UNIVERSITY OF EDUCATION, WINNEBA

COLLEGE OF TECHNOLOGY EDUCATION, KUMASI

ASSESSING THE NUTRITIONAL KNOWLEDGE AND PRACTICE OF EXERCISERS ON ABURI RIDGE IN THE EASTERN REGION OF GHANA

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A Thesis in the Department of HOSPITALITY AND TOURISM EDUCATION, Faculty of VOCATIONAL EDUCATION, submitted to the School of Graduate Studies, University of Education, Winneba, in partial fulfilment of the requirements for the award of Master of Philosophy (Catering and Hospitality) degree

OCTOBER, 2021

DECLARATION

STUDENT'S DECLARATION

I, MAUREEN NKANSAH ASANTE, declare that this Thesis, with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

SIGNATURE: ……

DATE: ……

SUPERVISOR'S DECLARATION

I hereby declare that the preparation and presentation of this work was supervised in accordance with the guidelines for supervision of Thesis laid down by the University of Education, Winneba.

NAME OF SUPERVISOR: DR. (MRS) DOREEN DEDO ADI

SIGNATURE ……

DATE ……

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DEDICATION

This work is dedicated to my dear husband Mr. Maxwell Nkansah Asante and my children, Nana Abena Bempomaa Asante, Maame Afia Serwaa Asante and Nyamedea Adwoa Animwaa Nkansah Asante.

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ABSTRACT

Nutrition is a significant element of any physical workout schedule. A person with satisfactory information on nourishment has a superior potential for success in distinguishing between nutritional facts from nutrition fads. Reliable information on nutrition has been believed to assume a significant function in advancing more beneficial eating practices, and thus lead to the support of fitting body weight. Among numerous exercisers in Ghana, physical activities are climax with devouring substantial amount of fatty meats accompanied with carbohydrate foods like "fufu, ɛmotuo or banku" and the drinking of alcoholic beverages. One contemplates whether they even have a thought on nutrition and determination of diet. . It is against this basis that the study did an intense research into the nutritional knowledge and practices of Exercisers on Aburi Ridge, in the Eastern region of Ghana. The primary research instruments used to gather information for the study were questionnaire, observation and interview. The group of individuals in the study were all exercisers on the Aburi Ridge, in the Eastern Region of Ghana. Results from the study indicates a greater percentage of the respondents (62%) were male while the remaining 38% were female. Respondents between the ages of 21 to 30 recorded 37.5%. Just 2.5% of the respondents were above 60years. Some respondents agreed (4.1±1.14) they exercise to keep stomach trimmed. The respondents also agreed (4.41±0.91) that they exercise to maintain current weight. Others agreed (4.18±0.90) they exercise to meet friends and to stay healthy (4.49±0.93). They also agreed (4.55±0.92) that they exercise to ease stress. The respondents agreed (4.67±0.47) to exercise when they see friends work out. About 49.1% of the respondents had knowledge in the nutrition related questions. Results from the study shows that 220 (91%) of the respondents always eat lunch. However, 9% of the respondents failed to eat lunch. About 33% of the respondents took banku and hot pepper after exercise. The respondents agreed (1.65±0.72) that there was an improvement in cardio respiratory wellness levels, decrease in mortality, build and maintain bones and decrease in diabetes. Improvement in memory and thinking were similarly referred to as impacts of diet on exercise. About 55% of the respondents knew that eggs and legumes are examples of protein sources other than meat.

CHAPTER ONE

INTRODUCTION

1.0 Background to the Study

Nutrition is a significant element of any physical workout schedule, according to Jonnalgadda *et al.,* (2018). The primary dietary objective for active people is to acquire sufficient sustenance to upgrade health and fitness for physical performance. This is not simply imperative to help improve performance yet in addition to advance solid dietary practices in the long term (Jonnalagadda *et al.,* 2018). Nutritional status has a direction on the active performance of individuals. Thus, actual training and fitness are reliant on healthful status of sports staff and physical coaches as postulated by Berning (2016). The primary dietary objective for active supplement information from nutritionists/dietitians and people is to acquire sufficient nourishment to advance health and wellness performance (Congeni and Miller, 2016).

Satisfactory nutritional information has been portrayed as having a cognizance of practices and ideas identified with nutrition including sufficient food consumption and prosperity, food intake and sickness, foods showing key sources of supplements and dietary rules and references (Kolodinsky, 2014). A few examinations have recommended that satisfactory degree of nutrition information is identified with ideal healthy practices (Drichoutis 2012; Miller, 2012; Kolodinsky, 2014). Consequently, admittance to realistic nourishment data may fill in as the reason for proper practices. For example, a person with satisfactory information on nourishment has a superior

potential for success in distinguishing between nutritional facts from nutrition fads (Brown *et al* 2011).

Reliable information on nutrition has been believed to assume a significant function in advancing more beneficial eating practices, and thus lead to the support of fitting body weight (Kruger *et al*., 2012). Literature have demonstrated that sufficient nutrition education has an effect on food propensities, ensuring that nutritional requirements are met during the life cycle (Worsely, 2012). Several studies have been researched on intervention programs for nutrition education (Lee *et al*, 2015; Powers *et al*., 2015; Ha and Caine-Bish, 2009; Ha and Caine-Bish, 2011) that focused on body builders, exercisers and fitness clubs with the goal of supporting the significance sound dietary intake and it effect on a person.

Different studies have also indicated that the suggested intake of dietary fiber, vegetables and organic products are not met by a few exercisers, particularly in Sub-Saharan Africa (McCracken *et al*., 2013; Huang *et al*., 2013) and they over consume nutrients such as sugar, sodium and fats (Dinger and Waigandt, 2017; Brevard and Ricketts, 2016; Anding *et al*., 2014). Negative potential health disorders, such as certain malignancies, hypertension, hyperlipidemia, iron deficiency anemia, cardiovascular infection, diabetes, obesity, and osteoporosis, can be attributed to these undesirable eating examples and propensities (U.S. Branch of Health and Human Services, 2017).

Nutrition outlines the physical performance establishment; it offers biological work with fuel and synthetics to separate and utilize the possible energy of food (McArdle *et al.,* 1999). Research underpins that appropriate nutrient consumption compares to high performance that is physical and that nutrient insufficiencies can contribute to decreased performance of athletic (Kiens, 2004). Some years ago, just world class competitors and exercisers were worried about the part nutrients played in human performance (Holt, 2013). In recent times, most competitors and performance bodies like exercisers and aerobic clubs comprehend that legitimate energizing through ideal nutrition is a significant and essential piece of a training program (Quaidoo, 2017). Regardless, most exercisers remain ineffectively instructed about sound nutritional practices and are untalented in settling on proper every day dietary decisions. Exercisers regularly go to sports mentors, strength and conditioning staff, mentors, or different competitors for nutrition advice, huge numbers of whom offer restricted verifiable data concerning sports nutrients (Quaidoo, 2017). Just a small bunch of exercisers affiliations have recorded utilizing the aptitude of dietetics experts to upgrade their group's presentation. Sports individuals regularly acquire from the web, their nutrient information or the mainstream press, particularly "muscle" magazines that promote supplementation and doubtful eating routine habits as the best approach to accomplish the ideal image (WHO, 2016).

The idea of wellbeing centers on lifestyle changes that incorporate nutrition, physical work, helpful and fulfilling work and amusement. Being physically active and dynamic empowers one to keep a sound body weight that assists with forestalling obesity related

medical issues (Ha and Caine-Bish, 2015). Physical work out has been characterized as any substantial development embraced by the skeletal muscles, requiring energy for its performance and for expanding energy consumption beyond basal levels (Haanstra and Kamper, 2012). Standard contribution in moderate to serious physical work out is viewed as an important segment of accomplishing and maintaining wellbeing (Khan and Brown, 2012; Ratzlaff, 2012). Physical work out is a critical idea in general wellbeing and exercise on the grounds that decreased physical activity is a notable danger factor for some constant illnesses and problems with inactive ways of life becoming common around the globe (WHO, 2016). It is thusly important to utilize coordinated actual work out schedules to improve the medical advantages of physical activities. Estimation of physical wellness is a typical and suitable practice in preventive and rehabilitative exercise programs. The reason for fitness testing in such projects incorporates; teaching members about their current health related fitness status, giving information that are useful in the advancement of activity remedies to address all health segments, gathering baseline and subsequent information that permit assessment of progress by practice program members, inspiring members to build up sensible and feasible wellness objectives just as satisfying cardiovascular risk (ACSM, 2014). The health-related parts of physical wellness have a strong relationship with good health and an improvement in nourishment and dietary intake (ACSM, 2014; Perry, 2016).

As per Quaidoo (2017), individuals who know about the link between inadequate nutrition and certain medical issue are bound to follow a decent eating routine and keep

away from inordinate weight gain. This implies that expanding nutritious information can be a decent system to utilize in the decrease and control of certain ailment. He likewise discovered that the greater part of exercisers in the nation are very little worried about eating routine and nutrition but instead worried about physical work out (Quaidoo, 2017). He further thought that expanded information on dietary or nourishment rules to be emphatically identified with more beneficial eating practices of certain exercisers. The researcher presumed that people who eat healthy foods have a higher dietary information prompting great food decisions that can minimize weight and maintain weight that is healthy. Having the information to settle on the correct decisions is significant in building up great dietary patterns yet the circumstance is very not quite the same as most exercisers in the nation particularly at Aburi in the Eastern Region of Ghana.

