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Nutrition and Chronic Diseases among Makkah Visitors

Omar B Ahmed [α], Tariq A Al Malki [σ], Arwa AAl Malki [ρ] & Anas S Dablool [ω]

Abstract- Chronic conditions are thought to affect ahigh number of the general population of pilgrims and Umrah visitors. With a little planning and preparation, people with chronic illnesses should have safe and enjoyable Umrah rituals. The study aimed to characterize the association between chronic diseases and dietary regimens among Umrah visitors. Data collection questionnaire designed for recording of the most expected diseases among Umrah visitors. The results showed that out of 401 Umrah visitors suffering from chronic diseases, 80.8% of them were on medication. The most disease was diabetes mellitus (41.4%) followed by blood hypertension (31.9%), chronic respiratory disease (18.5%) and chronic heart diseases (6.5%). Also, 44.9% of them were doing Umrah for the second time of their life, and 59.6 % of the patients had a special food program. Statistically, there was a significant association between age and the type of chronic disease (p-value <0.05), while there was no significant difference between the existing chronic disease in male and female and the type of the food taken by Umrah visitors (p-value > 0.05). It was concluded that those with chronic diseases should obtain a great deal of information and advice from a travel specialist doctor, and it is important that healthy foods to be promoted at the visitors food services centers.

Keywords: makkah, umrah visitors, travelers, chronic diseases, nutrition.

I. Introduction

Chronic disease is a disease that persists for three months or more [1]. Generally, there are slow in progression and long in duration. There are many types of chronic diseases such as; diabetes, cardiovascular such as heart attacks and stroke, cancers diseases in addition to the chronic respiratory condition such as chronic obstructed pulmonary disease (COPD) and asthma diseases [2]. Generally, vaccines or medication cannot prevent chronic diseases. Furthermore, chronic diseases cannot communicate from person to person [3]. Travel medicine is a specialty that needs highly specialized persons in travel-related diseases, In addition to up-to-date knowledge of the worldwide epidemiology of diseases or conditions [4]. Worldwide, rates of international travel are growing continuously, about 1 billion travelers worldwide crossing international boundaries yearly [5]. In Saudi Arabia, the number of pilgrims in 2018 attracted more than 3 million pilgrims from 184 countries [6]. Increasing globalization in travel leads to increase the risk of travel-related illnesses and progress pre-existing health problems such as chronic disease. A traveler's health depends on providing pre-travel counseling on appropriate interventions to promote health and prevent adverse health outcomes during travel [7, 8]. Unfortunately, a small number of travelers will seek pre-travel health advice. Lack of awareness among travelers is not being insured under health plans. Furthermore, those travelers who are consulting practitioners who are not eligible trained to recommend patients on travel [9, 10, 11, 12]. Some studies suggest that pre-travel care should be achieved by a certificated practitioners in the field of travel medicine (i.e., provided by local or international society of travel medicine) [13]. Progressive of chronic disease may kill three in five people worldwide and then becomes a leading cause of mortality in the world by representing 60% of all deaths. Moreover, it causes great socioeconomic problems within all countries, particularly developing nations [2, 14]. In developed countries such as United State of America (USA), 88% of Americans over 65 years have at least one chronic disease [1]. On the other hand, poor diet is a contributor cause to chronic diseases and possibly the death in USA [15]. Nutritional treatment in early stages of chronic kidney disease could prolong life [16]. Malnutrition and protein-energy wasting has been demonstrated to be strongly related to mortality in chronic kidney disease patients [17] [18]. During traveling, chronic disease care has become more complicated because easily access to highly processed foods and low consumption of fresh food [19]. The increasing physical activity and reducing intakes of highly rich foods with drinks in sugars can prevent unhealthy weight gain. More recent studies have not shown much improvement in the low prevalence of healthy lifestyle practices [20, 21]. Moreover, studies have shown that clinicians' knowledge and counseling about healthy diets are lacking [22]. That is may be due to difficulties for diabetic patients to find the recommended nutrient intakes described within dietary guidelines. The efforts of individuals and their healthcare providers, strategies to increase the nutritional quality of prepared foods could gain improved widespread benefits [23] [24]. Finally, CDC (Centers for Disease

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Control and Prevention) provide health Information for International Travel commonly called the Yellow Book published every two years as a reference for health professionals providing care to international travelers [25]. The study aimed to characterize the association between chronic diseases and dietary regimens among Umrah visitors during the first Umrah season in 1439.

