Hiking: Importance Of Outdoor Activities

Background of the Study

Health is wealth, is the famous saying which refers to the importance of health to the people. It is very evident in human lives. Keeping a good health, makes people always happy and gives that feeling of complete physical, mental, social and intellectual well-being. A good health can prevent diseases and disorders. A good health keeps people away from the mental and physical disabilities such as malaria, dengue, diabetes, heart diseases and other communicable diseases. In order to maintain good health people, need balance food, regular health check-up, rest and sleep, regular exercise that includes outdoor activities.

Outdoor activities benefits individual in improving one's physical health immensely. Spending multiple hours on these outdoor activities give the body extreme work out for exercise is not enough to be healthy.

There are many kinds of outdoor activities that includes hiking, camping, hunting, fishing, canoeing, kayaking, rafting, sailing, motor boating, Biking, rock climbing, horseback riding, skiing, and restoration and conservation volunteering. The most popular outdoor activities are running, biking, camping, fishing, and hiking.

Hiking as one of the most popular outdoor activities worldwide eventually takes people near the beauty of nature. Hiking is a long walk or is a walking tour through the top of the hill to see the beauty of the place surrounding it. It is not just a form of exercise, but rather a pleasure especially for those who have tried it for the first time. Hiking is more fun and exciting when doing it in a mountainous region and is thrilling rather than in the plains. The strength that hikers feel while climbing up to the top of the mountain and the adrenaline rush that hikers feel when climbing down the slope makes hiking one of the healthiest sports.

Due to the fast pace of today's society, Filipino became more interested in different outdoor activities especially hiking and it affects the local demand for imported products such as outdoor tools and equipment and also one of the most important item to bring on this kind of activities is food specifically water, breads, dehydrated eggs, energy bars which consist mainly of protein and essential amino acids.

Protein is a macronutrient that is essential in building muscle mass commonly found in animal products and other source such as nuts and legumes. Protein makes up about 15 percent of the person's body weight. Amino acids are the building blocks of protein amino such as 9 essential amino acids Histidine, Isoleucine, Leucine, Lysine, Methionine, Phenylalanine, Threonine, Tryptophan, and Valine. Protein intake is necessary to prevent body malfunction such as muscle break down, slow body muscle recovery, weakness of the muscle, fatigue and also to improve body performance. The presence of 11 essential amino acids are important to maintain proper body function. This kind of activities require excessive physical effort and energy requirement. Therefore, the body must be supported with proper vitamins, minerals and nutrients to the duration of these intensive outdoor activities.

In intensive duration of climbing, hiking or trekking, it is important to fuel up with easy to digest carbohydrates consist of essential nutrients need of the body including a minimum 20 grams of protein within 30 minutes of climbing to ensure that there are enough amino acids in the blood stream to prevent muscle breakdown and improve strength.

More so, the hikers tend to bring their own foods which are commonly rich in protein to sustain their strength while doing the hike. Examples of these foods are eggs, fish, milk and other foods rich in protein. These types of foods can be easily spoiled and may cause more harm to the hikers. Also, if the hikers just decide to buy in the nearby store, foods are too pricy and may consume more of their money during the hiking. To address spoilage of food of mountain climbers, Hikers decided to bring protein bars instead of carrying heavy cooked meals in their bag packs. Protein bar is a good example of comfortable food pack with protein and nutrients to sustain all over performance while in intensive hiking.

Protein bar is an easy-to-carry food that is very nutritious. But still, the problem in protein bars is that it stays to be pricy.

Furthermore, one of the most common problems for beginners while mountaineering is the overweight bag pack. Large portion of the storage is occupied by food supply therefore, it adds weight to the total weight of the person carrying it.

Although nowadays, there are a lot of readily available protein bars in the market, all of these items are imported from different foreign countries using foreign ingredients and limited options for locally made protein bar.

Thus, the researchers would like to introduce and develop a new variety of protein bar by using available local raw materials in reasonable market price for Filipino mountaineers.

Objectives of the Study

The general objective of the study is to develop protein bar from locally available materials for hikers and sports enthusiast.

Specifically, the study aims to:

1. Process mung bean through cabinet drying.
2. Formulate a standard recipe of protein bar.
3. Analyze the laboratory tests such as proximate, nutritional and microbial analyses and shelf-life testing.
4. Determine the appropriate packaging and labeling of the product.
5. Assess the acceptability of the product using 7-point hedonic scale rating.

