

ASSESSMENT OF NUTRITIONAL STATUS AND EATING HABITS OF INTELLECTUALLY DISABLED ADULTS (20–35 YEARS)

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ABSTRACT

Objectives: The present study was aimed to assess the nutritional status and eating habits of intellectually disabled adults between 20 and 35 years of age.

Methods: The study was conducted at special institutes for intellectually disabled individuals, situated in Hyderabad. The data were collected from 105 intellectually disabled adults through specially formulated questionnaire. Anthropometric measurements were taken to assess their body mass index (BMI). The data were compiled using MS Excel. Percentage analysis was performed to study the nutritional status and eating habits and conclusion was made.

Results: The study revealed – a significant presence of malnutrition (40%) and overweight being highest (16%) followed by obesity (12%) and underweight (12%). The presence of overweight and obesity was higher in females (19% and 16%, respectively) than males (13% and 11%, respectively). The presence of Down syndrome was highest among obese (54%) followed by overweight adults (19%). Irregular eating was highest in underweight group (61%) and frequent eating was highest in obese group (54%). Skipping meals daily (8%) and frequently (69%) were highest in underweight and no meal skipping was seen highly in obese (69%) followed by overweight group (19%).

Conclusion: The present study concluded that adults with intellectual disability have poor nutritional status and eating habits, especially among underweight, overweight, and obese group when compared to the adults with normal BMI, which could be one of the reasons for their poor nutritional status.

Keywords: Intellectual disability, Adults, Nutritional status, Body mass index, Underweight, Obese, Eating habits.

INTRODUCTION

Disability is any limitation, as a result of an impairment of the ability to perform in a way or within the range considered normal for a person. The disability is characterized by excesses or shortfalls in performing a normal day-to-day activity; these might be temporary or permanent, reversible, or occurring directly from the deficiency as a response of the individual concerned, especially in terms of psychological, physical, sensorial, or any other type of deficiency [1].

Intellectual disability was previously known as – “mental retardation,” and distinguished by notable limitations in cognitive performance and learning, disclosing itself as dysfunction in practical, civic, and conceptual skills. This disability commences before the age of 18 years; its etiology involves a group of genetic, acquired (congenital and developmental), environmental, and sociocultural factors [2].

Their capacities to adapt may also be very limited, with conceptual matters as well as social and practical matters. Thus, their ability to communicate themselves linguistically or their reading and writing abilities are not well developed, apart from that, their sense of responsibility and confidence. In routine activities such as grooming, personal care, and food preparation, the level of autonomy based on the severity of the disability [3].

According to the Diagnostic and Statistical Manual of Mental Disorders, 5th edition, there is mild, moderate, severe, and profound intellectual disability, each comes with its own difficulties. It creates problems with reasoning, planning, problem-solving, abstract thinking, and learning, all due to slow and incomplete cognitive skill acquisition [4].

Individuals with disabilities find it hard to convey their needs, get food by their own or perform any physical activity. Thus, it is generally their caretakers who have to settle on various aspects of their daily lives. Food dependency of such individuals on others could lead to state of malnutrition, overweight/obesity, inadequate intake of some micronutrients, and low fluid intake, among other problems [5-7].

Conditions where such adults cannot decide on their own food intake, it is essential for the offered food to be wholesome to meet their energy and nutrient requirements. However, the minimum nutritional needs are not met due to monotonous or inadequate food intake in terms of both, quantity or quality [8].

Estimation of a person’s nutritional status can help to determine their nutritional needs or requirements and predict the possible health risks they run; it can also help to ascertain whether this individual would benefit from any nutritional treatment and, if so, to decide whether or not this treatment is turning out to be effective. In the case of disability, of whatever type, several factors have an influence on the nutritional state, such as the level of neurological alteration, muscle tone, the ability to perform physical activity, and the existence of any eating abnormalities such as dysphagia or chewing problems, the medicinal treatment, and the socioeconomic environment [9].

Hence, the objectives of the present study were primarily to assess the nutritional status and eating habits of adults with intellectual disability.

METHODS

To assess the nutritional status and eating habits of intellectually disabled adults aged 20–35 years, a survey was carried out by purposive random sampling. Every subject under this study was individually

assessed for nutritional status with anthropometry. The study was conducted at institutes for intellectually disabled people, located in Hyderabad.