II. Materials and Methods

The study conducted at Holy City of Makkah Al Mukarramah, during Umrah season that at the first months of 1439 (1st September till 31th of December 2017). Inclusion criteria were simple random 401 travelers (Umrah visitors) using data collection questionnaire designed for recording of the most expected chronic diseases among Umrah visitors, while the exclusion criteria were non-Umrah visitors. Socio-demographic characteristics were age, level of education, job, marital status, education, job, socio economic status, Medical history and nutritional survey (Weather participant take white or brown rice and bread, low or whole dairy products, low-fat meat or chicken, low-sugar or regular beverage, fresh or canned salty food, well-cooked or raw food). Data entry and statistical analysis were done using SPSS 21.0 program.

III. Results and Discussion

Travel to Makkah can be relaxing and rewarding, but people with chronic may face unique challenges when they travel overseas, but sometimes the physical demands of travel can be stressful. The present study outlined most common chronic diseases and their dietary regimens during the first Umrah season in 1439 (2017). Four hundred and one were the Umrah visitors who declared that they had chronic diseases, most of them (65.38%) were male (Figure 1) while (65.38%) married (Figure 2). About 60.6% of the patients were from the age group 21-40 years old; none were more than 80 years (Figure 3). The present study showed that most of the Umrah visitors were with educational secondary school level (62.1%) while 37.4% of them were of university educational level of or higher (Figure 4). The commonest nationality of Umrah visitors with chronic diseases was Saudi (21.7%), followed by Bangladesh (19.7%) and Egyptian (14.4%) (Figure 5). The results of the present study were closed to previous studies (28) which showed Saudi citizens represented 42.5% of the total patients where the incidence in Saudi patients was more than that in other nationalities. The present study showed that the commonest chronic disease encountered among Umrah visitors was Diabetes Mellitus (41.4%), followed by blood hypertension (31.9%), chronic respiratory disease (18.5%) and chronic heart disease (6.5%) inflammatory bowel syndrome (1%) (Figure 6).

Another study reported that residents with a history of migration with a higher prevalence of chronic diseases such as cardiac diseases, hypertension, and diabetes (26). Statistically, the present study showed a significant association between age and the type of chronic disease (p-value <0.05), also there was no significant association between the chronic diseases and the gender (p-value > 0.05). Diabetes leads to the increased risk of many diseases such as cardiovascular diseases, kidney disease, stroke, and infections. Cardiovascular diseases are major etiologic morbidity factors in the world due to unbalanced diets and physical inactivity. More than half of international travelers to developing countries become ill during their trip, hence a small number looks for medical care for a travel-associated illness during their travel (27). So any chronic case, such as diabetes, blood pressure or kidney disease may add challenges to the traveler. Planning is the key to a successful Umrah visit trip. Bone disease is a problem of older people. Adequate intakes of calcium and vitamin D in patients with high osteoporosis rates may help to reduce fracture risk. Also, the sun exposure and physical activity may strengthen bones and muscles. The highest frequency of Umrah visits (44.9%) among Umrah visitors was for the second time per year, and 24.4% had an average annual visit frequency of 3 times (Figure 7). In the present study 80.8% of the patients on medication (Figure 8). In the present study (39.9%) the Umrah visitors traveled to Makkah without consulting a specialist doctor. Also 31.7% of them used to make regular medical check only once time before traveling while 28.4% of them used to make a medical check for two times (Figure 9). Most participants (72.1%) used to do periodic laboratory and measurement tests (Figure10). Each Umrah visitor needs to schedule an appointment with a travel specialist doctor as soon as possible and may ask for additional health needs, travel requirements. Also, he may be asked to do medical investigation and to bring extra medication packed in visitors carry-on luggage. Medications purchased abroad may not meet Saudi standards. Also, the study showed, most of the visitors were on medication. Hence, it is very important to consider bringing copies of visitors prescriptions, wearing a medical alert bracelet and a first aid kit packed with over the counter medications approved by the physician. Also, 59.6% of the patients had a diet food program (Figure 11). Also, 78.3% used only white bread/rice for eating (Figure 12) and while 71.1% and 28.9% had chicken/ meat with regular and low fat in their meals, respectively (Figure 13), also 62.3% and 37.7% of them were had regular and low fat a dairy product within their meals, respectively (Figure 14) and71.1% and 28.9% of them were had regular and low sugar beverage product, respectively (Figure 15). The rapidly increasing burden of chronic diseases is a determinant of global public health. For healthy diets, healthy foods should be promoted at Umrah visitors food services. For diabetic

