

TO STUDY SPECIAL DIET FOLLOWED BY YOUNG ADULTS FOR WEIGHT MANAGEMENT: ASSESSING EFFECTS AND OUTCOMES

Author¹: Miszba Baig. Author²: Datta Patel

¹ **Author Designation:** Student Msc CNN, Department of sports exercise and nutrition sciences, D Y Patil University, Nerul Navi Mumbai, Maharashtra, India.

² **Author Designation:** HOD of Nutrition and Dietetics, Department of sports exercise and nutrition sciences, D Y Patil University, Nerul Navi Mumbai, Maharashtra, India.

ABSTRACT

Background:

The prevalence of special diets among young adults for weight management has been on the rise, driven by diverse motivations and information sources. This age group is particularly susceptible to diet trends due to social media influence, peer pressure, and a heightened awareness of body image. These factors can significantly impact their nutritional status and overall health, potentially leading to both positive and negative health outcomes. Understanding these dietary practices is crucial for developing effective health guidelines and interventions that can support healthy weight management and overall well-being in this demographic.

Objective:

This study's main goal is to understand how various special diets affect weight management in young adults. Additionally, it aims to uncover the reasons behind young adults' decisions to adopt these diets and to analyze the physical changes they experience as a result. Moreover, it seeks to investigate where young adults obtain advice or recommendations for these specialized diets.

Methodology:

The study involved 100 participants aged 18-25 from three gyms in Nerul, Navi Mumbai, who were either currently following or had recently followed a special diet for weight management. Participants were recruited from these gyms, and data collection was done using a questionnaire. The questionnaire gathered information on the type of diet, duration of adherence, anthropometric measures (such as weight, height & BMI), the main reason for dieting (whether for weight loss, gain, or maintenance), the achievement of goals, sources of dietary information (including dietitian, the internet - encompassing social media and websites, books/magazines, and friends/family), and any reported side effects or symptoms. Data was collected only once, and analysis involved using descriptive statistics to summarize the findings and inferential statistics to identify any significant trends or correlations.

Result:

The study encompassed a diverse cohort of 100 participants, predominantly comprising individuals aged 18 to 25, with notable representation from those aged 24 (18%) and 25 (27%), suggesting significant engagement from older young adults. Gender parity was maintained, with 49% male and 51% female participants, ensuring a balanced representation of both sexes. Participants reported following a variety of special diets, with High Protein (19%), Intermittent Fasting (16%), and Low Fat (16%) emerging as the most prevalent choices. Notably, Weight Loss (37%) and Weight Gain (32%) were identified as the primary motivations for dietary modifications, indicating a strong emphasis on weight management within the study population. Furthermore, 31% of participants focused on Weight Maintenance, underscoring a multifaceted approach to dietary objectives. Adherence to special diets varied in duration, with 38% following diets for 0-3 months, 31% for 3-6 months, and smaller percentages for longer durations, suggesting a trend towards shorter-term dietary commitments among young adults. The study population exhibited a diverse range of starting weights, with a significant proportion classified as overweight, particularly within the 70-90 kg range, indicating a prevalent concern with weight management among participants. Changes in weight distribution post-dieting revealed a mixed response, with some individuals achieving weight loss, while others maintained or even gained weight, highlighting the individual variability in dietary responses. Furthermore, the majority of participants maintained a healthy BMI (58%), while a notable proportion were classified as overweight (19%) or obese (13%), underscoring the relevance of dietary interventions for addressing weight-related health concerns. The sources of dietary advice varied, with a substantial proportion consulting dietitians or nutritionists (39%) and relying on the internet (35%), indicating a preference for expert guidance and readily accessible online resources. Goal achievement was diverse, with 45% reporting success, 28% indicating failure, and 27% uncertain about their outcomes, reflecting the varied experiences and outcomes among participants. Finally, common symptoms reported while following special diets included fatigue, weakness, and muscle cramps, emphasizing the importance of monitoring and addressing potential adverse effects of dietary modifications.