Anthropometry

Weight was assessed with the digital weighing scale and height was measured using a stadiometer as per the World Health Organization protocol [10], to obtain body mass index (BMI) of the participants for assessing their nutritional status. The criteria of the World Health Organization for Asians were used to categorize them into underweight (BMI <18.5), normal weight (BMI 18.5–22.9), overweight (BMI 23–24.9), and obesity (BMI ≥25).

Questionnaire

The information was collected from caregivers of the subjects. The objectives of the study were kept in mind while framing the questionnaire. The content of the questionnaire included general information, anthropometric measurement, questions for assessing their mental and physical health, and eating habits.

Data compilation

The data were entered into MS Excel. Categorization of the data was done based on BMI, i.e., underweight, normal, overweight, and obese. Percentage analysis was performed to study the nutritional status and eating habits based on the BMI categorization. Results were obtained and conclusion was made.

RESULTS AND DISCUSSION

BMI of the subjects

From different special institutes for intellectually disabled, a sample of 105 adults with intellectual disability adults was selected randomly, consisted of both males and females. The age group covered was 20–35 years.

The present study showed that of 105 subjects, 60% were normal, 12% were underweight, 16% were overweight, and 12% were obese. Indicating 40% of the subjects were malnourished. Of them, 12% were undernourished and 28% were overnourished. Among the subjects who were overnourished, 16% were overweight and 12% were obese, showing a higher presence of overnutrition than undernutrition. The finding of the study was similar as the finding of Mhango *et al.* and Sobhana *et al.* [11,12] (Fig. 1).

Gender of the subjects

In the present study, it can be seen that, among males, 12% were underweight, 64% were normal, 13% were overweight, and 11% were obese. Among females, 13% were underweight, 52% were normal, 19% were overweight, and 16% were obese. The results indicated that the presence of underweight was almost same in both males and females. Normal BMI in males was more than females, i.e., 12% and 13%, respectively. The presence of overweight was higher in females than males. Obesity and overweight females (16% and 19%, respectively) were higher than males (11% and 13%, respectively). Studies were done by Sobhana *et al.* and Hsieh *et al.* [12,13] which showed similar results (Fig. 2).

Comorbidities among subjects

The present study showed that the majority of adults with normal BMI did not have any associated comorbidity. Developmental delay was present in about a quarter of overweight adults (25%), attention-deficit/hyperactivity disorder was associated with normal (26%) and underweight adults (15%). Down syndrome was high among obese (54%) followed by overweight adults (19%). A similar result was found in a study done by Braunschweig *et al.* [14], where 89% of participants with Down syndrome were overweight or obese (Fig. 3).

Diseases among subjects

The present study showed that there was a higher rate of heart diseases among overweight adults (19%), the absence of diseases among adults

