviewed and approved by the Ethics Committee for Research Involving Human Subjects, Mahasarakham University, Thailand. Approval is dependent on local ethical approval having been received. Any subsequent changes to the consent form must be re-submitted to the Committee.

Ratree S.

(Assistant Professor Ratree Sawangjit)

Chairman

Approval is granted subject to the following conditions: (see back of this Certificate)



ECMSU01-05.03 (English)

Clarification documents for the volunteers who answered the questionnaires
(Respondents must be above 18 years of age to participate in answering the questionnaires.)

To All respondents

I am (Jiajun Li, Master student, Health and Sport Science. Educational Faculty, Maharakham University) is now doing on research name "Construction normal of a physical fitness test on college students in China" Through the study of the physical fitness of students in Sichuan Health and Rehabilitation Vocational College, it aims to establish normal standards for the physical fitness of students in Sichuan Health and Rehabilitation Vocational College, so as to comprehensively and effectively evaluate the physical health level of college students. The benefits that you will receive from this research are, this research will help you and your classmates better understand your own bodies so you can achieve optimal health and fitness goals.

If you decide to participate in the research, the researcher will ask you to answer the questionnaire on General questionnaire about physical fitness. The questionnaire consists of 12 questions. answer the questionnaire is taking about 4 minutes. Researchers collect survey questionnaires themselves.

If you feel uncomfortable or feel uncomfortable with some questions You have the right to not answer those questions. You have the right to withdraw from this project at any time without prior notice. The refuse of participating in the research or withdrawing from this research project Will not have any effect to does not affect your studies.

The information in your questionnaire will be kept. Not disclosed to the public on an individual basis, only the overall research results will be reported. Researcher will destroy relevant information after the research is completed. In this research, you will not receive any compensation or any fees.

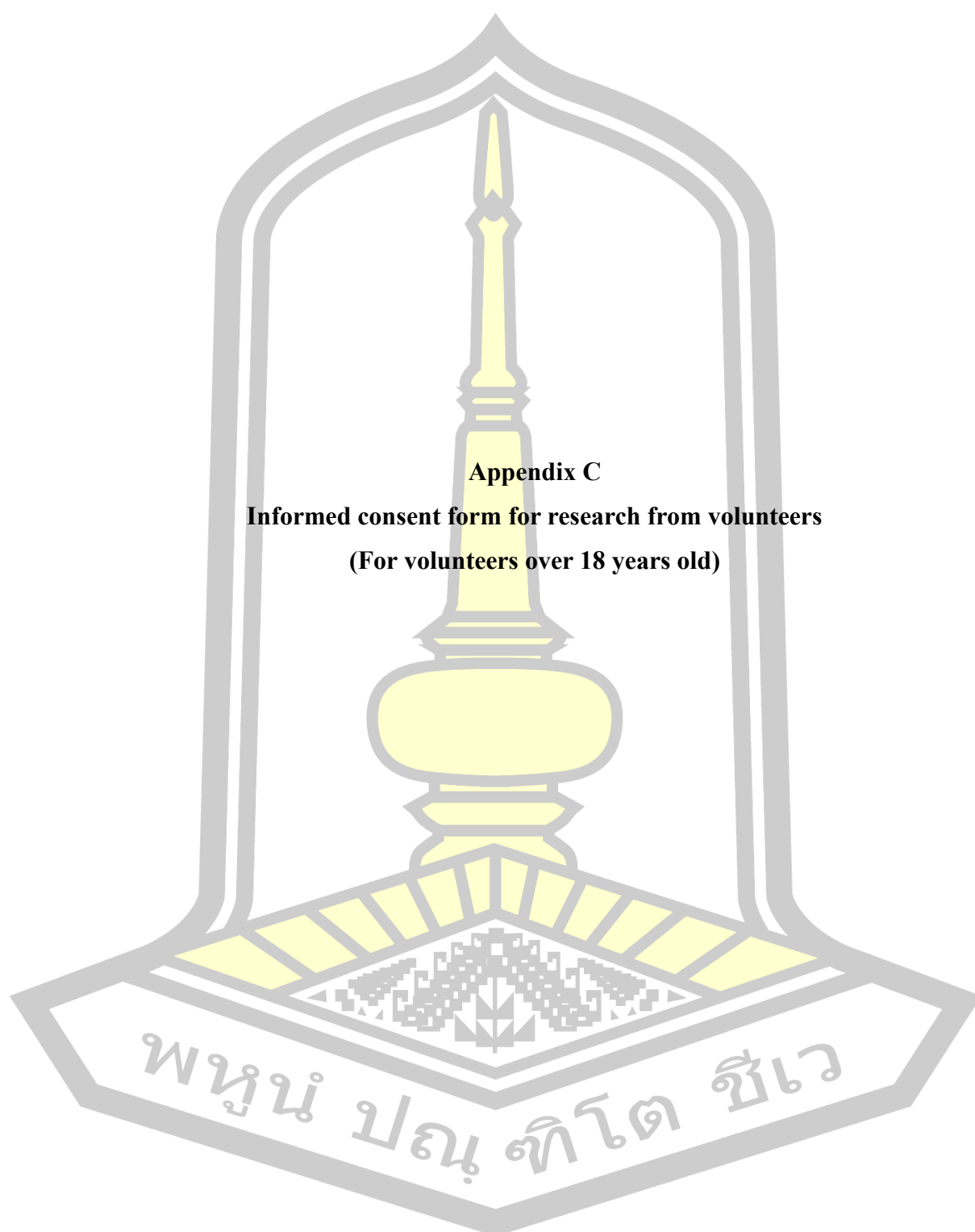
If you have questions about the research, Please contact us at (Jiajun Li- Health and Sport Science. Educational Faculty, Maharakham University, Phone: +8615708297282)