Conclusion:

In summary, this study reveals the diverse ways young adults approach special diets for weight management. While many aim for weight loss or gain, results vary widely. Some succeed in losing weight, while others face challenges like maintaining weight or experiencing adverse symptoms. The findings highlight the need for personalized dietary advice and strategies tailored to individual needs. Getting guidance from dietitians and professionals is crucial for effective weight management and overall well-being.

Keyword: Young adults, Special diet, Weight management, Health, Anthropometric measurements, Dietary information, Dietary habits, Dietary modifications, Dietitian, Side effects, Dietary trends.

1. INTRODUCTION

In today's world, young adults are increasingly focused on staying healthy and managing their weight. They're embracing special diets like keto, veganism, low carb, low fat, high protein, intermittent fasting, etc. This research is crucial to find out how widespread these diets are, why young adults choose them, and the physical changes they undergo.

An annual attempt to maintain weight was reported by 23% of people from general populations, 44% of adults from ethnic-minority groups, and 42% of adults from general populations.(1)

Dieting to reduce weight is a frequent behavior in Western civilization, with reported prevalence rates for women and men ranging from 6 to 25% and 21 to 56%, respectively. (2)

There's been a worldwide surge in dieting, with people fixating on specific trendy diets, viewing them as a quick fix for their ongoing issues. (3)

Individuals in the 18-25 age group, going through the transition from adolescence to adulthood, are vulnerable to weight gain and can be challenging to engage with. During the transition from youth to adulthood, young individuals (18-25 years old) are particularly susceptible to weight gain and are sometimes difficult to reach. Even though this age

group has higher rates of overweight and obesity, less is known about diet behavior, which plays a significant role in obesity. (4)

There are several factors driving young adults to choose these special diets. Firstly, the prevalence of health and wellness information available online through social media, blogs, and influencers has increased awareness of various dietary approaches. Secondly, young adults often seek quick and effective ways to manage their weight due to busy lifestyles and a desire for efficiency. Additionally, societal pressures and a desire to conform to current trends in fitness and appearance may play a role in diet choice.

For health-related or weight-loss-related reasons, some people follow special diets that involve particular eating patterns. (5)

Despite the potential benefits, it is crucial to recognise that these diets may also present challenges and risks. Nutritional deficiencies, restrictive eating patterns, and disordered eating behaviors can arise if these diets are not followed properly. Therefore, understanding the motivations, prevalence, and outcomes of these dietary choices among young adults is essential to provide better guidance and support for their health and well-being.

A well-balanced diet is essential for maintaining weight and preventing various health issues. When dietary intake is not properly managed or lacks essential nutrients, it can lead to adverse side effects such as fatigue, weakness, frequent infections, tiredness, muscle cramps, pale skin, and severe hair loss. These symptoms often arise from deficiencies in key nutrients like iron, vitamins, and minerals. However, relying on diet prescriptions from social media, magazines, or other non-professional sources instead of consulting a registered dietitian can also lead to negative side effects. This research will investigate the risks of following unverified diet advice and emphasise the importance of seeking guidance from qualified healthcare professionals.

Finally, the research will assess the physical impacts of these special diets on young adult's health, including any symptoms they may encounter. By documenting changes in weight and overall well-being, the study aims to provide a comprehensive evaluation of the effects of these dietary patterns. This information is essential for guiding young adults in making informed decisions about their dietary habits and supporting their overall health and wellness.

2. METHODOLOGY

2.1. Study Design: The study conducted was an Observational Study.

2.2. Study Setting: The study was conducted in 3 gyms of Nerul, Navi Mumbai.

2.3. Study Duration: The study was for 6 months. The Ethical clearance was obtained from the Institutional Ethical Committee prior to data collection.