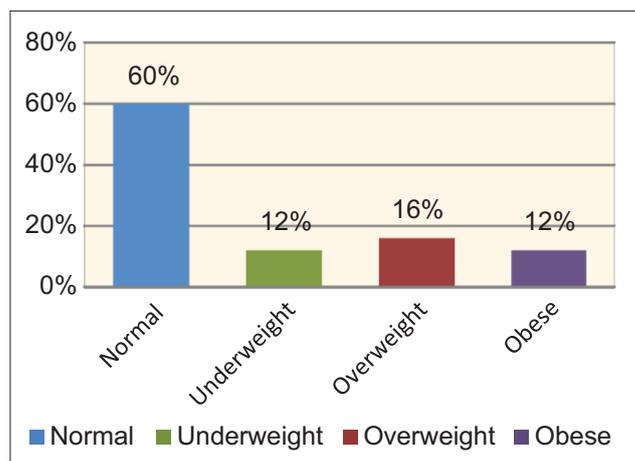


Fig. 1: Body mass index

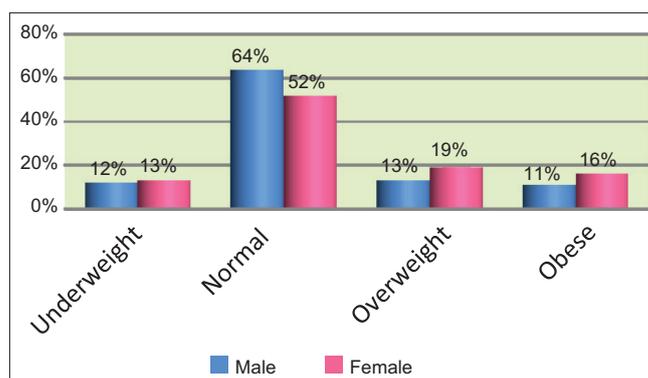


Fig. 2: Gender

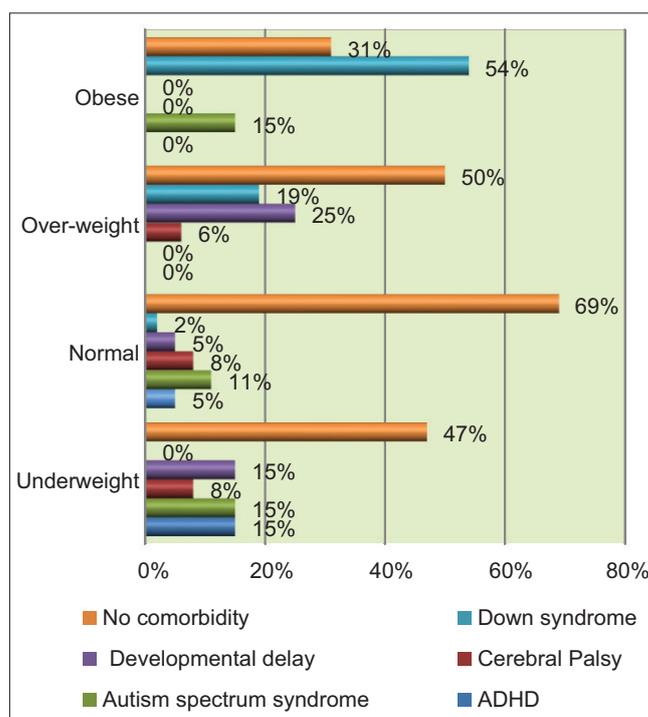


Fig. 3: Comorbidity

with normal BMI was more than other groups (86%), and higher presence of hypertension among underweight adults (15%) (Fig. 4).

Frequency of meals eaten among subjects

One of the strong reasons for being undernourished is irregular meal pattern and overnutrition is a result of recurrent eating. The same pattern can be seen in the present study; where, irregular eating was highest in underweight group (61%). On the other hand, frequent eating was highest in obese group (54%) followed by overweight group (25%). Davies [15] conducted a study and found similar results (Fig. 5).

Excessive hunger among subjects

Overweight and obese individuals tend to feel excessive hunger pangs frequently, which results in overindulgence in food which ultimately leads to overeating. The present study showed that excessive hunger was not felt in majority of underweight group (31%). On the other hand, sudden urge to eat was highest in obese group (92%) followed by overweight group (44%) (Fig. 6).

Food cravings for specific food among subjects

Craving for specific food results in its overconsumption. The present study showed that most craved food was sweets (31%), followed by spicy foods (8%). Food cravings were least in underweight group (84%) than other groups and were highest in obese group (39%) followed by overweight group (37%) (Fig. 7).

Food that improved mood among subjects

Certain foods help in improving mood of a person and this can also be observed from the present study showed where mood improvement by consuming chocolates was high in all groups, especially in obese adults (23%), followed by tea (16%), spicy foods (6%), and coffee (5%); dry fruits and nuts (2%) and sweets (2%) helped in mood improvement in least number of subjects. Hedworth *et al.* [16] showed similar findings (Fig. 8).

Meal skipping among subjects

Skipping of meals can lead to starvation as the body is deprived of nutrients which usually results in undernutrition. The present study showed that skipping meals daily and frequently were highest in underweight group (8% and 69%, respectively). On the other hand, meal skipping was least in obese (23%) and overweight group (44%) (Fig. 9).

Food consumption in stress

Certain people experience loss of appetite in stress period and they avoid food. Whereas some people find comfort in food, hence, they overindulge in eating during the time of stress. The present study