Scope and Limitations of the Study

The acceptability of local protein bar made of mung bean, peanuts, pinipig, pumpkin seeds, sesame seeds and egg powder are the focus of the study. The study aims to use local raw materials which are available and abundant here in the Philippines for good access of local and foreign hikers. It is also an advantage to promote local goods which can be more beneficial and

more affordable compare to the existing protein bar in the market.

The formulation and preparation of the product will undergo processing to achieve a healthy protein. Trials will be conducted further until a good quality product will be attained. This will be conducted in the first and second semester of school Year 2018-2019 at the Technological University of the Philippines, College of Industrial Technology under Food and Apparel Technology Department and different places which the researchers will be implemented and evaluated.

To prove the general acceptability of the product, the researchers will be subjecting the product through different tests such as: proximate analysis, to determine the value of macronutrients such as protein, fat, moisture, carbohydrates, minerals and vitamins through nutritional analysis, shelf-life testing and microbial analysis at the Adamson University Technology Research and Development Center (AUTRDC), San Marcelino, Ermita, Manila. In addition, the product will undergo sensory evaluation in terms of the product's attributes such as appearance, texture, aroma, taste, and general acceptability through 7-point hedonic rating scale, 10 professional hikers, 10 athletes and 10 food experts. The finished product will use flexible aluminum packaging with mandatory requirement. The result will be interpreted using statistical treatment.

Significance of the Study

The study is intended to promote and introduce locally made protein bars for local and foreign hikers at affordable price. It is also intended to help the hikers in decreasing the weight of their baggage upon hiking due to excessive and lack of protein supply foods. It will purposely help local and foreign hikers in consumption of low-cost food that contains more protein.

Moreover, the study will help Filipino agricultural sectors in introducing local goods and at the same time promote protein bar as a good substitute to the high cost present protein bars.

Conceptual Framework

This chapter presents the review of related literature and studies underlying the framework of the study. It includes the conceptual model of the study, the operational definition of terms and the evaluation system.

Review of Related Literature and Studies

Recreational activities are consisting of activities we do physically, this are the outdoor activities that some people done on their free time which can give them the feeling of relaxation, pleasure, and satisfaction. This activity can also give them the feeling of joy and entertainment.

Hiking is walking in nature as a recreational activity, it is basic to many sporting activities and is also widely recommended and practiced form of physical training. It is the ability to walk considerable distances without becoming overtired (an ability generally acquired through practice) also enhances the enjoyment of such other activities as bird-watching, nature walks, field trips of all sorts, and even sightseeing. Especially among those with sedentary occupations, hiking is a natural exercise that promotes physical fitness, is economical and convenient, and requires no special equipment, because hikers can walk as far as they want,

there is no physical strain unless they walk among hills or mountains. For example, hiking constitutes a large part of mountain climbing; experienced mountaineers know that they must train themselves for the long, arduous hikes over the lower trails and across glaciers and snowfields. Backpack camping, hunting, cross-country skiing and snowshoeing, and orienteering are other sports and sporting activities in which hiking is important. (Encyclopædia Britannica, 2015)

Figure 1. Example of Hiking

Source: https://www.travelwyoming.com

The word hiking is common in the English language but can also be referred in different ways such as walking, trekking, rambling, strolling and bushwalking (Nordbo, Engilbertsson, & Vale, 2014). The idea of undertaking a walk through the countryside for pleasure developed in the 18th century in Europe in the awakening of the romantic movement and changing attitudes to landscape and nature (Ween & Abram, 2012). Today, hiking is defined as an appreciative recreational activity in contrast to hunting and fishing which are defined as consumptive activities (Dunlap & Heffernan, 1975). Physical activities during vacation are becoming more and more popular (Douglas & Derrett, 2001), and several rural communities promote nature in developing attractive activities in order to encourage tourists to visit their destination. (Figure 1.)

Internationally, hiking is one of the most well-known outdoor activities, wherein different association of mountaineers from different countries, offers guides and trainings with their mountain professionals. ‘Erciyes Tigers’ (Figure 2) are a group of mountaineers who do this sport regularly. They have been climbing Mount Erciyes (3500 m, in Kayseri, Turkey) once a week at least for ten years.