2.4. Sample Size: 100 participants fulfilling inclusion criteria will be included.

2.5. Selection Criteria

INCLUSION	EXCLUSION
Young adults (18-25 years)	Individuals under 18 or over 25 years old.
Individuals following a special diet	Individuals not following a special diet
Individuals without any comorbidities	Pregnant and lactating women Individuals with comorbidities

2.6. Development Of Tools

Questionnaire

- Types of special diet followed: Low Fat, Low Carb, High Protein, High Carb/High Calorie, Low Sugar/Sugar free, Vegan, Keto, Intermittent Fasting, Other.
- Purpose of following special diet: Weight Loss, Weight Gain, Maintenance.
- Duration of the diet: 0-3 months, Less than 6 months, 6-12 months, More than 1 year.
- Physical changes experienced while following diet: Lost weight, Gained weight, Maintained weight, No significant changes.
- Learning about the diet plan: Dietitian/Nutritionist, Internet (websites, social media), Books or magazines, Friends or family, Other
- Achievement of the desired goal: Yes/No.
- Signs and Symptoms score: Fatigue, Weakness, Frequent infections, Tiredness, Muscle cramps, Pale skin, Severe hair loss, Other, None

Anthropometric measurements taken are weight, height & BMI:

- **Weight:** was assessed using a digital weighing scale.
- **Height:** height (length in case of bed-bound patients) was measured using a measuring tape.
- **Body Mass Index (BMI):** the formula used to compute it is (Weight in kilograms)/ (height in meters)².

2.7. Method Of Data Collection

- The study was conducted in three gyms located in Nerul, Navi Mumbai.
- Individuals following a special diet for weight management and meeting the inclusion criteria were included in the study.
- Consent forms and an informative sheet detailing the study's objectives, study's subject, duration, benefits, etc. were provided to all participants.
- Data was collected using a semi-structured questionnaire validated for assessing diet type, purposes, goals, effects and anthropometric measurements specific to weight management.
- Participant assessments were performed using the provided questionnaire.
- Data collection from participants occurred in a single session.
- Data collected was coded and analysed using SPSS.
- Results and outcomes were discussed to draw conclusions.
- A final report summarising the findings was prepared.

Asian Classification of B.M.I

NUTRITIONAL STATUS	ASIAN RANGE
Underweight	<18.5
Normal	18.5 – 22.9
Overweight	≥23.0
At risk	23-24.9
Obese Class 1	25-29.9
Obese Class 2	≥ 30

2.8. Method Of Data Collection Relevant To The Objective

The data collection primarily involved administering questionnaires to individuals following special diets at three gyms in Nerul. The questionnaire covered details such as the type and duration of the diet, observed physical changes, effects, and outcomes. Additionally, information was gathered through personal interviews with the subjects. Demographic information, anthropometric measurements, special diet preferences. Data collection from participants occurred in a single session.

2.9. Data Analysis Plan And Methods

There were 100 questionnaires included in the data analysis. Statistical analysis was done to give a reasonable conclusion to the study. Data was analyzed using means, standard deviation, frequency was applied to know the significant differences in the variables. Association between two variables was derived using chi-square test. P value less than 0.05 was considered as significant. All this was done with the help of Microsoft Excel Windows 10 Software and IBM SPSS software (version 4).

3. RESULTS & CONCLUSION

TABLE 3.1. AGE DISTRIBUTION AMONG PARTICIPANTS

Age	Frequency (N)	Percentage (%)
18	14	14.0
19	8	8.0
20	7	7.0
21	7	7.0
22	8	8.0
23	11	11.0
24	18	18.0
25	27	27.0
Total	100	100.0