1.1 Statement of the Problem

Promoting health and reducing chronic disease risk associated with diet and weight is one of the goals of health groups in every country. Nutrition education and prevention efforts targeted at all ages especially children and adults have become an important public health approach as such individuals face many new dietary challenges and are establishing lifelong health behaviors (Brunth, Rhee, Zhong, 2017; Kolodinsky, Harvey, Johnson, 2018) and the young years of an individual is an important time to encourage behavior change through quality nutrition education.

Among the various organizations or associations believed to be interested in the well-being of its members in terms of physical health and nutrition in the country are group

of exercisers. These members are involved in physical exercises and keeping the body in shape. Among many exercisers in Ghana, these physical activities are climax with feasting on fatty meats accompanied with heavy carbohydrate saturated foods like "fufu, ɛmotuo or banku" and the drinking of alcoholic beverages (Otoo, 2017). Daily workout is also known to directly affect the fat in our bodies, thus burning them down and providing us with an ideal weight and energy. However, these members seem to be digging holes and at the same time covering them repeatedly. One wonders if they even have an idea on nutrition and selection of diet. Despite the wide scope of nutrition education initiatives by (Brunth, Rhee, Zhong, 2017; Kolodinsky, Harvey, Johnson, 2018) it is somewhat surprising that relatively few studies have also evaluated the level of nutritional knowledge in the general community and its impact on exercisers. It is against this background that the study did an in-depth study into the nutritional knowledge and practices of Exercisers on Aburi Ridge, in the Eastern region of Ghana.

1.2 Objectives of the Study

1.2.1 Main objective

The main objective of this study was to assess the nutritional knowledge and practice of exercisers on Aburi Ridge in the Eastern Region of Ghana.

1.2.2 Specific Objectives

Specifically, the objectives are:

1. To assess the factors influencing individuals who exercise on the Aburi Ridge.
2. To examine the nutritional knowledge of exercisers on Aburi Ridge.

3. To explore the nutritional and dietary practices of exercisers found on the Aburi Ridge.
4. To assess the effect of Exercisers dietary practices on their physical workout abilities.

1.3 Research Questions

The following questions served as a guide to the study.

1. What are the factors influencing individuals who exercise on the Aburi Ridge?
2. What is the nutritional knowledge of exercisers on Aburi Ridge?
3. What are the nutritional and dietary practices of exercisers found on the Aburi Ridge?
4. What is the effect of Exercisers dietary practices on their physical workout abilities?

1.4 Significance of the Study

This study is significant in diverse ways. This study gives better understanding into nutrition that are actualized by exercisers with the point of presenting whether individuals have knowledge on nutrition and practice it. The discoveries of this research which center around the exercisers are relied upon to give a commitment to the hospitality industry by giving more precise and explicit data identified with nourishment. This proposed study will add to information by giving data that may help policy makers, the exercisers, and community health workers, Non-Governmental

Organizations (NGOs) to design, create and actualize projects to create more awareness about nutrition and further reduce mortality as a result of it.

The research will provide reasonable means for advancing and revising incorrect practices among exercisers. This study will likewise bring to book the effect of nutritional knowledge on dietary consumption among exercisers found on Aburi Ridge and add to the supply of information or studies conducted by other researchers. The after effects of the research will provide a reason for additional studies, particularly in the hospitality industry.

1.5 Scope of the Study

There are numerous exercisers in Ghana. Be that as it may, the study utilized exercisers at the Aburi Ridge in the Eastern Region of Ghana. The research focused on the people to survey their dietary knowledge and practice. Aburi Ridge was chosen due to the easy access to information for the researcher and the readily assistance and corporation of exercisers.

1.6 Organization of the Study

The organization of the study is in five primary parts. This presents how and what the researcher would like to do in the study. These parts comprise of; Chapter one which contains the background information to the research topic, stating the statement of problem, research questions, expressing the goals or objectives that the project seeks to answer, describing the relevance of the study, depicting the study's scope and

bringing to light how the study has been organized. Part two takes a glimpse at the literature review (theoretical and empirical review). In this part of the work, research materials of different researchers are talked about and assessed. This incorporates journals, newsletters, magazines, text books, and reports and so on. Section three examines the research methodologies involved in the research and applicable justifications. It summarizes the approaches for completing the secondary and primary data collections and how results was examined. The procedure incorporates the Introduction, Research Design, Population, Sample size and Sampling Techniques, approach to Data collection (Primary and Secondary information), Research instrument (Questionnaires/interview) and Administration of the Research instrument. Chapter four presents the detailed analysis of data, discussion and interpretation of the results of the questionnaires distributed. Chapter five which is the last section of the study, centers on the summaries of discoveries, recommendations and conclusions.

CHAPTER TWO

LITERATURE REVIEW

2.1 Nutritional knowledge

Knowledge is one of the principal factors important for the advancement in each face of man life on earth. Gaining understanding on information empowers us to get an unmistakable picture about regions whereupon we should act. The expansion in proof about the significance of appropriate nutrition in guaranteeing appropriate development and improvement, and keeping up wellbeing and infection anticipation has focused on the requirement for more studies into nutrition in all population groups everywhere around the world.

The essential segment to living a strong and a vigorous life is because of appropriate nourishment. The Dietetics and Nutrition Academy characterizes the establishment for a health advancing lifestyle as a balanced diet with an assortment of nutrient dense nourishments and refreshments consumed with some restraint with suitable physical activity (Freeland-Graves and Nitzke, 2013). Disregarding the various dietary information accessible, most Americans are not eating a balanced diet with adequate or quality extent of nutrients.

Many are over consuming total kilocalories, sugars, and fats, while under consuming significant nutrients and minerals. For instance, as per Freeland-Graves and Nitzke, (2013), an eating regimen wealthy in fruits and vitamins is the most ideal approach to guarantee an eating routine sufficient in the missing nutrients, however more than 66%

of grown-ups detailed eating fruits or vegetables not as much as twice a day. This is a significant reason for concern since inadequate dietary propensities can prompt continuing sickness or poor treatment of existing illnesses.

2.2 Diet

The general wellbeing of an individual is extraordinarily founded on their dietary intake. Studies have been done to figure out what an individual ought to eat in each condition of life. For example, when one is in a healthy state and when one is in a stressed or ailing state. For instance, a diabetic patient is highly required to control their starch consumption (Nelms *et al*., 2014). Likewise, a lady who is pregnant is required, on normal every day, to take an extra 300 kilocalories, at least 175 grams of starches, an additional 25 grams of protein, 13 grams of linoleic acid, 1.4 grams of alpha-linoleic acid, and increased folate, Vitamin D, calcium, and iron. A patient with kidney illness needs to control their protein consumption, phosphorus intake, and liquid consumption. These models exhibit how diets can be unmistakable for various individuals and conditions. The best possible working of the human body relies exclusively upon the nutrients found in food and being taken by the body. The nourishments devoured are separated for the nutrients to be delivered to fuel body cycles, construct and fix cells and tissues. Without filling the body with an eating routine satisfactory in required nutrient quantities, the body cannot work appropriately along these lines intensifying the danger of creating medical issues.

2.3 Nutrient Needed

The body needs macronutrients in moderately huge sums to work appropriately. The macronutrients comprise of nutrients that produce energy, for example, water, lipids, proteins, and carbohydrates (Smolin and Grosvenor, 2013). Liu *et al.* (2003) revealed a relationship among the extent of nutrient-producing energy and the absolute energy consumed for weight management. As daily suggested consumption rates, healthy consumption varieties for energy-producing nutrients have been identified. During any form of active workout, and particularly during periods of extreme anaerobic action, carbohydrates serve as a basic and preferred energy source (Rolfes *et al*., 2014). The use of carbohydrate was discovered to be related with psychological cycles, for example, memory and attention in older individuals (Kaplan *et al*., 2000), and this may likewise be helpful for students making progress toward scholarly significance. As an energy source, the human brain relies solely upon carbohydrates (Lutz et al., 2014). The dietary carbohydrates of RDA, that depends on its part as the main energy source for the brain, is 130 grams for women and men per day (Institute of Medicine, 2005). Sugary added should be limited to less than 10% of the overall intake of calories (USDA and USDHHS, 2015). Also, it is suggested that grown-up women eat from the gram of 21 to 25 of total dietary fiber per day, and men consume between 30 and 38 g.

The primary capacity of protein in the human body is for development, repair, replacing tissues and fighting infections. Protein found in nourishments serves to supplant amino acids that are broken to deliver energy. As indicated by USDA, USDHHS (2015), the suggested day by day consumption for protein is $5^{1}/_{2}$-ounce equivalent per day. By and large, the American Dietetic Association, ADA, (2000) contends that these suggestions

are achieved by eating appropriate meal and without the utilization of amino-acid or protein enhancements. Additionally, it has been set up that people taking an interest in perseverance and strength occasions have somewhat higher protein necessities (1.2-1.7g/kg body weight) because of expanded protein misfortunes that happen during competition and training (American College of Sports Medicine, 2000).

Another fundamental source of energy is dietary fat which is additionally a macronutrient and furthermore assists with engrossing body nutrients (Huang *et al*., 1994). It has been discovered to be to a great extent over consumed among school matured students (Huang *et al*., 1994; Schuette *et al*., 1996). Due to its high caloric density, it is often the first macronutrient to be limited during periods of caloric restriction. Dietary fats should be gotten through diet in sufficient sums to forestall nutritional inadequacies and to keep a collection of the biological cycles of the body (Taylor *et al.*, 2006).