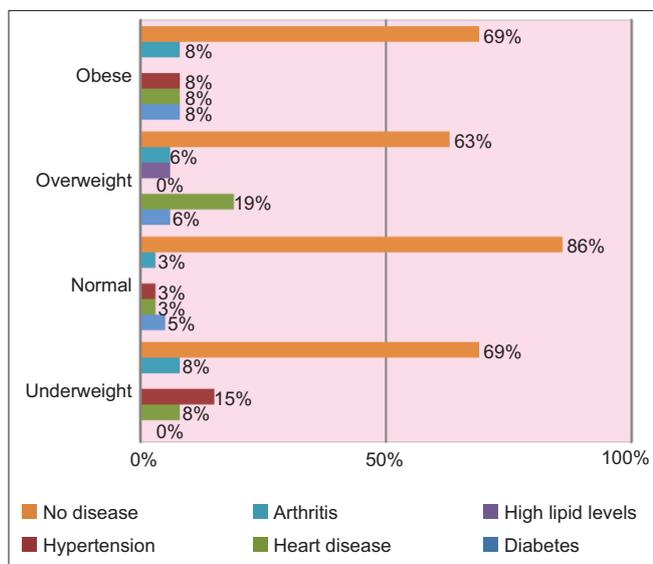


Fig. 4: Type of disease

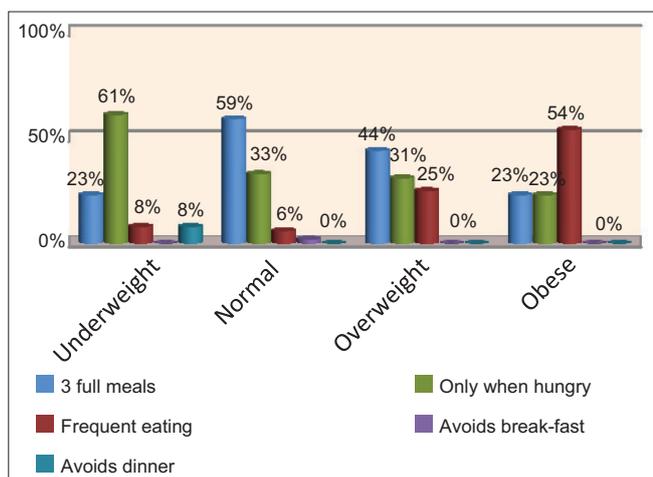


Fig. 5: Frequency of meals eaten

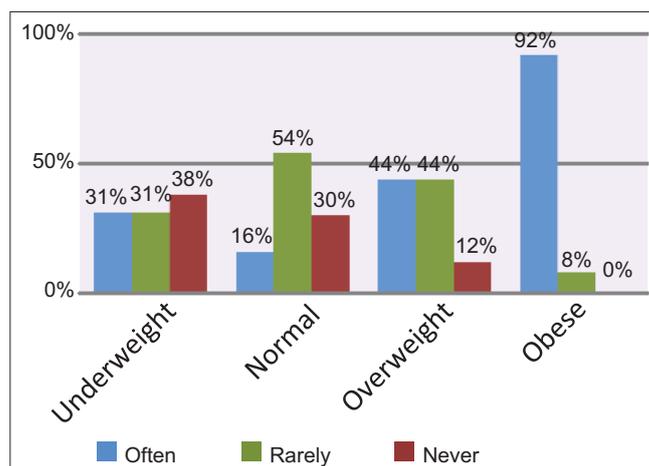


Fig. 6: Excessive hunger

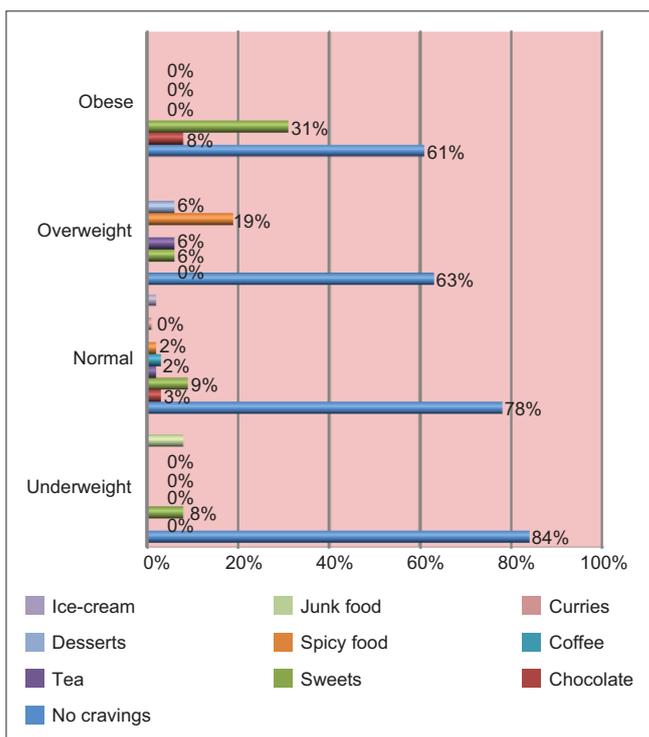


Fig. 7: Cravings for specific food

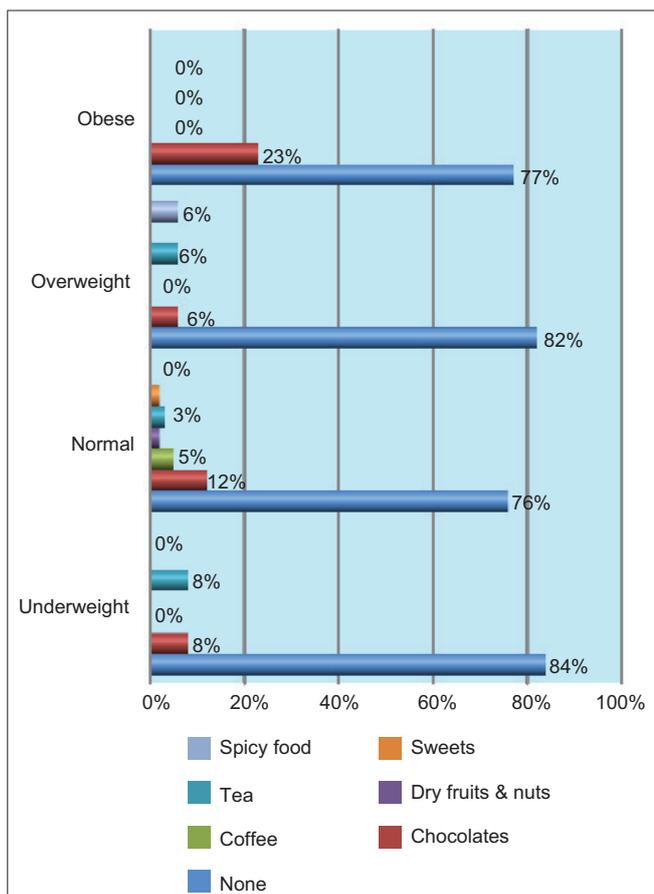