If you have not performed as stated or want to know your rights while participating in this research, please contact "Committee on Ethics for Research in Humans Maharakham University Division of Research" Tel. 043-754416, 1758

Sincerely

(Jiajun Li)
Researcher





67/558

ECMSU01-06.03 English 2023

Volunteers Consent Form
(For volunteers over 18 years old)

I (Mr./Miss/Mrs.) Surname Age.....Year.
 House number Village No. Sub-district District
 province.....
 Convenient phone

Read the explanation / listen to the explanation from Miss. Jiajun Li about volunteering in the research project on "Construction normal of a physical fitness test on college students in China", the explanatory text consists of Full details about the purpose of the research, details of the research. I agree with the value of the study, I am aware of the benefits to be gained and the risks that may arise from participating in the study. Include guidelines for possible problems. Explanations and answers to any questions from the head of the research project were also received.

As well as the testimony from the researcher that will keep my information confidential. In addition, not anonymously or private information individually to the public. The results of the research will be presented in the form of an overview that is a summary of the research results for academic purposes only.

"In participating as a volunteer of this research project I join voluntarily." And I can withdraw from this study at any time. If I wish which will not have any effect and will not lose any rights in study or work that I will receive in the future.

sign..... Volunteer

(.....)

Date.....

sign..... witness

(.....)

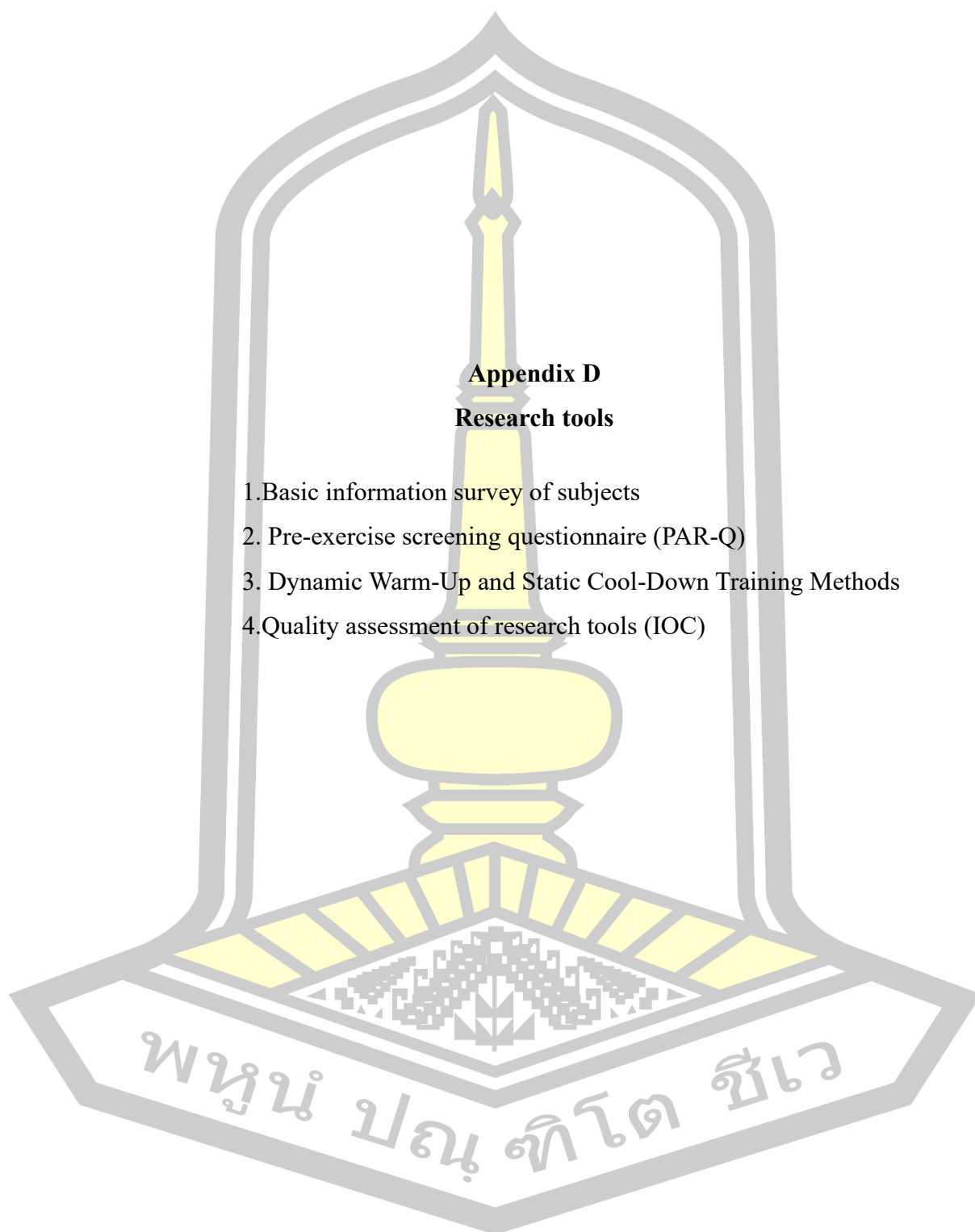
Date.....