The suggestion for total fat and oil intake is set at 27 grams for each day, approximately 20 to 35 percent of the total daily energy consumption, to improve good health (USDA and USDHHS, 2015). Around 70 per cent of this intake should come from unsaturated fats, and saturated fat calories should not reach 10 per cent of total calories every day (USDA and USDHHS, 2015). When energy intake is adequate and the consumption of immersed fat is minimal, diets of up to 35% of calories from fat can be feasible with acceptable health. Nonetheless, the chance of insufficient consumption of essential fatty acids in fats and oils below 20% of calories increases (Rolfes et al., 2014). The essential fatty acids should give a piece of the energy allowance of total fat (linoleic

and linolenic acids). RDA suggests that linoleic acid should have energy consumption of five to ten percent per day per day and linolenic acids should provide energy intake of 0.6 to 1.2 percent per day per day (Rolfes et al., 2014).

Water is a basic supplement that should be used for survival in food. Death occurs without water within a couple of days (Smolin and Grosvenor, 2013). Water makes up to 60 percent of the weight of the human body and in every daily meal it is required in enormous amounts. Water plays various functions in the interconnected body; it serves as a lubricant, a transport fluid, and an internal heat level controller (Smolin and Grosvenor, 2013). Water needs depend on the food consumed, ambient temperature, humidity, much like the level of movement of a person. This makes it hard to build up a water RDA. As Rolfes et al. (2014) points out, the more energy a person consumes, the more water is recommended. The body needs micronutrients in much smaller quantities, but assumes an imperative part of the body. If not available, inadequacies can be created by the body. Non-energy-producing nutrients are micronutrients that incorporate vitamins and minerals. To control body measurements, vitamins are required; minerals are needed for bone health and oxygen transport. Vitamins are natural particles that do not provide energy, but body measurements are required to guide (Smolin and Grosvenor, 2013). Despite the fact that vitamins do not provide energy, a large portion of them fill in as reaction coenzymes to provide energy from carbohydrates, fat, protein and alcohol (Smolin and Grosvenor, 2013). The Sufficient Intake (AI) and RDA are made dependent on age and sex for the intake of vitamins.

Inorganic molecules that do not give energy are minerals (Hill et al., 2004). A huge class of micronutrients are made up of minerals, a large portion of which are called essential nutrients and are needed for bone growth, oxygen transport, impulse transmission and many different functions (Smolin and Grosvenor, 2013). It is divided into two groups of nutrients: macro-nutrients and micro-nutrients. For good health, RDA for macro and micro nutrients is dependent on age and gender. For example, macro nutrients such as calcium and phosphorus are required in amounts of 100 mg/day or more, while micro nutrients such as iron and selenium are required in much smaller amounts, regularly below 15 mg/day (Smolin and Grosvenor, 2013).

2.4 Nutritional needs for Adults

A nutrition rule for individuals fluctuates from one age group to another. For example, the nutritional requirements for home-staying healthy adults are like those of younger individuals. The intake and use of energy should be changed and an adequate healthy diet should be considered. In the overall nutrition plan, which relies on the Nordic Nutrition Recommendation, diet quality rules are found (Nordic Nutrition Recommendations 2014, VRN 2014).

Inclination is featured for wholegrain goods rather than inferior carbohydrates and the use of salt is held moderate. The psychosocial value of feeding should also be considered at this meeting (Suominen et al. 2010). The proposal focuses on that conceivable weight decrease should be done gradually, accentuating upkeep of muscle mass with a reasonable eating routine joined with work out.

During sicknesses, micronutrient, protein, and adequate energy intake is significant (Suominen *et al*. 2010). Healthcare workers with various illnesses: notwithstanding the suggestion for strong home-staying individuals, this group's unique center is the avoidance of weakness (Suominen *et al*. 2010). Workers of medical care ought to sharply recognize and forestall changes of weight and compulsory weight reduction (Morley *et al*. 2007). CGs are advised to sort out food, and in the case of serious illness, limited food stocks should be maintained at home (Suominen et al. 2014).

Home-care customers as of now have different sicknesses and utilitarian incapacities. Despite the two above-mentioned recommendations, it was also suggested that social and home-care staff prepare regular feeding, conceivable shopping administrations, and on-wheels meals together with older people and their CGs, taking a lot into account the needs of each person. The need for eating assistance should be assessed and cleanliness ensured with the aid of home-care staff. The psychosocial importance of eating and pleasure should be considered. Preventing inadvertent weight loss and weight shifts is especially important in this category (Suominen et al. 2014). More proven standardized people: considering the aforementioned suggestions, family-style meal times are advanced, where dinning meals should be quiet and older people should have the option of taking as much time as required to eat without being hurried (Nijs et al. 2006). Medical attendants are urged to eat along with the tenants at comparable tables (Nijs et al. 2006, Suominen et al. 2010).

2.5 Nutritional Knowledge

Worsely, (2002) propose that nutritional knowledge is the "knowledge on health and nutrition". Also, Nutritional information is a significant factor that impacts healthy food propensities which guarantee that nutrient needs all through lifecycle are met. Person's ability to meet their wholesome requirements will empower them settle on strong food decisions that improves wellbeing and health by forestalling abundance consumption of nutrients that could be related with chronic sickness. Kruger *et al.* (2002) concurs with the way that healthy information as a significant factor in advancing more advantageous dietary patterns, and therefore, keeping a proper body weight, accordingly, forestalling overweight and corpulence.

Grafova, (2006) contends that individuals who know about the link between poor nutrition and certain medical issue are bound to follow a fair eating regimen and keep away from extreme weight pick up. This is additionally upheld by Read and Schlenker, (1993) who set that is a demonstrated actuality that individuals who have gained essential nourishment information have been found to apply what they have realized while choosing food. A few examinations have demonstrated that people neglect to focus on nourishment while choosing food since they are ineffectively educated about dietary rules.

Accordingly, Read and Schlenker, (1993), contends that improving nourishment information through instruction and mediations may help forestall persistent infection and improve standard of life. Because of this, there is a requirement for individuals to

comprehend and to be instructed on how and the need to use a good eating routine for more noteworthy advantages to the safety of the general public. In this way, nutrition education in a group focuses on food expectations of behavior by expanding food value knowledge to enhance dietary habits and thereby improve the nutritional status of the individual environment and help (Worsley, 2002).

2.5.1 Nutritional Knowledge impact on Food Choices

An investigation by Parmenter *et al*., (2000) uncovered the connection amongst knowledge and smart dieting propensities. In the analysis, the members with more nutrition information were 25 percent more likely to consume adequate measures of foods grown from the ground every day. Worsley (2002) has conducted studies on the relation between nutritional awareness and eating practices and found that "numerous studies show no relationship, however there are some that do, but numerous at 'low' levels of evidence".

Mirsa (2007) used a conceptual model to determine the relationship between awareness, viewpoints and use of the nutrition label among 537 randomly selected students from two Midwestern colleges using a mail questionnaire. It meant that the anticipated use of the label was "dietary education, age, sex and attitude anticipated label use" The study also found that there was an inherent skepticism about the honesty and accuracy of food labels, despite the fact that most students considered food labels to be helpful and easy to read (Misra, 2007).

In 2002, Worsley analyzed a study of an adult population in the US that uncovered an immediate correlation between knowledge on cancer prevention and satisfactory use of healthy foods. Vegetables, vegetables, fiber, and fat were eaten by the more proficient adults in amounts similar to the suggested day by day values than the less learned members. An inquiry led by the USDA Economic Research Service found that the knowledge about food and nutrition from mothers frankly influenced the weight management plans of their children (Blaylock et al., 1999). A cross-sectional research by Kolodinsky et al. (2007) studied the relationship of students in the dining hall between existing dietary laws and food decisions and found that expanded knowledge was linked to improved eating habits for fruits, dairy, protein, and whole grains. Nutrition awareness was also shown in the analysis as the key determinant of individual food decisions for each case. Apparently, students will use their experience to decide on a more engaging decision when given a discussion about a specific form of food. (Kolodinsky et al., 2007). The results of this study indicate that better eaters typically have greater dietary awareness.

2.5.2 Physical Activity and exercisers

To sufficiently adjust the energy condition in each individual, there is the need to add physical work out to a decent and fluctuated diet that adjusts to the proposals recorded previously. It is prescribed that people matured at the age's from18 to 64 years who are searching for sufficient medical advantages, ought to take part in at least 150 minutes of modestly intense active every week or 75 minutes of energetic aerobic action every week (USDA and DHHS, 2015). Nonetheless, to the individuals who need more broad

medical advantages, it is suggested that they increase their active work to 300 minutes out of each week (USDA and DHHS, 2015). Also, muscle fortifying exercises, for example, a training program of total body resistance, is suggested on at least two days of the week (USDA and DHHS, 2015). While trying to suggest or recommending diet or a physical work which can assist the body with training and uses nutrients for energy, one requirement is to likewise think about, hereditary impacts.

Health specialists are consistent in their notice that whatever isn't utilized decays or dies constantly gradually and that this is especially the situation with the human body. "If you want to keep truly fit and healthy, regular exercise is the appropriate response. This essential law of health whenever broken or disregarded, prompts sickness". Many people from keeping fit clubs and benefactors of recreation centers say that after working out they are typically of good conscience and alert (Narh, 2012). This is because of the way movement makes it easier for the heart and brain to function as they get satisfactory oxygen supplies. It additionally encourages one to eat better, rest better and prevents continuous disorders like colds, fever and body pains.