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patients, overweight and obesity and physical inactivity may raise the rates of type 2 diabetes. During traveling, increased physical activity and maintaining a healthy weight can prevent and help the treatment of diabetes. Risk of chronic diseases such as heart disease and stroke is reduced by eating low saturated fats, enough amounts of fruits and vegetables and low-salt diets. Also it is very important to practice physical activity and controlling weight. Reduction of salt intake helps to reduce blood pressure and consequently will limit the cardiovascular diseases. Dietary modifications are common treatment plans for patients with different chronic diseases. It was supposed that the patient who read labels on the food packages used less energy, low saturated fat, carbohydrates, and sugar, and more fibers than those who did not (29). Such findings reflect the value of dietary counseling in chronic disease management (29). The present study showed no significant association between the chronic diseases and the type of food taken by Umrah visitors (p-value > 0.05). The study concluded that chronic diseases among Umrah visitors are variable. Also, it could be recommended that those with chronic disease should obtain a great deal of information and advice from a travel specialist doctor and may need to carry extra medication. Also, healthy foods should be promoted at Umrah visitor's food services.

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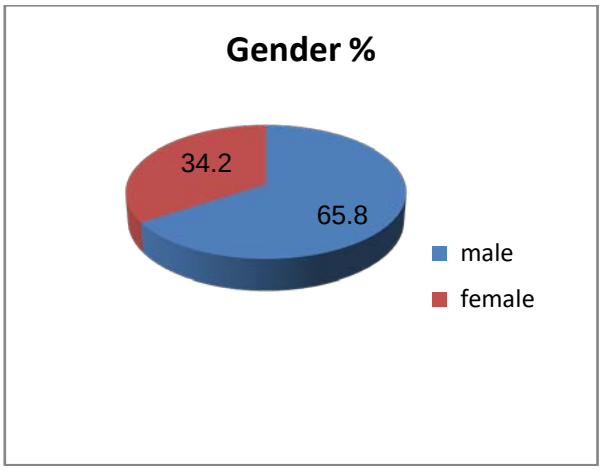