sign..... researcher

(Mrs. Jiajun Li)

Date.....





Basic information survey of subjects

Evaluate your health by answering the following questions truthfully:	
1. Your gender	
A. Female	
B. Male	
2. How many times do you exercise per week?	
A. Never	
B. 1-2 times	
C. 3-4 times	
D. 5 times or more	
3. How long do you exercise each time?	
A. Less than 30 minutes	
B. 30 minutes to 1 hour	
C. 1 hour to 2 hours	
D. 2 hours or more	
4. What is your favorite form of exercise?	
A. Running	
B. Swimming	
C. Fitness	
D. Badminton	
E. Others	
5. Do you often feel tired?	



<p>A. Often</p> <p>B. Occasionally</p> <p>C. Rarely</p> <p>D. Never</p>
<p>6. Are your eating habits regular?</p> <p>A. Yes, every meal is regular</p> <p>B. Not necessarily, depends on the schedule</p> <p>C. No, irregular</p>
<p>7. How do you think your physical condition is?</p> <p>A. Healthy</p> <p>B. Good</p> <p>C. Sub-healthy</p> <p>D. Average</p> <p>E. Very poor</p>
<p>8. Have you ever had a sports injury?</p> <p>A. Yes</p> <p>B. No</p>
<p>9. Have you ever felt unwell after exercising?</p> <p>A. Yes</p> <p>B. No</p>
<p>10. Do you have regular physical examinations?</p> <p>A. Yes</p>



B. No
11. Do you have any medical history of the following? A. Asthma, bronchitis, breathing difficulties, allergies B. Heart disease C. Diabetes D. Hypertension E. Pregnancy F. Others G. None of the above
12. What year are you in now? A. Freshman B. Sophomore C. Junior D. Senior

Name:

Time:



Pre-exercise screening questionnaire

Evaluate your health by answering the following questions truthfully:	
<p>Medical History Have you ever had:</p> <ul style="list-style-type: none"> ----One heart attack ----Heart surgery ----Cardiac catheterization ----Percutaneous transluminal coronary angioplasty (PTCA) ----Pacemaker/insertable defibrillator/cardioverter ----Heart failure ----Heart transplant ----Congenital heart disease 	<p>If you have any of the conditions described in this section, please consult a doctor or health care professional before exercising. You may need to exercise under the supervision of a certified medical professional.</p>
<p>Symptoms</p> <ul style="list-style-type: none"> ----Experienced chest discomfort when exerting oneself ----Experienced unexplained breathing difficulties ----Experienced dizziness, fainting, or vertigo ----Experienced swollen ankles ----Experienced discomfort due to a fast and strong heartbeat ----Take heart medications ----Muscle or bone problems that limit physical activity 	