Subsequently, as indicated by the Ministry of Health, around 60% of grown-up death in Ghana are owing to heart-related and other non-communicable infections resulting because of stationary ways of life (Narh, 2012). Fortunately, a fitness desires appears to now be a trend in numerous areas of Ghana and huge numbers of individuals are joining these clubs and training with gyms for regular exercise. As indicated by Narh, (2012), two key issues have anyway arisen: The first, is that “numerous individuals

have gotten on board with the exercise bandwagon trend and are jogging, running and lifting weights everywhere except it ought not be so, since this could prompt lethal results like injury, loss of consciousness and unexpected death for individuals with ailments they are ignorant of." The second is that fitness trainers, instructors and colleagues who have had no expert training at all as fitness mentors and teachers supervise a significant number of the numerous stay fitness clubs and exercise centers.

In that capacity, they have no or less information on the determination of better eating habits for the correct nutrients required by the human body. Be that as it may, the greatest fitness and physical well-being is best accomplished by activities organized by specialists in physical activities and wellbeing and guided under the guidance of trained advisors who know the categories of activity appropriate for people of different ages and health conditions. The guaranteed physical fitness practitioners ensure that they take people to real exercises that are useful without putting an excess of physical pressure on this class of people. They also promote how health can be improved by improving exercise with a healthy lifestyle. Dr. Narh says that part of the solution to the problem of undeveloped fitness clubs and gym instructors is that the clubs and gyms benefit from training activities themselves.

2.6 Conceptual Framework

Adequate nutritional knowledge is fundamental for development and improvement, wellbeing and prosperity, and the prevention of some chronic illnesses in mature age (CDC, 2018). Grown-ups, particularly mentors and exercisers, need adequate energy,

protein, and various nutrients for growth as well as retaining body capacity. In general, nutrient needs will have parallel levels of growth. Growth continues at a steady pace during childhood, and then accelerates during pre-adulthood, rising nutrient requirements to support the rapid growth rate and expansion in lean body mass and body size (Story et al., 2012).

Dietary practices outline the ways people or groups of individuals select, plan, consume and by and large utilize food accessible to them. Various social orders use food diversely and have picked various flavors, textures and food types and have designed their eating in an unexpected way (Wardlaw, 2017). Notwithstanding the effect on development and improvement, person's weight control plans are critical to guarantee generally health and prosperity. Dietary acts of grown-ups and besides exercisers influence their danger for various medical conditions, including obesity, iron deficiencies, and dental caries. Lacking nourishment likewise brings down resistance to infections, and may unfavorably influence the capacity to work at highest mental and physical capacity (IOM, 2015).

Unseemly nutrition can likewise prompt obesity which is an expanding general medical issue in various nations. Early nourishing shortages are likewise connected to long term impedance in development and wellbeing. Ailing health during the initial 2 years of life causes stunting, prompting the grown-up being a few centimeters shorter than their potential height (Martorell *et al*., 1994). Great nourishing and dietary information go far to have effect on the way of life of individuals.

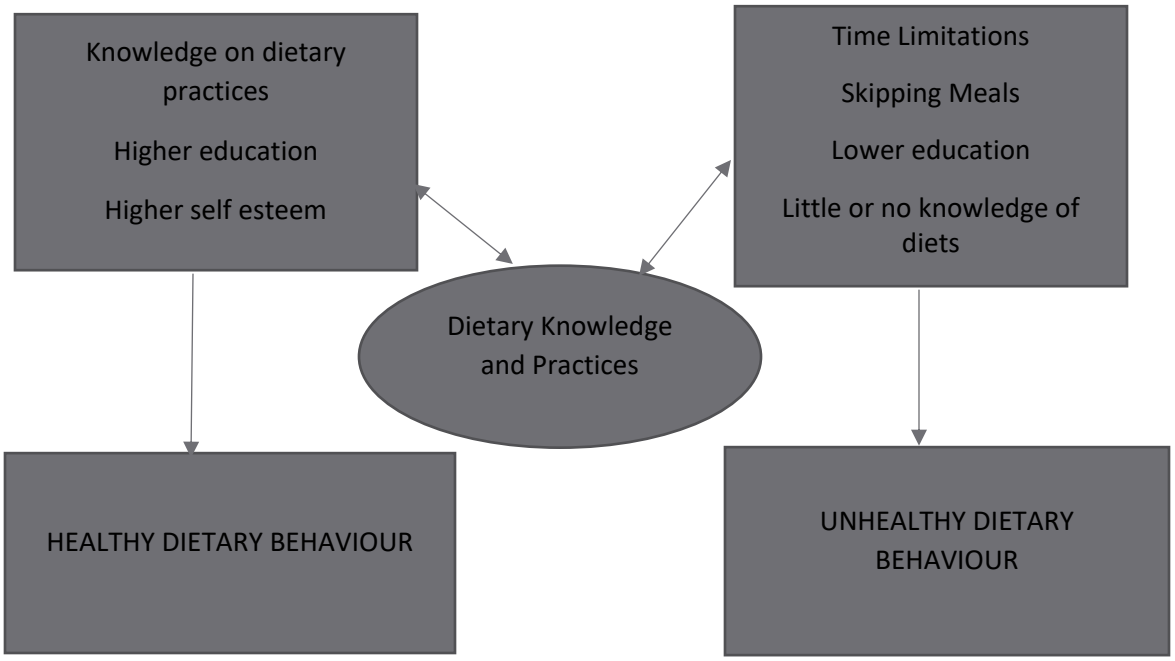

Figure 2.1: Conceptual framework

Figure 2.1 indicates that the knowledge of individuals impacts the type of food and diet they will consume. With correct and adequate knowledge and information on diets, individuals are likely to follow such systems and indulge in good or healthy dietetic manners while those with little or no knowledge or education do not eat healthy foods.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

The technique part gives a structure on how the researcher gathered and examined information to discover the responses to the research questions. This part manages the different strategies used to gather, supervise and examine the information in the study cycle. It is a focal segment of the study, which presents the systems followed by the researcher to make substantial determinations, which structure the premise of the suggestions and accomplish the expressed research goals. The approach fundamentally contained; research design, population, sample and sampling technique, instrument, data collection means and the analysis of the data.

3.1 Research Design

As indicated by Gay (2014), study pattern includes collecting data to test hypothesis or answer research questions on the situation of the topic under study. This study can be delegated descriptive survey since it is organized and well comprehended. The term descriptive survey can be utilized to assign any research action in which the examiner assembles information from a part of a populace to inspect the attributes, suppositions or goals of that population (Polit and Beck, 2014). The selection of a descriptive design was necessary due to it serious level of representativeness and the simplicity wherein a researcher could easily acquire the members' opinions (Polit and Beck, 2014). A descriptive survey in the form of cross section was chosen by the researcher, where information was gathered once across a populace through sampling. Descriptive

surveys center on suggesting data about the nature and status of specific phenomenon at a given time. Under this, the descriptive study explanatory methodology was utilized. Explanatory research was made to answer why and how questions. It keener on predicting, understanding, controlling, and clarifying connections between variables than with causes being differentiated.

Explanatory studies go beyond just explanation and seek to illustrate the motives behind the phenomena recorded in the descriptive study. Dim (2014) notes that descriptive research builds on descriptive and exploratory research and continues to find real explanations for the emergence of a phenomenon. Explanatory study looks for reasons and causes and offers facts to assist or refute a forecast or clarification. It is aimed at reporting and identifying a few similarities between different sections of the phenomena under investigation. The motivation behind why the researcher utilized this technique was that the scientist needed to evaluate the nutritional knowledge and practices of exercisers at Aburi.

The survey approach was the utilization of the mixed methodology. The idea of this study made it important to embrace a blend of qualitative and quantitative analysis strategies and instruments to evoke the required information. Ringer (2005) thinks that the quantitative methodology offers the analyst the occasion to make quantifiable research and speculations. In addition, Denzin and Lincoln (2000) argue that quantitative and qualitative methodologies are researched, that qualitative methodology focuses on how social experience is produced and given importance,

whereas quantitative methodology focuses on analysis and estimating causal connections between variables rather than cycles.

This means that the synthesis of quantitative and qualitative study criteria has a strong potential to achieve both an in-depth and an insider view of the phenomena under review, as well as an assessment of variables to answer the research questions. For this review, this survey method was adopted to ensure that the research is improved by its characteristics.

3.2 Population

Anhwere (2013) characterizes a population as the whole assembly of study groups that fulfill an assigned set of measures. This infers that whatever the fundamental unit, the population consistently includes the complete total of all components wherein the researcher is interested.

The group of individuals in the study were all exercisers on the Aburi Ridge, in the Eastern Region of Ghana. The total population was 800 exercisers.

3.3 Sampling Size and Sampling Technique

For a genuine description of the population, the sample size that was utilized was half (50%) of the populace. This is upheld by Leedy and Ormrod (2010) who recommended that a populace size of 500 should have a sample percentage of half (50%) to qualify as a genuine representation of the populace. To obtain the 400 respondents through

random sampling, exercisers who show up are selected and issue with questionnaire until the required number is obtained.

A purposive sampling is a non-probability sampling technique that is chosen based on attributes of a populace and the target of the study. Participant in purposive sampling is chosen because they are the most productive sample to answer the research questions. For this reason, gym instructors and organizers were purposively interviewed since they are considered as 'information rich'. There was not any form of bias on any age or gender, or level of ability since the sample was chosen independent of the age or gender of the members.