Fig. 8: Mood improving foods

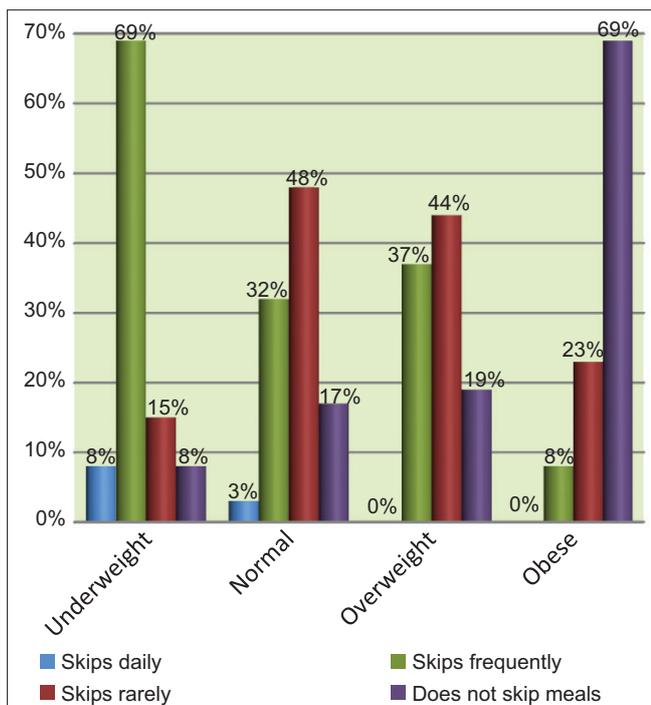


Fig. 9: Meal skipping

showed that, in underweight group, avoiding food in stress was highest (54%) and lowest in obese adults (8%). On the other hand, eating more food in stress was highest in obese adults (31%) and none among the underweight adults (0%) ate more food in stress (Fig. 10).