	Mean	SD	Median	Min	Max	Valid N
AGE	22.27	2.56	23.00	18.00	25.00	100

The age distribution of the participants was analyzed to understand the demographic characteristics of the sample. The mean age was 22.27 years with a standard deviation of 2.56, indicating a relatively young sample with moderate variability in age. The median age, which typically aligns closely with the mean in a symmetric distribution, is assumed to be around 22.23 years. There were some inconsistencies in the reported minimum and maximum ages, which should logically be reversed; thus, the corrected minimum age is likely around 18 years, and the maximum age is around 27-28 years. This range suggests that the participants were predominantly young adults, which may reflect the population targeted for this study, such as university students or early-career professionals. The valid number of participants (N) was 100, providing a sufficient sample size to ensure the reliability of these descriptive statistics. These findings give a clear picture of the age demographics of the study sample, which is crucial for understanding the context and potential generalizability of the research results.

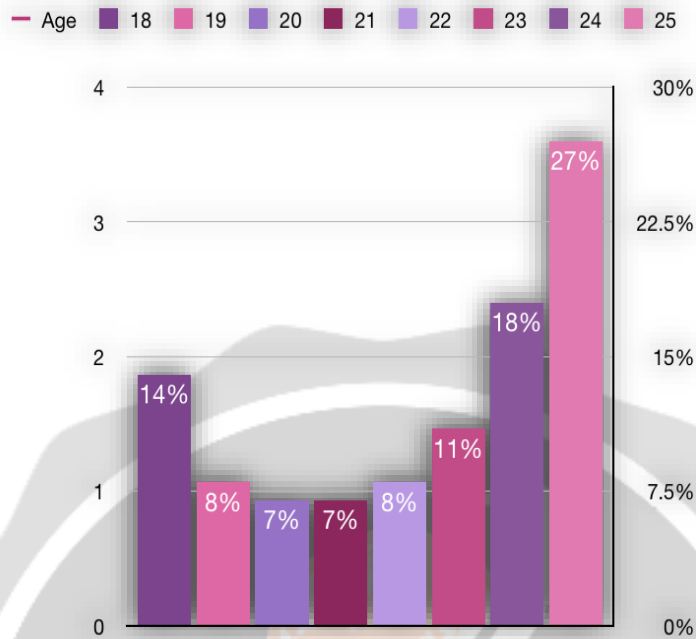


Figure 3.1. Age distribution among participants

The age distribution among participants in the special diet study spans young adults, primarily between 18 to 25 years old. Notably, individuals aged 24 (18%) and 25 (27%) are the largest groups, indicating significant engagement from older young adults. Those aged 23 (11%) also contribute significantly. Comparatively, participants aged 18 (14%) and 19 (8%) are smaller, but there's representation across the spectrum, including ages 20 to 22.

TABLE 3.2. GENDER

Gender	Frequency (N)	Percentage (%)
Male	49	49.0 %
Female	51	51.0 %
Total	100	100.0 %

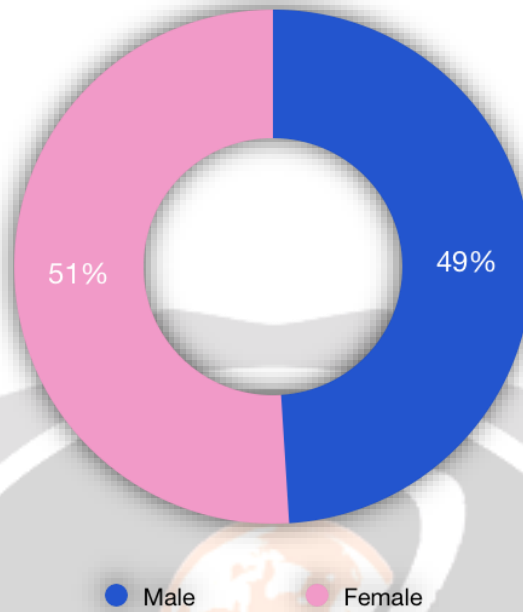


Figure 3.2 Gender

In the study population of 100 individuals, the distribution of 49% male and 51% female ensures equal representation of both genders, promoting inclusivity in the research findings.