3.4 Data Collection Instruments

The primary research instruments (tool for the collection of data) used to gather information for the study were questionnaire, observation and interview. The survey was picked to accumulate information for the research on the grounds that the study needed to gather direct and fair information and gave a decent premise to requesting the assessment or view of respondents on a given phenomenon. Once more, the study picked the utilization of questionnaires since it was relatively more affordable, save time and helpful for the respondents to finish. Further, the survey was organized and planned in two sections; the respondents' characteristics and on the objectives of the study, which was separated into subheadings. It comprised of close ended questions; the employment of the close ended questions was to restrict the responses to questions and furthermore to help the respondents to remember any reactions they may have

failed to remember. The questionnaire was planned by the researcher dependent on the review of the important literature in accordance with the targets of the examination and to likewise fill in as the reason for the interview that was completed to acquire better details and explanation of facts.

Interviews were likewise directed, recorded and thusly interpreted for analysis. Interviews were directed in a casual way to consider adaptability and respondents to feel sufficiently good to give an acceptable data. The researcher made notes during interviews to monitor information to assist the researcher with taking note of the subjects and patterns that arose during the entire process. Research requires the use of multiple methods to collect extensive data. Therefore, participant observation was employed. Among sociologists and anthropologists who wish to understand and study another group, culture or context, participant observation is common. The observation method was employed for the researcher to discover things that participants may not want to talk about in the interviews. In order to learn detailed details about the perceptions and actions of people, observation means looking and listening very carefully.

3.5 Data Collection Procedure

A letter was acquired from the Department of Catering and Hospitality to empower me present myself as a student of University of Education Winneba undertaking the study as a component of academic work. Consent was looked for and affirmed by the selected exercisers to empower the examination to initiate with the organization of

questionnaires. The researcher trained two research assistants to help in the data analysis. The researcher personally administered the questionnaires and organized the interviews. All respondents were educated regarding the objectives and plan of the study. Attention was made known that the research findings are essentially for academic purposes. Respondents were educated regarding their function in giving significant data and the reason for which their data was utilized. To uphold secrecy, anonymity and privacy, questionnaires didn't demand for the personal details of respondents.

Self-revealed data from respondents was gathered for the research through semi-organized interviews. Following the approval got from the chosen exercisers, the researcher enlisted the members for the study by means of visits and calls. Following the enlistment of the members, the researcher booked meetings that would last for 20 to 30 minutes. The meetings were scheduled on days of convenience chosen by the respondents.

Prior to the data collection periods, the researcher made calls to affirm their criteria for the interview and their preparedness for the process to ensure a smooth collection of data. Meeting periods was recorded utilizing telephones and other helpful sound recording devise which was later be deciphered for analysis.

3.6 Pretest of Questionnaire and Interview Guide

The questionnaires and meeting guide were directed by Abundant Grace Keep Fit Club at the Kumasi Sports Stadium. Five individuals including three enlisted exercisers and

two mentors were chosen. The choice models were purposive. The meeting area went on for 15 minutes with every mentor.

A post meeting conversation was coordinated as they showed some motivating interest on nutritional knowledge to be uncertain alongside the questionnaire. It was additionally recommended that such factors be looked into. Pretesting proved effective as it helped upgrade the research instrument. This was completed with Microsoft Excel.

3.7 Reliability and Validity of Research Instrument

To develop validity, to ensure that they were focused on the substance of the literature, the items formulated for the questionnaire were scrutinized. Again, experts in the Department of Catering and Hospitality, University of Education (Winneba) Kumasi, who are well aware of involvement in sports and physical activity to ensure that they were devoid of ambiguities, tested the content and face validity of the instrument. A pilot test of the instrument to verify reliability and validity was performed prior to the actual analysis. The instrument was pilot tested among Keep fit club members in order to ensure that items were worded correctly and were understandable to respondents. This was done to sharpen and fine tune it by correcting possible weaknesses, inadequacies and ambiguities that could characterize the items.

3.8 Data Analysis Techniques

Information assembled from the field of study were completely edited, coded and checked for mistakes and consistency. Raw scores were then entered into the PC and

analyzed, using Statistical Product and Service Solutions variant 20 programming. Descriptive statistics, for example, frequencies and rates were employed. MS Excel was utilized to draw the diagrams for the processed information. This was applied by the researcher due to the simplicity in utilizing MS Excel for this reason over the other software programs.

3.9 Ethical Consideration

The questionnaire was explained to the participants. They were assured of their confidentiality of results. The researcher explained to the participants that the results of the study were solely for educational purposes. Once the participants gave their consent to partake in the study, they were given the chance to participate.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Demographic Characteristics

The gender distribution of the respondents is clearly represented in table 4.1. Results from the study indicates a greater percentage of the respondents (62%) were male while the remaining 38% were female. This is an indication that more males exercise as compared to their female counterparts.

The social organization shows a distinct division of labor based on sex and age in most parts of Ghana. Strict duties are given to all in the family to contribute to the general upkeep of the household. For example, while women plant crops, harvest and store crops, as well as cook and provide childcare, men are responsible for clearing the land (Abdul-Korah, 2011). Therefore, women usually manage more household duties than men, helped by their daughters (Opare, 2015). The World Bank (2008) confirms that in some parts of Tanzania, Zambia, and Ghana, women expend a substantial time between the field and their homes, taking firewood to the house, fetching water, and grinding grain, also, keeping the household's overall hygiene and performing every domestic work. Reproductive practices at the same time where these duties significantly reduce the time available for women to engage or contribute to in community meetings and relations (Opera, 2015).

Table 4.1 additionally gives an outline of the age dispersion of the respondents. Respondents between the ages of 21 to 30 recorded 37.5%. Just 2.5% of the respondents

were above 60years. This study again implies that persons in their pension age do not exercise as much as those in active service.

Table 4.1: Demographic characteristics of respondents

Factor		Number of respondents	Percentage (%)
Sex	MALE	250	62%
	FEMALE	150	38%
Age	Below 20yrs	40	10
	21 – 30	150	37.5
	31 – 40	100	25
	41 – 50	60	15
	51 – 60	40	10
	Above 60	10	2.5
Education	PRIMARY	50	12.5
	SECONDARY	110	27.5
	TERTIARY	226	56.5
	OTHERS	14	3.5

The exercise destination in the current study was a hilly area. This thus calls for people with strong immune systems. In addition to the acute and infectious diseases that affect all age groups, the burden of chronic diseases for which recurrent medical care is needed, is disproportionately higher among respondents of the older age groups compared to their younger colleagues (Denton & Spencer, 2010). Thus, people of older

age do not engage in such activities because of the nature of the hill where the exercise takes place and their health conditions.

The educational characteristics of the respondents was analyzed. Over 80% of the respondents had finished secondary education. Students at the tertiary level recorded about 56.5% of the respondent. The study confirms that majority of the respondents were educated.

The income level of the respondents was examined. Results from the analysis demonstrated that dominant part of the respondents (54%) had income levels below GH₵250. Just 3% of the respondents had income above GH₵8000. This is presented in table 4.2. The minimum wage in Ghana is GH₵10.19 daily (GSS, 2010). This data shows that majority of the respondents live below the minimum wage. They can thus be termed as poor.

Table 4.2: Income level of respondents

Factor		Number of respondents	Percentage (%)
Income Level	Very high (above GH₵ 8000)	12	3
	High (GH₵3000 -GH₵7000)	44	11
	Middle (GH₵1000 -GH₵2500)	28	7
	Low (GH₵300 -GH₵1000)	100	25
	Very low (Below GH₵250)	**216**	**54**

The underlining medical problem of the respondents were recorded. Most the respondents had other sicknesses. 23% of the respondents had hypertension and 20% were Obese. Just 1% had diabetes. This is illustrated in table 4.3. The data shows that majority of the respondents are not medically fit and need medical attention. This confirms reports that the major disease in Ghana include cardiovascular disease, cancers, diabetes and chronic respiratory diseases (Aikins, 2007).

Table 4.3: underline conditions of respondents

Conditions	Number of respondents	Percentage (%)
Diabetes	4	1
Coronary heart disease	28	7
Hypertension	92	23
Obesity	80	20
Others	196	49
Total	**400**	**100**

4.2 Factors influencing individuals who exercise

The variables which impact the exercise behavior of respondents are introduced in table 4.4. The outcomes were evaluated on a scale from 5 to 1 (Strongly agree to strongly disagree). These statements were given an impartial (neutral) response by the respondents. I exercise if I have not been eating healthy (3.35±1.14). A portion of the respondents were likewise neutral on the positive feelings after exercise cause individuals to exercise more (3.9250±.9885). Table 4.4 likewise shows that

respondents Agreed to 6 statements on why individuals work out. Some respondents incorporate exercising to keep stomach trimmed (4.1±1.14), maintain current weight (4.41±0.91), when they will meet friends (4.18±0.90) and to stay healthy (4.49±0.93). A few respondents likewise exercise to release (4.55±0.92) while others are urged to exercise when they see friends work out (4.67±0.47).

This outcome suggests that exercisers have a positive attitude about engaging in sports and physical activity. Shamshoum's (2003) studied similar research and found that what inspires students to partake in physical activities that promote their development, mentally, emotionally, physically and socially and to their progress is a positive attitude. People build positive and significant attitudes toward physical activity, according to Tuckman (1999), considering the advantages inherent in engaging in sports and physical activities. In addition, positive attitudes enable people to participate in physical activities that contribute mentally, emotionally, physically and socially to their development, whereas negative attitudes, appear to impede such development (Godin & Shepherd, 1990).