Figure 1: Frequency of gender

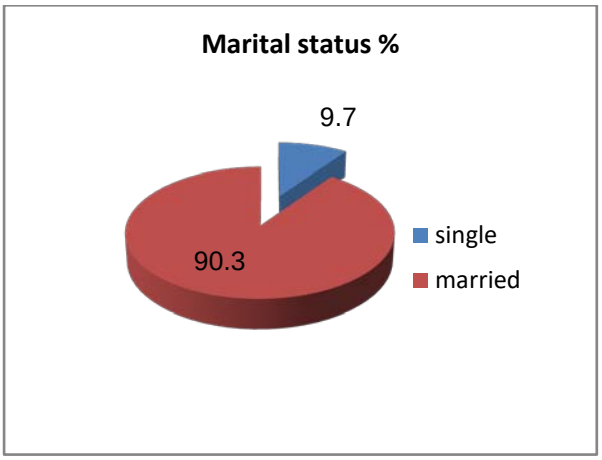


Figure 2: Frequency of married patients

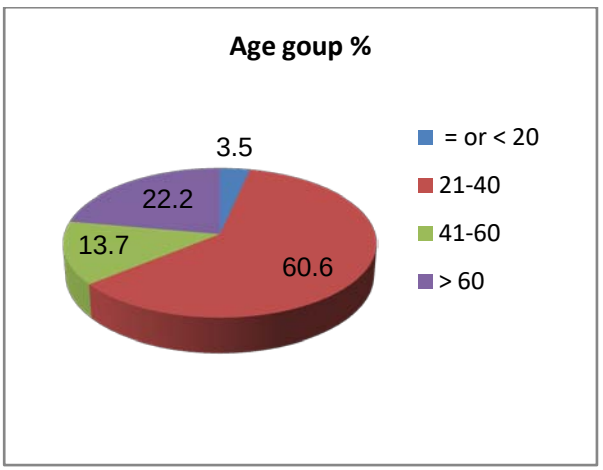


Figure 3

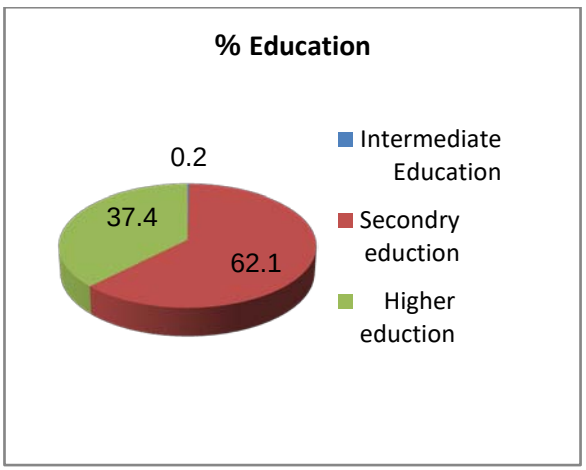


Figure 4

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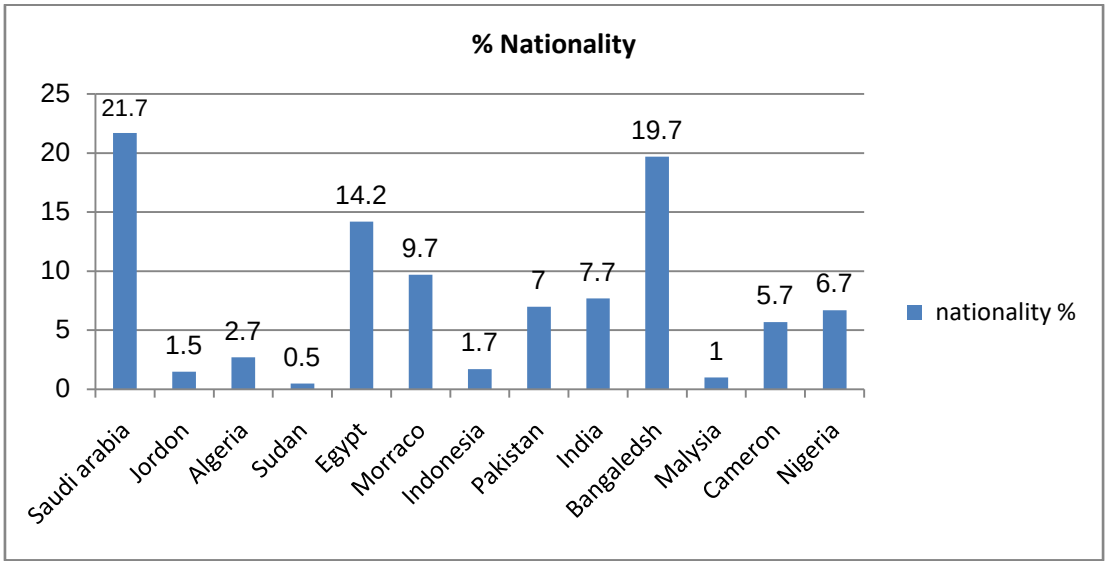