<p>Other health problems</p> <ul style="list-style-type: none"> ----Having diabetes ----Having asthma or other lung disease ----Your calves feel warm or cramp when walking short distances ----Concerned about the safety of exercise ----Taking prescription medications ----Pregnant 	
<p>Cardiovascular risk factors</p> <ul style="list-style-type: none"> ----Smoking or quitting smoking for less than 6 months ----Blood pressure $\geq 140/90$ mm Hg ----Taking antihypertensive medications ----Plasma cholesterol ≤ 200 mg/dl ----Don't know your plasma cholesterol level ----A close relative with a weak heart or heart surgery, where the father or brother is ≤ 55 years old, the mother or sister is ≤ 65 years old ----Prediabetes ----Don't know if you are in prediabetes 	<p>If you have two or more of these conditions, you need to consult a physician or other health care professional to develop your exercise program as part of your medical management. "You will benefit more from your exercise program under the guidance of a qualified professional exercise instructor."</p>
<p>None of the above items were selected</p>	<p>You can safely start exercising without consulting a physician or other health care provider, and you can exercise in almost any setting that meets your exercise program needs.</p>

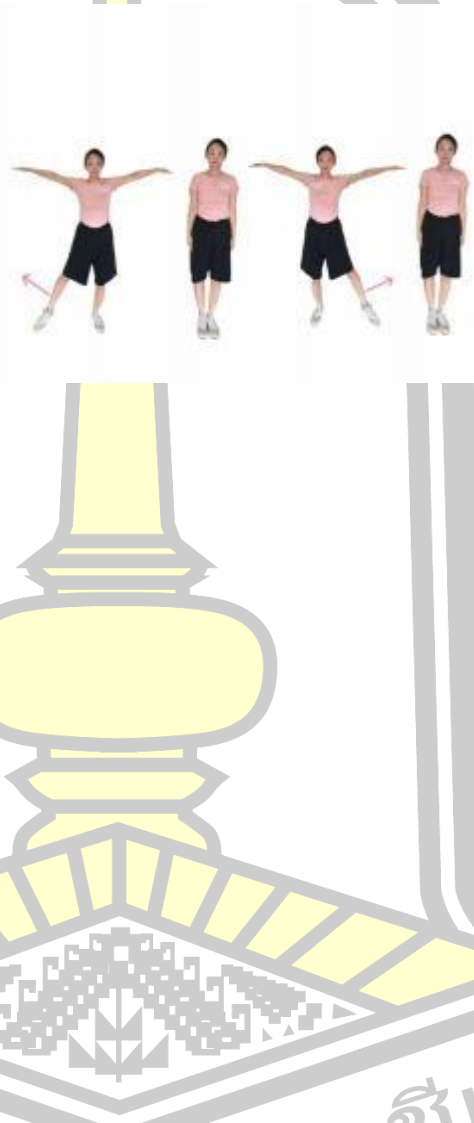
Name:


Time

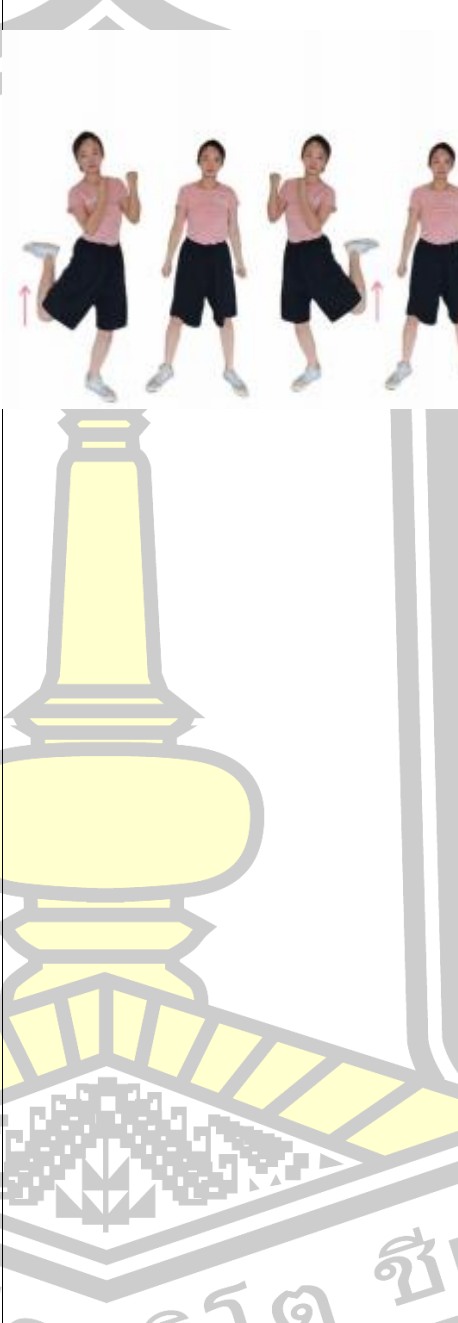


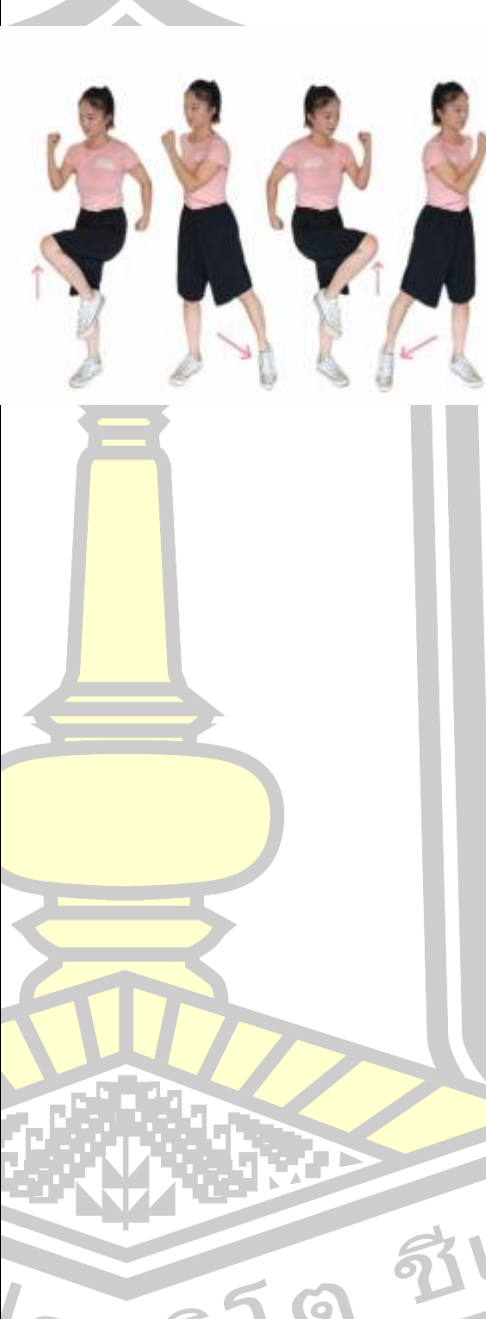
Dynamic Warm-Up and Static Cool-Down Training Methods

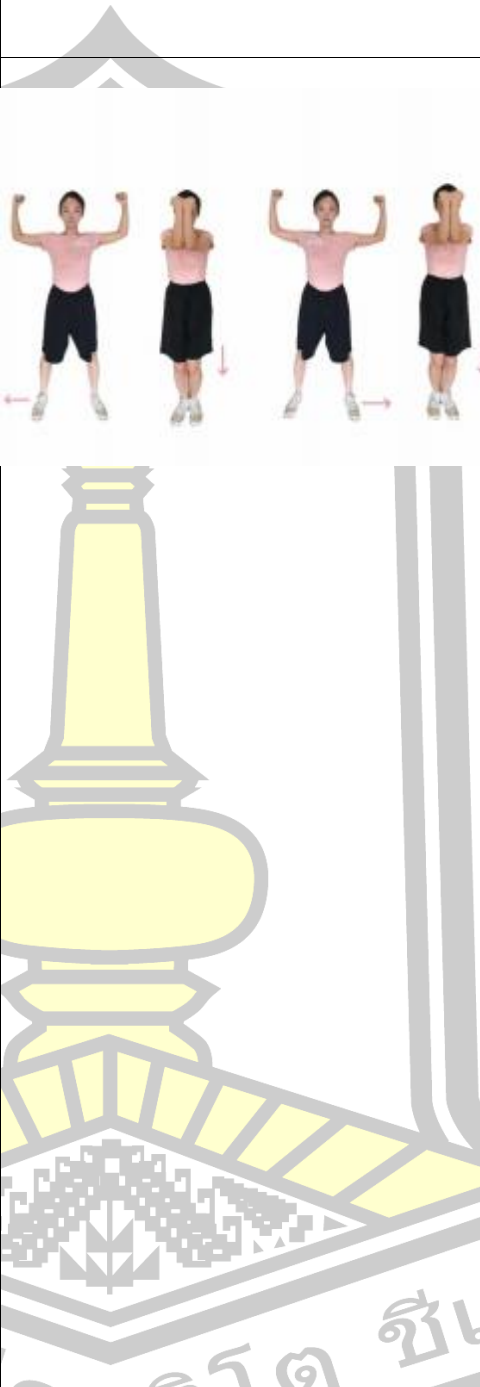
Phase 1: Dynamic Warm-up


How to Practice	illustration	Practice time
<p>Horizontal Raise Side Step</p> <p>1. Preparation: Stand up straight, feet together, arms hanging naturally on both sides of the body.</p> <p>2. Start the action: Raise both arms horizontally to both sides at the same time, until the arms are parallel to the ground or slightly higher. At the same time, step the left foot to the left, with the toes touching the ground, and the feet apart to the width of the shoulders or slightly wider than the width of the shoulders. Alternate the left and right movements.</p>		<p>Alternate left and right once, repeat 16 times.</p>