Figure 2. Mt. Erciyes

Source: http://www.snow-forecast.com

Like the other countries, the Philippines is one of the countries which have the best hiking destination. Whether a pro or a beginner, who would not love to try this sport. People got lots of mountains to trek here. Some mountains in the Philippines are too risky to climb which is why people will need a guide who knows the ways through the mountain they want to go to. Make sure that they are legitimate guides for hikers’ own safety.

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Figure 3. Mt. Palay-palay

Source: http://www.pinoymountaineer.com

Figure 3 shows Pico de loro or Mt. Palay-palay in Maragondon, Cavite and Nasugbu, Batangas.

Due to its proximity to Manila, Mt. Palay-Palay, or more commonly known as Pico de Loro, is one of the top choices for mountain climbing enthusiasts, and because it is considered as a minor climb, it is also ideal for those who just started, or planning to try mountain climbing. (biyahengjuansided.com)

Figure 4. Mt. Balagbag

Source: http://1.bp.blogspot.com

Figure 4 shows the image of Mt. Balagbag in Rodriguez, Rizal. Mt. Balagbag has an elevation of approximately 777 metres above sea level and encompasses the provinces of Bulacan and Rizal. Its major jump-off point is located in Sitio Balagbag in Rodriguez, Rizal. It is now a well-protected mountain with locals working towards its reforestation because of its history being a site of illegal logging. (trizilla.ph)

Figure 5. Mt. Daguldol

Source: http://www.pinoymountaineer.com

Mt. Daguldol is in San Juan, Batangas it is also one of the famous hiking destination in the Philippines. (Figure 5). The Philippines hiking destination includes Pico de Loro at Maragondon Cavite, Nasugbu Batangas, Mt. Balagbag at Rodriguez Rizal and Mt. Daguldol at San Juan Batangas. (The mountaineering Federation of the Philippines. MFPI 2018).

During a multiday hike the hikers will need ample calories and water to fight fatigue and headaches, stick to lightweight and low-bulk backpacking food as much as possible, especially on long journeys. Consider repackaging foods into re-sealable plastic bags to minimize bulk and garbage, be sure to clearly label the baggies and include cooking instructions. The hikers should bring foods that is rich in carbohydrates and proteins. Intelligent quick snacks such as nuts and dried fruits provide more stable energy for your muscle. The hikers can also bring perishable foods, such as sandwiches, just be sure you have a cold source (such as an ice pack) to keep foods properly chilled to below 40°F. The more you stash in a backpack, the harder it is to hike, so opt mainly for non-perishable foods that are relatively lightweight and nutrient dense, such as Dried or freeze-dried fruits and veggies, chews or gels, Ready-made tuna salad pouches, Whole-grain tortillas, Poultry, salmon or meat jerky, Trail mix, Nuts, seeds, nut-based bars or nut butter packs, energy bars, Granola or granola bars. (Academy of Nutrition and Dietetics, 2017)

Hiking can deplete much needed energy in the body even a simple hike can drain your body of much needed energy. However, once all of that energy is depleted, you can start to feel dizzy, sore, and out of energy. Energy snacks and bar are recommended for both hikers and campers. Not only will they help give you that extra boost that you need to finish a hike, but they also taste great, and are healthier alternatives than other foods or snacks that you might take with you. It also replaces those lost calories in your body. In fact, a single bar will generally be loaded with a considerable amount of protein and carbohydrates, both of which are important energy sources, and can provide you with hours of sustained energy. (Grab1 Nutrition bars, 2014)

Body proteins are constantly and simultaneously being made (synthesized) and degraded. This

constant turnover provides for a mechanism of steady maintenance of potentially damaged and dysfunctional proteins. In skeletal muscle protein turnover is also ongoing and provides the basis for skeletal muscle's plasticity in response to the degree of impose high-intensity loading (resistance exercise). A schematic representation of skeletal muscle protein turnover and other muscle-specific metabolic fates of amino acids. The extent to which the amino acids, liberated because of muscle proteolysis, are reused is extensive. This intracellular recycling, however, is not 100% efficient and amino acids are lost from skeletal muscle, often in appreciable quantities. The amino acids are lost from skeletal muscle have numerous fates, but generally speaking are oxidized or converted to glucose via gluconeogenesis, with the amino nitrogen yielding urea. Obviously, the lack of efficiency in reusing amino acids from ptoteolysis means that we have a daily requirement to ingest protein. (S.M. Phillips, 2004).