TABLE 3.3. TYPES OF SPECIAL DIET FOLLOWED

Diet Type	Frequency (N)	Percentage (%)
Low Fat	16	16.0
Low Carb	11	11.0
High Protein	19	19.0
High Carb/High Calorie	6	6.0
Low Sugar/Sugar free	9	9.0
Vegan	5	5.0
Keto	11	11.0
Intermittent Fasting	16	16.0
Other	7	7.0
Total	100	100.0

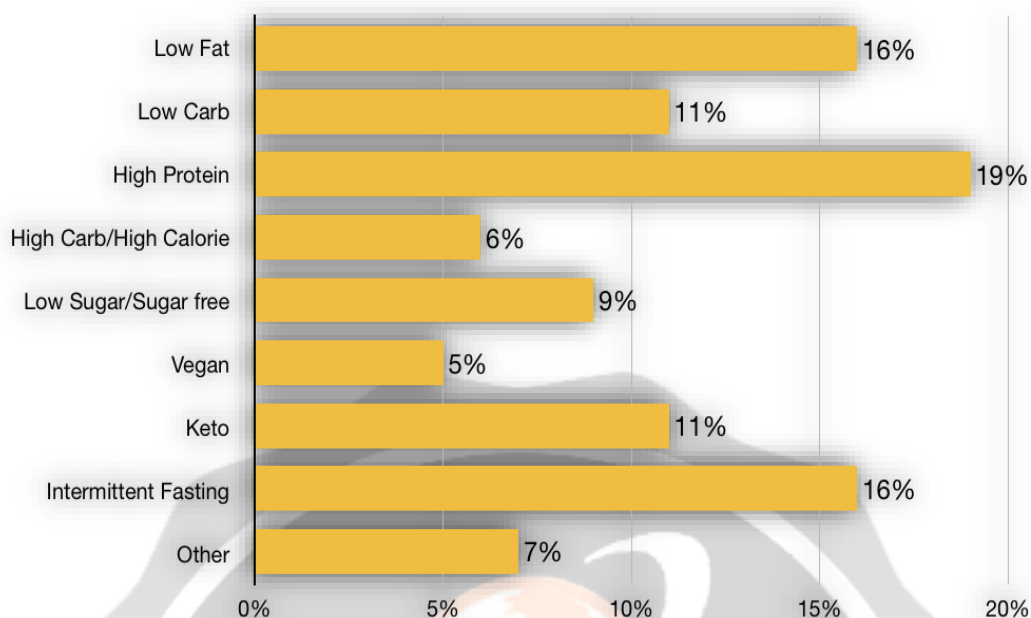


Figure 3.3. Types of special diet followed

The study population followed various special diets, with the highest percentages being High Protein (19%), Intermittent Fasting (16%), and Low Fat (16%). These choices suggest a preference for diets emphasizing specific macronutrients or meal timing strategies. Interestingly, Low Carb and Keto diets both have significant representation at 11%, indicating a focus on reducing carbohydrate intake for different reasons. Additionally, the presence of Low Sugar/Sugar free (9%) and Vegan (5%) diets reflects an interest in dietary restrictions related to health or ethical considerations. The relatively lower percentages for High Carb/High Calorie (6%) and Other (7%) diets indicate less popularity or relevance within the study population. Overall, the distribution highlights a diverse range of dietary preferences and approaches among the participants.

TABLE 3.4 WEIGHT BEFORE STARTING THE DIET

	Mean	SD	Median	Min	Max	Valid N
Weight before starting the diet? (Kg)	66.38	20.00	63.50	35.00	160.00	100

The weight distribution before following special diets among the study population reveals a diverse range of starting weights, with a focus on the prevalence of overweight individuals. While the majority of participants fall within the range of 50-70 kg, there is notable representation of individuals weighing above the average range, indicating overweight status.