How to Practice	illustration	Practice time
<p>Jumping jacks</p> <p>1. Preparation: Stand up straight with your feet together and your arms hanging naturally on both sides of your body.</p> <p>2. Start the movement: Jump your feet outward at the same time, shoulder width or slightly wider, and stretch your arms out to both sides at the same time until your palms hit each other above your head.</p> <p>Jump your feet back to the starting position at the same time, and your arms return to your sides at the same time.</p> <p>Jump your feet outward at the same time, shoulder width or slightly wider, and bend your arms up at the same time until your forearms are level with your chest. Jump your feet back to the starting position at the same time again, and your arms return to your sides at the same time.</p> <p>Alternate jumping jacks.</p>		<p>Do alternating jumping jacks once, and repeat 10 times.</p>


How to Practice	illustration	Practice time
<p>Kickback and bend your arms</p> <p>1. Preparation: Stand with your feet shoulder-width apart and your arms hanging naturally on both sides of your body.</p> <p>2. Start the movement: Bend your left knee and kick it back, keeping your heel as close to your buttocks as possible, and bend the opposite leg slightly to maintain balance. At the same time, bend your arms until your elbows form a 90-degree angle, and your hands can be kept at shoulder height or slightly higher, with your fists facing inward. Alternate left and right movements.</p>		<p>Alternate left and right once, repeat 16 times.</p>

How to Practice	Illustration	Practice time
<p>Left and right high leg sucking</p> <p>1. Preparation posture: Stand up straight, feet shoulder-width apart, arms hanging naturally on both sides of the body.</p> <p>2. Start the action: Bend the left knee and lift it forward, try to raise it to be parallel to the ground or slightly higher. Then, lower the left leg back to the ground, touch the ground with the left foot, and bend the main leg slightly to control the balance of the body. After repeating the action of lifting and lowering the leg 4 times, switch to the other side to lift the leg.</p>		<p>Repeat the leg raise exercise 4 times on each side, and do 4 sets.</p>


How to Practice	Illustration	Practice time
<p>Bend your arms and open and close your feet</p> <p>1. Preparation posture: Stand up straight, put your feet together, and let your arms hang naturally on both sides of your body.</p> <p>2. Start the action: Raise your arms at the same time, bend your elbows, and spread your arms to the sides to shoulder height. Open your left foot outward, with your toes slightly pointing outward, and spread your feet to shoulder width or slightly wider than shoulder width. The movements of your arms and feet should be performed at the same time. Bring your arms together from both sides of your body until your forearms touch, and your feet also move from the open state to close together, with your knees slightly bent. The movements of your arms and feet should be performed at the same time.</p> <p>Alternate left and right movements.</p>		<p>Alternate left and right once, repeat 16 times.</p>

How to Practice	Illustration	Practice time
<p>Lunge Jump</p> <p>1. Preparation: Stand up straight with your feet together and your arms hanging naturally at your sides.</p> <p>2. Start the movement:</p> <p>(1) Take a big step forward with your left foot, placing your left foot in front and your right foot behind. Bend your left knee to about 60 degrees.</p> <p>(2) Start from the lunge position, push off the ground with your feet and jump up quickly. While in the air, swing your arms forward and up to increase momentum.</p> <p>(3) When landing, land on the forefoot first, then naturally transition to the heel. After completing the lunge jump with your left leg, switch to the right leg and do the same exercise. Alternate between the left and right legs for each jump.</p>		<p>Alternate left and right once, repeat 8 times.</p>


How to Practice	Illustration	Practice time
<p>Alternating side leg lift jump:</p> <p>1. Preparation posture: Stand up straight with your feet shoulder-width apart and your arms hanging naturally on both sides of your body.</p> <p>2. Start the action:</p> <p>(1) Put your hands on your hips and jump up with your right foot while opening your left leg and lifting it to the side. Raise it as high as possible, and keep your left leg naturally suspended in the air.</p> <p>(2) When your left leg is lowered to the ground, jump up and open your right leg and lift it to the side. Raise it as high as possible, and keep your right leg naturally suspended in the air. Repeat the action of alternating side leg lift jump.</p>		<p>Alternate left and right once, repeat 16 times.</p>