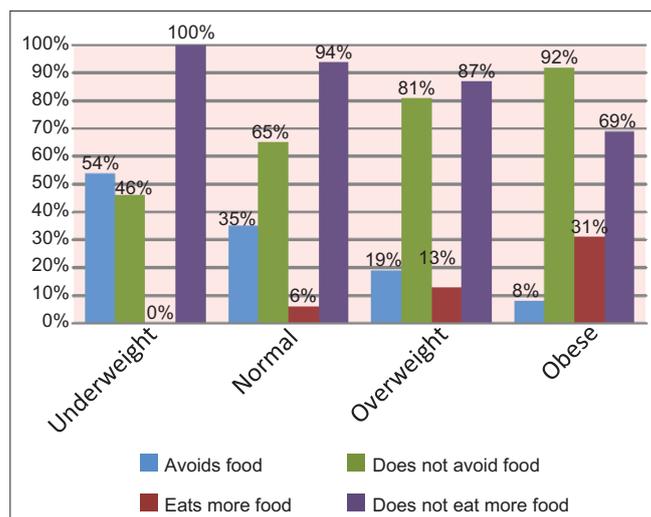


Fig. 10: Food in stress

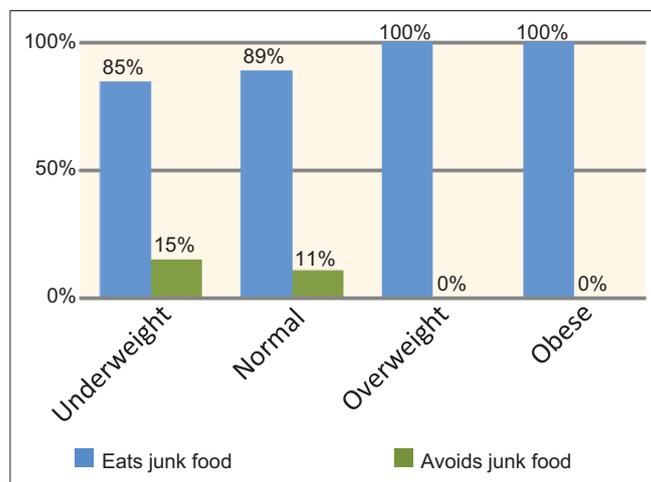


Fig. 11: Junk food consumption

Junk food consumption

Junk foods are known to contain empty calories and very little essential nutrients; their excess consumption may contribute to health problems and obesity. The present study showed that avoiding junk food was highest in underweight group (15%), and no adults from obese and overweight group avoided junk food, which could be a reason their excess weight (Fig. 11).

Foods eaten outside

The present study showed that frequent consumption of food outside home was highest among overweight group (37%) followed by obese group (31%) which may lead to overindulgence in food, whereas avoiding eating food outside home was highest in underweight group (8%) followed by adults with normal BMI (3%) (Fig. 12).

CONCLUSION

The data in the present study provided information on various aspects of adults with intellectual disabilities. In this context, the following findings are especially relevant:

Assessment of nutritional status was done using anthropometry and it showed that there is a significant presence of malnutrition where overnutrition was higher and a notable presence of undernutrition. Eating habits were poor among underweight individuals, which could add up to the reasons for poor nutritional status and less weight among

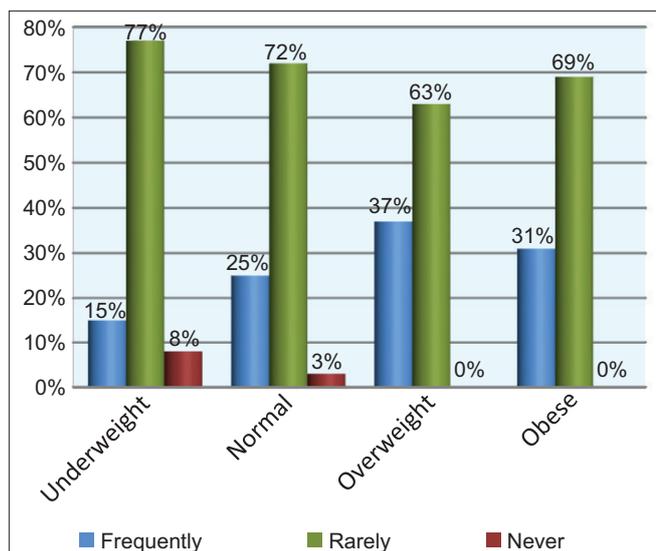


Fig. 12: Foods eaten outside

underweight group. Among adults with normal BMI, eating habits were better than their underweight, overweight, and obese counterparts. Faulty eating habits add up to the reasons for the excess weight of obese and overweight group.

Therefore, the present study concluded that among adults with intellectual disability, eating habits were unhealthy, especially among the underweight, overweight, and obese groups when compared to adults with normal BMI, which could be one of the reasons for their poor nutritional status.

CONFLICTS OF INTEREST

The author(s) declare(s) that they have no conflicts of interest to disclose.

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