Figure 5: Distribution of chronic diseases according to nationality

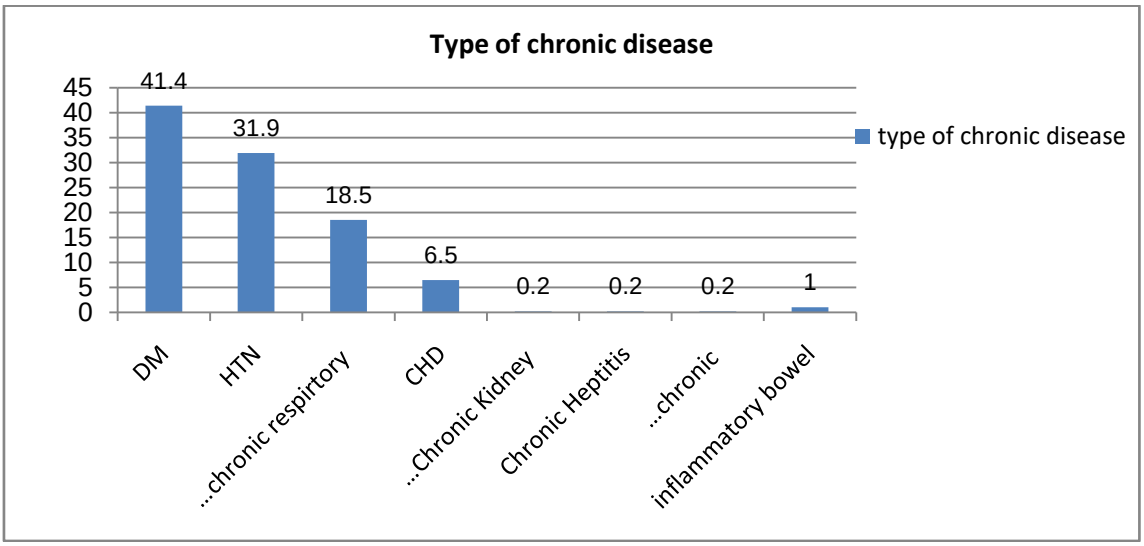


Figure 6: Type of chronic disease %

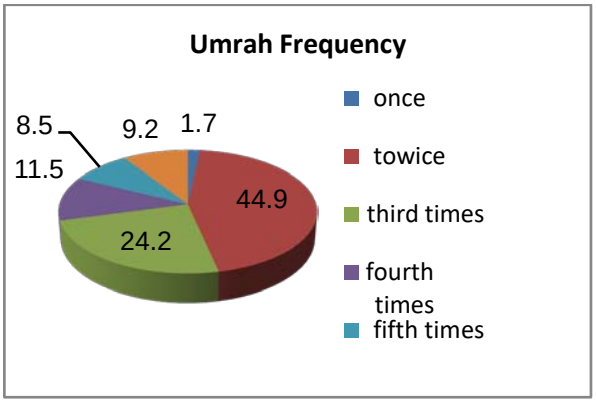


Figure 7: Umrah Frequency %

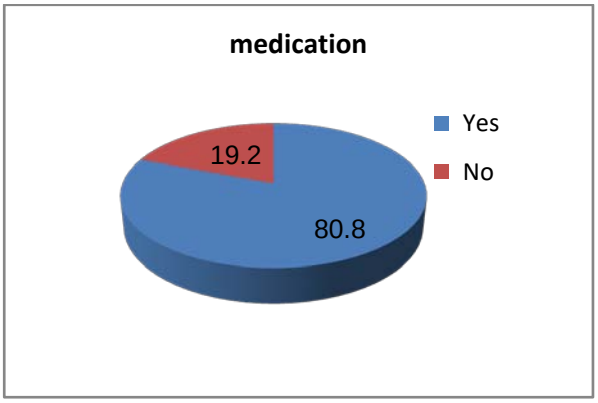


Figure 8: Medication %

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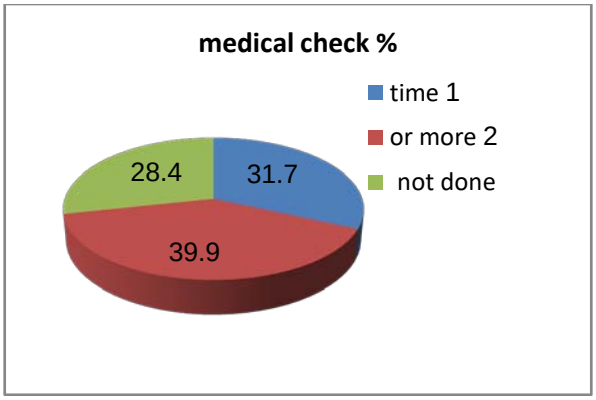