Table 4.4: Influencing factors of people who exercise

	Mean	Std. Deviation
Work on unhealthy eating	3.3475	1.14456
Suspected Overweight	3.5325	1.33356
Enjoyment	3.7500	1.09109
Positive feelings	3.9250	0.98580
Stomach trimming	4.1000	1.13720
Maintain current weight	4.4125	0.91072
To meet friends	4.4175	0.90290
To Remain healthy	4.4900	0.93116
To ease stress	4.5500	0.92175
Motivated by others	4.6650	0.47258

(KEY: Strongly agree: 5, Agree: 4-4.9, Neither Agree or disagree 3-3.9, Disagree: 2-2.9, Strongly disagree: 1-1.9). **Source: field survey, 2020**

As per Tuckman (1999), people create strong inspirational mentalities toward physical activities given the advantages gained in taking an interest in proactive exercises and sports. In addition, positive attitude persuades people to participate in physical exercise adding to their development physically as well as emotionally, socially and intellectually, while adverse perspectives then again will in general hinder such developments (Godin and Shepherd, 1990).

Members in this research held both positive and negative elements which impact them to work out. Regarding positive attitudes, they were impacted by progress in physical and mental health, physical appearance, and wellbeing.

Some members exercised just to meet their friends. Participants felt that when confronted with the needs of their family and work, practicing requires a great deal of exertion and responsibility; subsequently it is a lot simpler to be sedentary. Despite the fact that the variables referenced relate explicitly to healthy eating and exercise, these discoveries are like those from other studies that analyzes inspirations for weight reduction. In this research, men stated improved health, wellbeing, and appearance as motivations to lose weight (Wolfe and Smith, 2002; Shepherd *et al*., 2010; Hankey *et al*., 2002; Morgan *et al*., 2011; Egger and Mowbray, 1993).

4.3 Nutritional information on Exercisers

The knowledge of respondents on nourishment are introduced in table 4.5. Reactions went from True, False or do not know. Honey contains higher calories than sugar. 1gram honey has 64 calories while sugar has 49calories (Bogdanov *et al*., 2008). Reaction from the investigation indicated that dominant part of the respondents didn't have a clue (46.75%) that honey had less calories compared with sugar. 25.75% likewise answered false to this assertion.

Parker and Vadividoo (2019) in their study revealed that legumes and eggs are sources of protein other than meat. Just 55.75% of the respondents knew eggs and vegetables are protein sources. About 28.5% answered false while 15.57% did not know. Fatty acids are stored as triglycerides in the muscle (Alles *et al*., 2017). Proteins are thus not the primary source of muscular energy. About 50.75% had no clue that proteins are essential sources of muscular energy (30% False and 20.75% did not know).

Key *et al*., (2014) noted that red meat has more saturated fats. The study indicated that 50.5% realized that red meat is high in saturated fat. 49.5% did not know. Out of this 27.5% answered false while 22% didn't have an idea.

One of the best-known sources of Vitamin A is carrots. Carrots are important sources of vitamins and minerals. They contain about 73% of the daily requirement of Vitamin A (Clare, 2013). Less than half of the respondents (31%) realized that carrot are acceptable sources of vitamin A. The excess 69% had no clue about the vitamin A in carrot.

In the United States, cheese, yogurt, and milk are sources of calcium that are rich naturally and are the major nutritious food contributors to people (Bailet *et al*., 2010). The greater part of the respondents (62.5%) answered false to the knowledge that milk is a decent provider of calcium. Just 35.75% of the respondents realized milk was a good source of calcium. The intake of calcium also impacts peak bone mass achievement during young adulthood and adolescence, which is an important determinant of osteoporosis risk (Llyod *et al*., 1993). Nonetheless, dominant part of the respondents (55.75%) knew sufficient calcium intake was fundamental for female athletes. More than a quarter (27.5%) answered false to this assertion while 16.75% didn't know about the significance of calcium to female athletes.

Bones can be affected by the ingredients found in soft drinks. Loss of calcium can be increased by sodium and sugar found in soft drinks (Nordin *et al*., 1993). The analysis demonstrated that 59.75% knew that digestion of calcium is influenced contrarily by utilization of carbonated drinks. To prevent any deficiencies, one must be encouraged

to have good sources of iron in his or her healthy diet and balanced diet. Vitamin C mixed with vegetarian sources of iron in a meal will also help prevent deficiencies. Cashews, whole grains, beans and baked potatoes are some of the good sources of iron (Wanders *et al*.., 2011). While 63.25% realized that cashew and whole grains were acceptable sources of iron, 23.75% did not know and 13% answered false.

Vegetarians also have a higher risk for increasing iron depletion, low iron stores, and related iron deficiency anemia, compared to non-vegetarians (Roman *et al*., 2018). The investigation likewise recorded 55.75% responding that vegetarians are at a higher danger of iron deficiency. 35.5% of the respondents answered false to this assertion and 8.75% didn't know about this affirmation. The relevance of the intake of dietary iron and loss of menstrual blood in affecting iron deficiency risk in women consuming meat-containing diets and lacto-ovo-vegetarian is not defined well, but vegetarianism has been reported as related to menstrual disturbances (Barr, 1999). The greater part of the respondents had no clue that menstruation necessitates that females get sufficient supply of iron than men. 38.25% of the respondents realized females required more iron than guys. A lack of iron in the diet can cause headaches, weakness, fatigue, and many other symptoms (Roman *et al*., 2018). Larger part (61.25%) of the respondents also realized that absence of iron can cause tiredness, injury and sickness.

Around 161 respondents representing to 40.25% realized that vegetables in the eating routine accomplished the suggested day by day dietary allowance. 27.5% (111) answered false to this assertion. Again 32% (128) didn't realize vegetables accomplished the dietary allowance required.

Two vegetables serving's everyday accomplishes suggested allowances of dietary. Yellow, leafy and green vegetables are relevant due to their guaranteed in vitamin A supplement for the individual (Anding, 2001). The study likewise indicated that larger part (61.25%, 245) of the respondents realized leafy vegetables help people get adequate vitamin A. The research indicated that 27.5% representing 101 respondents didn't know about this explanation. Just 45 respondents answered false to this claim.

Fiber is known to be connected with constipation (Barzegari *et al*., 2011). About 33% of the respondents (75.25%) knew fiber and diet helps decline constipation, blood cholesterol and cancer prevention. About 19.5% didn't know about the impact of fiber on constipation, cancer and blood cholesterol. Only 5.25% answered false to these statements. A nutritious diet that is well-planned must meet the mineral and vitamin needs of an athlete, and provide enough protein to enhance muscle repair and growth (White *et al*., 2009). Mean Score showed that majority of the respondents (48.66%) were knowledgeable in nutrition related issues.

Higher findings have been shown by previous research. For instance, Pirouznia (2001), Wiita & Stombaugh (1996), Chapman (1997) & Cupisti (2002) revealed that adolescent baseline nutrition awareness was 77.6%, 68%, 66.2%, and 69%, respectively. In addition, Cupisti and colleagues (2002) revealed that athletes' basic nutrition awareness was greater than that of non-athletes, indicating that athletes have access to nutrition knowledge from trainers and coaches, despite a lack of high school education in nutrition (Cupisti, 2002). Nutrition must thus be taught as part of the exercise procedures.

Table 4.5: Nutritional Knowledge of Exercisers

Statement	True N (%)	False N (%)	Do not know N (%)
Honey contains fewer calories than an equal amount of sugar	110 (27.5)	103 (25.75)	187 (46.75)
Eggs and legumes are examples of protein sources other than meat	223 (55.75)	114 (28.5)	63 (15.75)
Protein is the primary source of muscular energy	197 (49.25)	120 (30)	83 (20.75)
Protein is not stored in the body; therefore, it needs to be consumed every day	138 (34.5)	125 (31.25)	137 (34.25)
All red meat is high in saturated fat	202 (50.5)	110 (27.5)	88 (22)
Carrots are good source of Vitamin A	124 (31)	120 (30)	156 (39)
Milk is a good supplier of calcium for all age groups	250 (62.5)	143 (35.75)	7 (1.5)
Adequate calcium intake is necessary for female athletes of all ages to prevent osteoporosis	223 (55.75)	110 (27.5)	67 (16.75)
Carbonated beverages can negatively affect calcium metabolism	239 (59.75)	114 (28.5)	47 (11.75)
Cashews, whole grains, beans and baked potatoes are good sources of iron	253 (63.25)	52 (13)	95 (23.75)
Strict vegetarians are at a higher risk for iron deficiency	223 (55.75)	142 (35.5)	35 (8.75)
Due to menstruation, females need more iron in their diets than men	153 (38.25)	162 (40.5)	85 (21.25)
A lack of iron in the diet can result in fatigue, injury and illness	245 (61.25)	98 (24.5)	57 (14.25)
Two servings of vegetables per day fulfills recommended dietary allowances	161 (40.25)	111 (27.75)	128 (32)
Green, leafy and yellow vegetables are important because they help ensure the vitamin A requirement for the individual.	245 (61.25)	45 (11.25)	101 (27.5)
fiber and diet may help decrease constipation, decrease blood cholesterol levels and prevent cancers	301 (75.25)	21 (5.25)	78 (19.5)
a physically fit person eating a nutritionally adequate diet can improve her performance by consuming greater amount of nutrients	129 (32.25)	112 (28)	159 (39.75)
MEAN	49.10	27.45	23.45

The analysis indicated 32.25% of the respondents knew physically active people actually are expected to take in prominent amounts of nutrients to improve their performance. 28% of the respondents didn't think that physically active people required additional nutrients. Larger part of the respondents (39.75%) didn't know.