How to Practice	Illustration	Practice time
<p>V-shaped walking</p> <p>1. Preparation posture: Stand up straight, feet together, arms hanging naturally on both sides of the body.</p> <p>2. Start the action:</p> <p>(1) Put your hands on your hips, take a big step forward with your left foot, keep your right foot in place, and slightly spread your toes outward.</p> <p>(2) After the right foot touches the ground, the left foot also steps forward, forming a "V" shape. At this time, the left and right feet are in the same parallel line.</p> <p>(3) Withdraw the left foot diagonally backward to the initial position, and keep the right foot in place.</p> <p>(4) Withdraw the right foot diagonally backward to the initial position, and keep the feet together.</p>		<p>Repeat the "V" walking movement for 30 seconds.</p>

Phase 2: Cooling down the body


How to Practice	Illustration	Practice time
<p>Rear deltoid stretch</p> <p>1. Preparation: Stand with your feet shoulder-width apart and your back naturally straight.</p> <p>2. Stretching: Stretch your left arm out and place it across your chest with your elbow slightly bent. Bend your right elbow and lift it up, grab the elbow of your extended arm, and gently pull it to the side of your body. Repeat the same action with the other arm many times as possible.</p>		<p>Alternate between the left and right sides. Hold this position for 20 seconds on each side.</p>




How to Practice	Illustration	Practice time
<p>Single-arm triceps stretch</p> <p>1. Preparation posture: Stand up and keep your back straight.</p> <p>2. Stretching action: Bend your left arm at the elbow so that your palm touches your upper back or the back of your neck.</p> <p>Place your other hand on the elbow of your bent arm and gently push the elbow of your bent arm to stretch your arm toward your head. Until you feel a noticeable stretch in your triceps.</p> <p>Repeat the same action with the other arm.</p>		<p>Alternate between the left and right sides. Hold this position for 20 seconds on each side.</p>


How to Practice	Illustration	Practice time
<p>Stretch your waist with your hands</p> <p>1. Preparation: Stand with your feet shoulder-width apart and keep your body balanced.</p> <p>2. Stretching: Put your right hand on your waist and extend your left arm to the other side of your body, parallel to the ground with your palm facing down. While extending your hand, lift your foot on the same side and tap it backwards to feel a greater stretch. Repeat the same action on the other side.</p>		<p>Alternate between the left and right sides. Hold this position for 20 seconds on each side.</p>

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How to Practice	illustration	Practice time
<p>Piriformis standing stretch</p> <p>1. Preparation: Stand with your feet shoulder-width apart.</p> <p>2. Stretching action: Put your left ankle on your right thigh, bend your right knee slightly, and point your left knee outward. While maintaining balance, slowly lean your upper body forward toward the leg you are holding. Repeat the same stretching action with your right leg.</p>		<p>Alternate between the left and right sides. Hold this position for 20 seconds on each side.</p>

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How to Practice	Illustration	Practice time
<p>Standing stretch for the front of the thigh</p> <p>1. Preparation: Stand with your feet shoulder-width apart.</p> <p>2. Stretching action: Bend one leg, bring the heel as close to the buttocks as possible, grab the ankle or instep of the bent leg with the hand on the same side, and gently pull the heel closer to the buttocks. Let the other hand hang naturally, or hold the wall or chair to help maintain balance. During the stretch, keep the knees together and do not let the knees flare out or inward. Repeat the same stretching action with the right leg.</p>		<p>Alternate between the left and right sides. Hold this position for 20 seconds on each side.</p>

How to Practice	Illustration	Practice time
<p>Standing hamstring stretch</p> <p>1. Preparation: Stand with your feet shoulder-width apart and keep your body balanced.</p> <p>2. Stretching Stretch your left foot slightly forward with your heel touching the ground and your toes pointing up or slightly bent toward your body. Stand with your right leg straight with the sole of your foot completely on the ground and your knee slightly bent to maintain balance.</p> <p>Slowly lean your upper body forward toward the stretched leg while keeping your back upright. Grasp the calf or toes of the front leg with both hands until you feel a stretch in the back of your thigh.</p> <p>Repeat the same stretch with your right leg.</p>		<p>Alternate between the left and right sides.</p> <p>Hold this position for 20 seconds on each side.</p>