Figure 9: Frequency of medical check

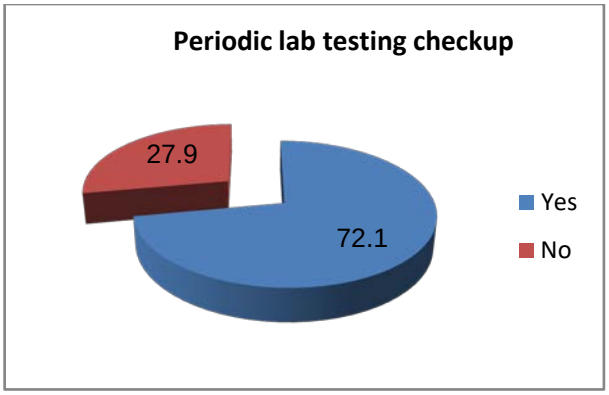


Figure 10: Periodic lab testing checkup %

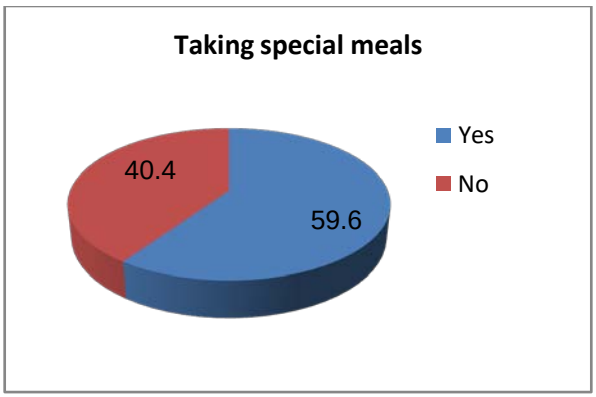


Figure 11: Taking special meals %

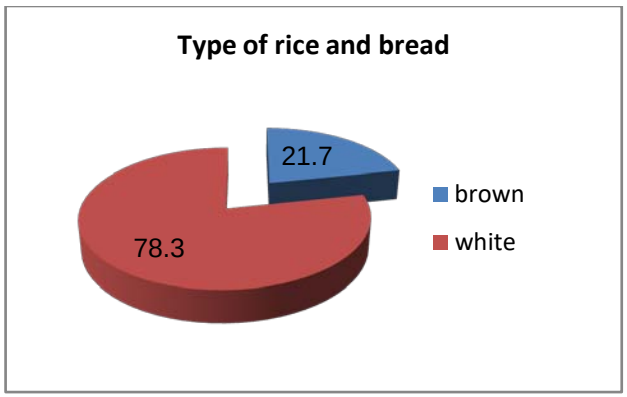


Figure 12: Type of rice and bread %

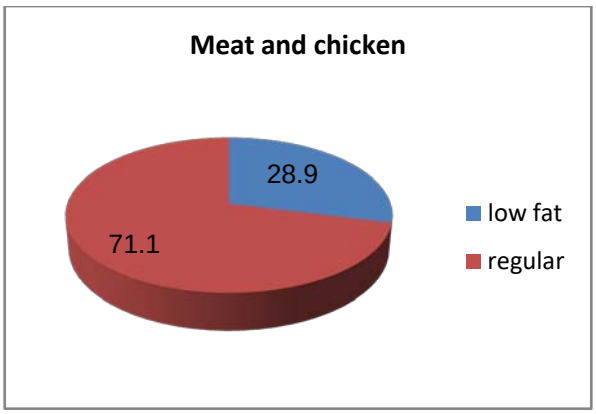


Figure 13: Meat and chicken %

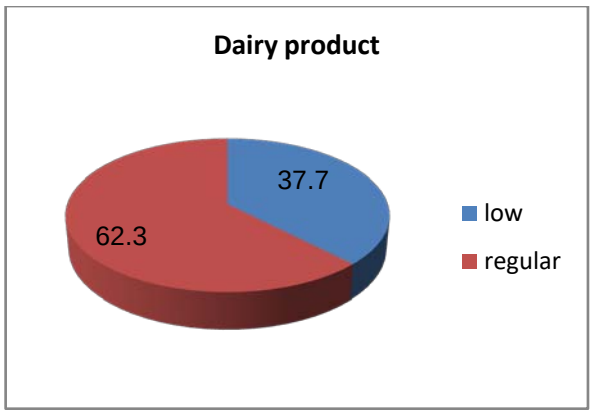


Figure 14: Dairy product %

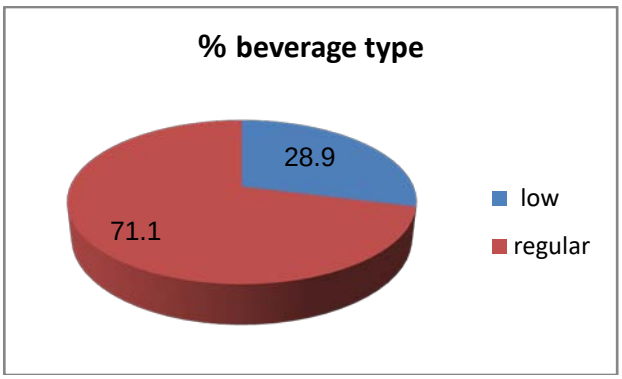


Figure 15: Beverage product type

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