This is important to the study as the primary energy for muscle contracting is given by carbohydrates. Moreover, carbohydrates are often the central nervous system's most significant power (Gleeson, 2009). Given that athletes believe that the toughest macronutrient to digest is carbohydrates, it would be important to examine their meal of pre-competition. Our findings reflect the pre-competition of those athletes.

The study showed 49.1% of exercisers displayed excellent knowledge of basic principles of nutrition that could be harmful to success. However, 50.9% had no knowledge in the nutritional factors.

4.4 Nutritional and dietary practices of Exercisers

The quantity of meals consumed by respondents in a day are summed up in table 4.6. Greater part of the respondents (35%) consumes meals thrice in a day. Just 15% consume one meal in a day. It was additionally noticed that 21% of the respondents consumed meals four times in a day.

Table 4.6: Number of Meals consumed per day

Conditions	Number of respondents	Percentage (%)
Once a day	60	15.0
Twice	116	29.0
Thrice a day	140	35.0
Four times	84	21.0
Total	**400**	**100**

The nutritional practices of the exercisers are summed up in table 4.7. The nutritional dietary acts of the exercisers were analyzed. Results from the study shows that the 156 (39%) of the respondents always eat breakfast. However, 20% failed to eat breakfast.

Table 4.7: Nutritional practices of exercisers

	Response	Frequency	Percentage (%)
How often Breakfast is eaten	Always	156	39
	Sometimes	164	41
	Never	80	20
How often Lunch is eaten	Always	274	68.5
	Sometimes	105	26.3
	Never	21	5.3
How often Supper is eaten	Always	359	89.9
	Sometimes	20	5.0
	Never	21	5.3
How often Snacks are eaten	Always	40	10
	Sometimes	200	50
	Never	160	40
Source of meals	Canned	46	11.5
	Self-prepared	145	36.3
	Vendors	209	52.3

Majority of the respondents (89.9%) of the respondents always eat their supper. Only 5.3% never ate lunch. However, 5% sometimes ate their supper. More than half

(68.5%) of the respondents ate their lunch. About 26.3% sometimes ate their lunch while only 5.3% never ate their lunch.

Results from the study also shows that 40% never ate snacks while 10% always ate snacks. It also indicates that about 50% sometimes ate their snacks. The main source of meals for the exercisers was from food vendors (52.3%). Only 36.3% prepared their own food and 11.5% relied on canned foods for meals. These are presented in table 7.

Table 4.8: Skipping meals

	Response	Frequency	Percentage (%)
How often meals are skipped	Very often	20	5.0
	Quite often	30	7.5
	Sometimes	190	47.5
	Never	160	40
Most likely skipped meals	Lunch	20	8.34
	Breakfast	220	91.66
Meals taken after exercise	Stew and Rice	93	23.3
	Banku with hot pepper	132	33.0
	Only water	26	6.5
	Light soup with Fufu	66	16.5
	Fish Okro Stew and Banku	83	20.8

Results from the study also showed that about 47.5% of the respondents sometimes skipped their meals. Only 5% very often skipped any of the meals whilst 7.5% quite often skipped meals. The most likely skipped meal was breakfast (91.66%). The type of meals taken after exercise was also analyzed. The meals taken after meals by the exercisers were also analyzed. Majority (33%) of the respondents took banku and hot pepper after exercise. This was followed by rice and stew (23.3%), banku with okra

stew and fish (20.8%). About 16.5% also ate fufu with light soup after exercise. Only 6.5% of the exercisers consumed water after exercise.

Table 4.9: Type of food eaten

	Response	Frequency	Percentage (%)
Natural fruit choice	Always	220	55.0
	Sometimes	100	25.0
	Hardly	80	20.0
Soft drink/carbonated drink	Always	100	25.0
	Sometimes	240	60.0
	Hardly	60	15.0
Koko/Rice porridge/Oatmeal	Always	280	70.0
	Sometimes	80	20.0
	Hardly	40	10.0
Fried egg	Always	223	55.8
	Sometimes	98	24.5
	Hardly	79	19.8
Boiled egg	Always	221	55.3
	Sometimes	141	35.3
	Hardly	38	9.5
Vegetable salad with mayonnaise / salad cream	Always	141	35.3
	Sometimes	221	55.3
	Hardly	38	9.5
Vegetable salad without mayonnaise / salad cream	Always	280	70.0
	Sometimes	101	35.3
	Hardly	19	4.8
Sugar bread	Always	214	53.5
	Sometimes	124	31.0
	Hardly	62	15.5
Brown/ wheat bread	Always	244	61.0
	Sometimes	137	34.3
	Hardly	19	4.8
Butter on bread	Always	230	57.5
	Sometimes	110	27.5
	Hardly	60	15
No spread (Bread only)	Always	210	52.5
	Sometimes	40	10
	Hardly	150	37.5
Groundnut paste on bread	Always	105	26.3
	Sometimes	275	68.8
	Hardly	20	5.0

The types of food eaten by the exercisers are presented in table 9. The study showed that 220 (55%) always consumed natural fruits. About 25% sometimes ate natural foods while 20% hardly consumed such foods. For soft drinks 25% always consumed it, 60% sometimes consumed it while 15% hardly consumed it. The exercisers also consumed koko, rice porridge and oatmeal. It was shown that majority (70%) always ate this food, 20% sometimes ate porridge and 10% hardly consumed this meal. The study also showed that 55.8% and 55.3% always ate fried and boiled eggs respectively. 19.8% and 9.5% of the respondents also hardly ate fried and boiled eggs respectively.

Majority of the respondents (70%) always ate vegetable salad without mayonnaise or salad cream. The study also showed that 35.3% of the respondents always ate vegetable salad with mayonnaise and salad cream. With regards to bread 61% always ate brown or wheat bread while 53.5% always ate sugar bread. About 57.5% always had butter on their bread whiles 52.5% also always had no spread. The study again showed that 68.8% sometimes ate bread with groundnut paste whiles 26.3% always ate bread with groundnut paste. Only 5% did not eat bread with groundnut paste.

Little improvements in body composition and lean muscle maintenance have a major effect on success in various games (example track, field, acrobatics, boxing, and running). The key factors are energy usage and energy consumption when changing body composition (Bounty et al., 2011). A study conducted by Duetz et al. (2000) that examined four groups of top female athletes argued that energy deficiencies correlated positively with body fat within the day, while excess energy within the day was

negatively related to the percentage of body fat (Deutz et al., 2000). The relevant findings of that study were that in the event that they had to preserve an optimal body composition for competitions, athletes could not avoid feeding or skip meals. A rapid rise in dietary fat, fat gain, and mid-overnight leptin increase can be carried out by skipping even one meal a day (Chapelot et al., 2006). A study by Benardot et al. (2005) found that when 60 male and female school athletes were given a 250-calorie snack for around 14 days after breakfast, lunch and dinner (adding snacks up to 750 calories), a lot of fat (-1.03 percent) was lost and lean body mass (+1.2kg) gained compared to a non-caloric fake placebo community.

A rapid rise in mid-overnight leptin, fat gain, and dietary fat increase can be caused by missing even one meal per day (Chapelot et al., 2006). A research by Benardot et al. (2005) found that a large amount of fat (-1.03 percent) was lost and lean body mass (+1.2 kg) was gained when a 250-calorie snack was offered to 60 male and female college athletes for two weeks after breakfast, lunch and dinner (totaling 750 calories in snacks) compared to a non-caloric placebo snack community. In addition, in those who ate the 250-calorie snack, a substantial improvement in anaerobic capacity and energy production was observed. However, no major differences were found in those who ate a non-caloric placebo. They had a non-significant increase in overall daily caloric intake of 128 kcals when individuals ate 750 kcals daily in the form of extra snacks; in other words, they consumed less calories per meal. When snacks were excluded, the values obtained by fat loss and lean body mass went back to baseline levels after 4 weeks. Such findings show that missing meals has a negative impact of

39 on the composition of the body and can impede efficiency. Furthermore, a negative energy balance will lead to a substantial decrease in anaerobic energy and energy efficiency (Bernardot et al., 2005).

4.5 Effect of individuals dietary practices on their actual exercise capacities

The impacts of diet on physical exercise are summed up in table 4.10. All respondents concurred that diet affects physical exercise.

Table 4.10: Effect of diet on physical workout

	Mean	Std. Deviation
Helps improve the memory and thinking	1.7000	0.78200
Dietary practices help reduce heart diseases and slows the risk of developing diabetes, high blood pressure, colon and other diseases.	1.6500	0.79314
Dietary practices help control weight, build and maintain healthy bones, muscles and joints.	1.6500	0.85400
Dietary practices is associated with significant reductions in the incidence and mortality of cardiovascular disease.	1.6500	0.57299
It can improve cardio-respiratory fitness levels of sedentary overweight individuals	1.6500	0.72720
It helps improve balance, agility, coordination, reaction time and speed	1.5500	0.66979

(KEY: Agree: 1-1.9, Neutral 2-2.9, Disagree: 3-3.9). **Source: field survey, 2020**

Results from the examination demonstrated that there is an improvement in balance, agility, coordination, response time and speed (1.55±0.66). The respondents

additionally concurred that there was an improvement in cardio respiratory wellness levels, decrease in mortality, build and maintain bones and decrease in diabetes (1.65). Improvement in memory and thinking were similarly referred to as impacts of diet on exercise (1.700±0.78).