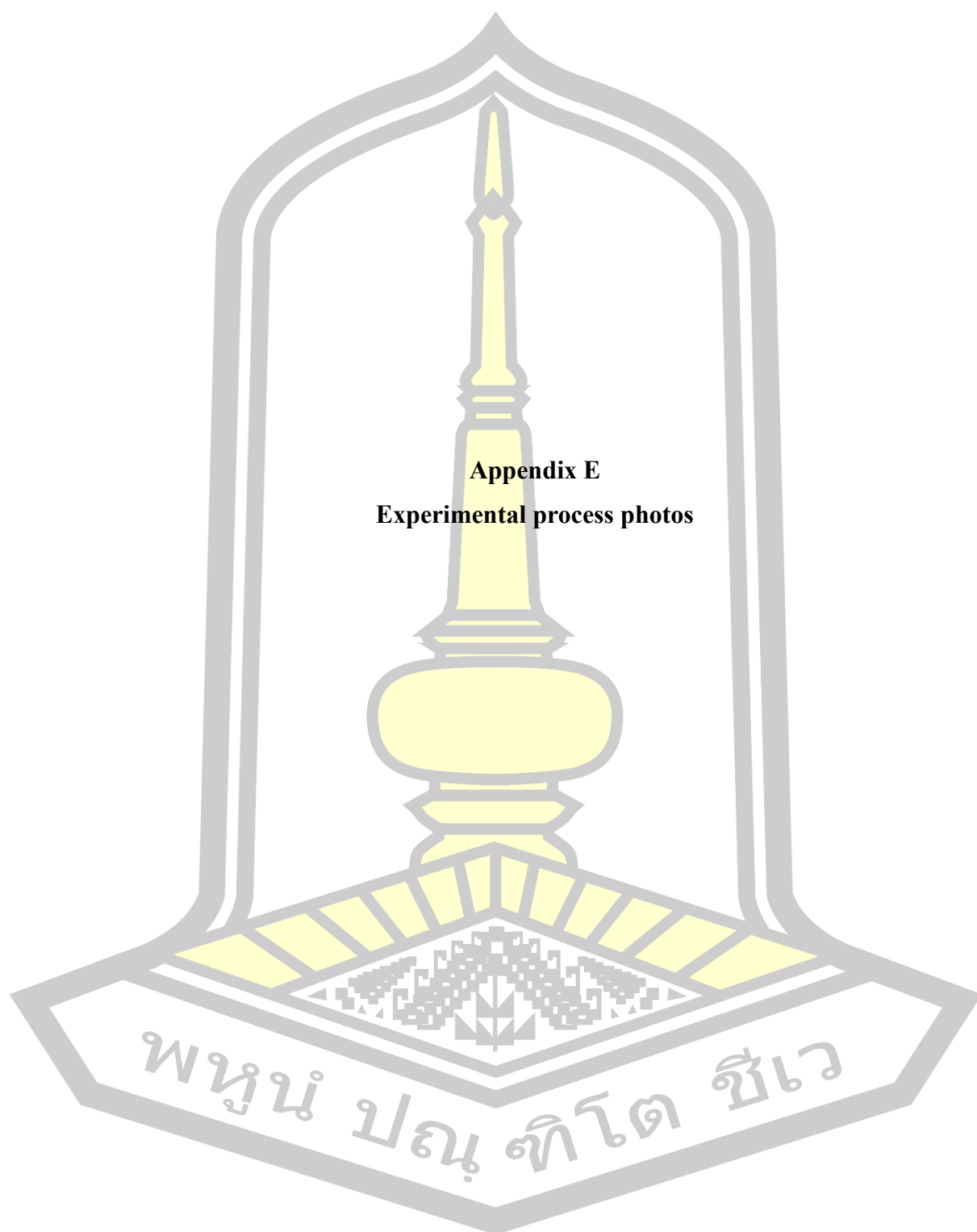
Quality assessment of research tools (IOC)

There are 3 specialists to check and confirm the effectiveness of pre-exercise warm-up, exercise training program and post-exercise stretching to be evaluated.

SECTION 1 : <u>Pre-exercise</u> Warm-up Summary Sheet					
Three experts evaluated the objective consistency of the program, examining and confirming the effectiveness of the warm-up prior to athletic training, as follows:					
No.	Items	Expert Evaluation			IOC Value
		1	2	3	
1	Horizontal Raise Side Step	1	1	1	1
2	Jumping jacks	1	1	1	1
3	Kickback and bend your arms	1	1	1	1
4	Left and right high leg sucking	1	1	1	1
5	Bend your arms and open and close your feet	1	1	1	1
6	Lunge Jump	1	1	1	1
7	Alternating side leg lift jump	1	1	1	1
8	V-shaped walking	1	1	1	1

SECTION 2 : Cooling down the body					
Three experts evaluated the objective consistency of the protocol and checked and confirmed the effectiveness of Cooling down the body as follows::					
No.	Items	Expert Evaluation			IOC Value
		1	2	3	
1	Rear <u>deltoid</u> stretch	1	1	1	1
2	Single-arm triceps stretch	1	1	1	1
3	Stretch your waist with your hands	1	0	1	0.66
4	<u>Piriformis</u> standing stretch	1	1	0	0.66
5	Standing stretch for the front of the thigh	1	1	1	1
6	Standing hamstring stretch	0	1	1	0.66





Appendix E
Experimental process photos







BIOGRAPHY

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