Commitment in exercise is known to add to the developmental results for a healthy way of life, where people find out about physical, social and psychological abilities (Choi *et al*., 2014). All the more extensively, commitment in physical work is equally perceived to contribute a variety of positive results, explicitly; physical and psychological fitness, social wellbeing, intellectual and scholastic performance (Bailey *et al*., 2012). As indicated by WHO (2006), there is proof to recommend that improved nutrition upgrades learning capacity prompting better scholastic performance. Giving exercisers balanced and nutritious food all through life strengthens lifelong dietary patterns hence adding to their general fitness and assisting them with getting a healthy and satisfying life later on. A lot of research has been done on the impacts of physical work on wellbeing behavior and healthy way of life (Casey *et al*., 2009; Goodwin, 2006; Donaldson and Finch, 2012; Lioyd, 2005). Physical work out was related with a diminished probability of despondency in a survey of 9,938 school age children. Male young people were bound to take an interest in physical work out and more averse to feel discouraged (Goodwin, 2006). In a population sample of 19,288 adolescent and grown-up twins and their families, exercisers were revealed on average to be less anxious, discouraged and psychotic (DeMoor *et al*., 2006). People who have encountered coronary heart failure (CHF) go through an emotional decrease in their

personal satisfaction, which regularly causes them nervousness and misery. Clinical preliminaries involving these patients have noticed checked upgrades in exercise limit. The proof proposes that exercise can assume a significant part in improving capacity and personal satisfaction of patients with CHF (Lloyd-Williams and Mair, 2005). These outcomes are in consent to the after effects of the current research.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

The study concludes that stomach trimming, retaining current weight, meeting companions, sustaining a healthy life as well as releasing stress and support by companions are factors influencing people who exercise on the Aburi Ridge.

Results from the study concludes that more than half of the exercisers on the Aburi Ridge had no knowledge on nutrition related topics even though some of them understood the relevance of carbohydrates, proteins and green leafy vegetables and also had information on the work of iron and minerals in their diet.

The study again concludes that the exercisers consume lunch, supper and snacks but skip their breakfast. Eggs, vegetable salad and butter were also part of the diet of the exercisers.

The study concludes that there is an improvement in balance, agility, coordination, reaction time and speed. The respondents also agreed that there was an improvement in cardio respiratory fitness levels, reduction in mortality, build and maintain bones and reduction in diabetes. Improvement in memory and thinking were also cited as effects of diet on exercise.

5.2 Recommendations

Based on the above findings, the researcher makes the following proposals;

It is recommended that studies be conducted to find the effect of healthy nutrition education on health of exercisers.

The effect of nutrition education among secondary and university students in Ghana must also be researched.

Further studies must be conducted on the exercise and nutrition patterns of persons above 60 years in Ghana.

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APPENDIX 1

UNIVERSITY OF EDUCATION, WINNEBA – KUMASI

DEPARTMENT OF CATERING AND HOSPITALITY

QUESTIONNAIRE

The researcher is a student from University of Education, Winneba - Kumasi and this questionnaire is to enable me collect necessary information to complete my research on the topic assessing the nutritional knowledge and practices of keep fit members on the Aburi Ridge. This questionnaire consists of five (5) sections and should take about 10-15 minutes to answer. In each question choose the alternative that best reflects your own opinion or experiences. I will be pleased if you will complete this questionnaire. Your response will be treated with the utmost anonymity and confidentiality. Thank you for your cooperation.

Write or tick (√) the appropriate response to each of the question/statement.

Section A: Demographic Data

1. Sex: Male ☐ Female ☐

2. Age range: Below 20 ☐ 21-30 ☐ 31-40 ☐ 41-50 ☐ 51-60 ☐ Above 60 ☐

3. Number of years exercising: below 2 years ☐ 3-5 years ☐ 6-8 years ☐

4. Highest Educational Qualification: Primary S☐ndary Tertia☐ Others ☐ (specify)….

5. Income Level: Very Low (below GHS250) Low (GHS300-GHS1000) Middle (GHS 1000-GHS2500) High (GHS 3000-7000) Very High (Above GHS 8000)

6. Weight:

7. Height:

8. Do you have any of the following underlining conditions?

Diabetes ☐ Coronary heart disease ☐ Hypertension ☐ Obesity ☐

Others ……

B. Factors Influencing Individuals to Exercise

Please indicate your interaction with a tick [√]

Strongly Agree (SA) Agree (A) Neutral (N) Disagree (D) Strongly Disagree (SD)

Statement	**SA**	**A**	**N**	**D**	**SD**
I exercise because I want to remain healthy					
Positive feelings after exercise causes people to exercise more					
I am encouraged to exercise when I see my friends exercise					
I exercise more whenever I see myself as overweight					
I exercise because I want to enjoy myself					
I exercise to keep my stomach trimmed					
I exercise to maintain my current weight					
I exercise when I want to meet my friends					
I exercise if I have not been eating healthy					
I exercise to ease stress					
I exercise to look better					
I generally have a sedentary life style					

C. Nutritional Knowledge of Exercisers

Please indicate your interaction with a tick [√]

True (T) False (F) Do Not Know (DNK)

Statement	**T**	**F**	**DNK**
Honey contains fewer calories than an equal amount of sugar			
Eggs and legumes are examples of protein sources other than meat			
Protein is the primary source of muscular energy			
Protein is not stored in the body; therefore, it needs to be consumed every day.			
All red meat is high in saturated fat			
Carrots are good source of Vitamin A			
Milk is a good supplier of calcium for all age groups.			
Adequate calcium intake is necessary for female athletes of all ages to prevent osteoporosis.			
Carbonated beverages can negatively affect calcium metabolism.			
Cashews, whole grains, beans and leafy vegetables are good sources of iron			
Strict vegetarians are at a higher risk for iron deficiency.			
Due to menstruation, females need more iron in their diets than men			

A lack of iron in the diet can result in fatigue, injury, and illness.			
Two servings of vegetables per day fulfills recommended dietary allowances			
Green, leafy, and yellow vegetables are important because they help ensure the Vitamin A requirement for the individual.			
Fiber in the diet may help to decrease constipation, decrease blood cholesterol levels, and prevent cancers			
A physically fit person eating a nutritionally adequate diet can improve her performance by consuming greater amounts of nutrients.			
Dehydration can impair physical performance			

D. Nutritional and Dietary Practices of Exercisers

1. How many times do you usually eat main meals in a day?
a. Once a day ☐ b. Twice a da ☐ c.Thrice a day ☐ d. Four or more times a day ☐

Please indicate your interaction by a tick [√]

During a normal week, how often do you eat the following?	Tick as appropriate		
	Always/often	Sometimes	Never/Rarely
Breakfast			
Lunch			
Supper			
Snacks			

2. What is the main source of the meals you mostly consume?

Prepare it my self ☐ Purchase from vendors/restaurant ☐ Canned/pre-packed ☐ foods

3. How often do you skip meals?

Very often ☐ Quite often ☐ Sometimes ☐ Never ☐

4. When you skip meals, which meal are you most likely to skip?

Breakfast ☐ Lunch ☐ Supper ☐ Not applicable ☐

5. Why do you skip meals?

……
……
……
……
……
……
……

6. What meal do you take immediately after exercising?

……
……
……
……

E: Food Items Consumed

Please indicate your interaction with a tick [√] on the food you consume

Food Items	Always	Most at Times	Sometimes	Hardly	Never
Beverage					
Natural fruit choice					
Soft drink/carbonated drink					
Koko/rice porridge/oatmeal etc					
Eggs					
Fried egg					

Boiled egg					
Vegetable salad preparation					
Vegetable salad with mayonnaise/salad cream					
Vegetable salad without mayonnaise/salad cream					
Type of Bread					
Sugar Bread					
Brown/wheat bread					
Spread on Bread					
Groundnut paste on bread					
Butter on bread					
No spread(bread only)					

F. Effect of Exercisers Dietary Practices on their Physical Workout Abilities

Please indicate your interaction with a tick [√] on how your dietary practices affect your physical activities.

Strongly Agree (SA) Agree (A) Neutral (N) Disagree (D) Strongly Disagree (SD)

Statement	**SA**	**A**	**N**	**D**	**SD**
Sharper memory and thinking					
Dietary practices enhance team members performance					
Higher self-esteem					
Better sleep					
More energy					
Stronger resilience					
It helps to maintain a healthy body to prevent obesity and health problems					

INTERVIEW GUIDE

1. Gender

   a) Male ☐

   b) Female ☐

2. Age

   18 – 25 ☐ 26 – 35 ☐ 36 – 45 ☐

   46 – 55 ☐ 56 – 60 ☐ 60 and above ☐

3. How often do you counsel keep fit members on nutrition?

   Always ☐ Sometimes ☐ Never ☐

4. Is it important to take dietary supplements after every exercise, why?

   ……

   ……

   ……

   Will you recommend nutritional practices to exercisers?

   ……

   ……

   ……

5. Would you prefer to spend more time on nutrition counseling than exercising?

   ……

   ……

   Would you be willing to attend free nutrition workshops as part of your own personal continuing education?

   ……

   ……

Thank you.