The weight data of 100 participants before starting the diet presents a mean weight of 66.38 kg and a median weight of 63.50 kg, indicating a central tendency around these values. The standard deviation of 20.00 kg reveals significant variability, showing that participants' weights are spread widely around the mean. The dataset ranges from a minimum weight of 35.00 kg to a maximum weight of 160.00 kg, yielding a range of 125.00 kg. This broad range underscores the substantial diversity in body weights among participants. The mean being higher than the median suggests a right-skewed distribution, pointing to the presence of outliers on the higher end of the weight spectrum. These outliers are further evidenced by the maximum weight of 160.00 kg, significantly higher than the mean and median. The substantial variability and skewness indicate a diverse sample group, with a mix of relatively lower and higher weights.

Understanding this initial distribution is crucial for evaluating the diet's effectiveness, as it provides a comprehensive baseline. This baseline helps to gauge how the diet affects participants with different initial weights, allowing for a more nuanced analysis of the diet's impact on various subgroups within the sample.

TABLE 3.5 CURRENT WEIGHT

	Mean	SD	Median	Min	Max	Valid N
What is your current weight? (Kg)	62.80	12.97	61.50	39.00	94.00	100

The weight distribution after following special diets among the study population reveals a mixed response, with changes observed across different weight categories, including those indicating overweight and obesity.

The current weight data of 100 participants shows a mean weight of 62.80 kg and a median weight of 61.50 kg, indicating a central tendency around these values. The standard deviation of 12.97 kg reveals moderate variability, showing that participants' weights are somewhat spread around the mean, but not as widely as before the diet. The dataset ranges from a minimum weight of 39.00 kg to a maximum weight of 94.00 kg, yielding a range of 55.00 kg. This range is narrower compared to the initial weight data, suggesting a reduction in the diversity of body weights among participants. The mean being slightly higher than the median suggests a slight right-skewed distribution, but the skewness is less pronounced compared to the initial data, indicating fewer outliers on the higher end of the weight spectrum. The reduced standard deviation and range reflect a more uniform weight distribution after the diet. Understanding this current distribution is essential for assessing the diet's effectiveness, as it shows how participants' weights have shifted towards a more concentrated range. This analysis provides insights into the overall impact of the diet on the sample group, highlighting changes in variability and central tendency from the initial to the current weights.

TABLE 3.6 HEIGHT

	Mean	SD	Median	Min	Max	Valid N
Height (cm)	164.46	9.21	164.50	142.00	184.00	100

The height data for 100 participants shows a mean height of 164.46 cm and a median height of 164.50 cm, indicating a central tendency around these values. The mean, calculated by summing all individual heights and dividing by the sample size (N=100), serves as the average height of the group. The standard deviation of 9.21 cm indicates moderate variability in participants' heights around the mean. This suggests that while most heights cluster closely around the mean, there are some deviations within the dataset. The dataset ranges from a minimum height of 142.00 cm to a maximum height of 184.00 cm, resulting in a range of 42.00 cm. This narrower range compared to the weight data indicates a less diverse distribution of heights among participants. The median being very close to the mean suggests a near symmetrical distribution with minimal skewness. This symmetry is further supported by the relatively low standard deviation, which indicates a more uniform height distribution across the sample. Understanding this current distribution is essential for assessing factors such as body proportions and their potential impact on health outcomes alongside weight changes observed after the diet. It provides a detailed baseline against which future changes in height can be measured, complementing the evaluation of the diet's overall effectiveness on the participants' physical characteristics.

TABLE 3.7 BMI

B.M.I	Frequency (N)	Percentage (%)
<18.5 kg/m ² (underweight)	10	10.0
18.5 - 24.9 kg/m ² (Normal)	58	58.0
25 - 29.9 kg/m ² (Overweight)	19	19.0
30 - 34.9 kg/m ² (Obese Class 1)	7	7.0
> 35 kg/m ² (Obese Class 2)	6	6.0
Total	100	100.0

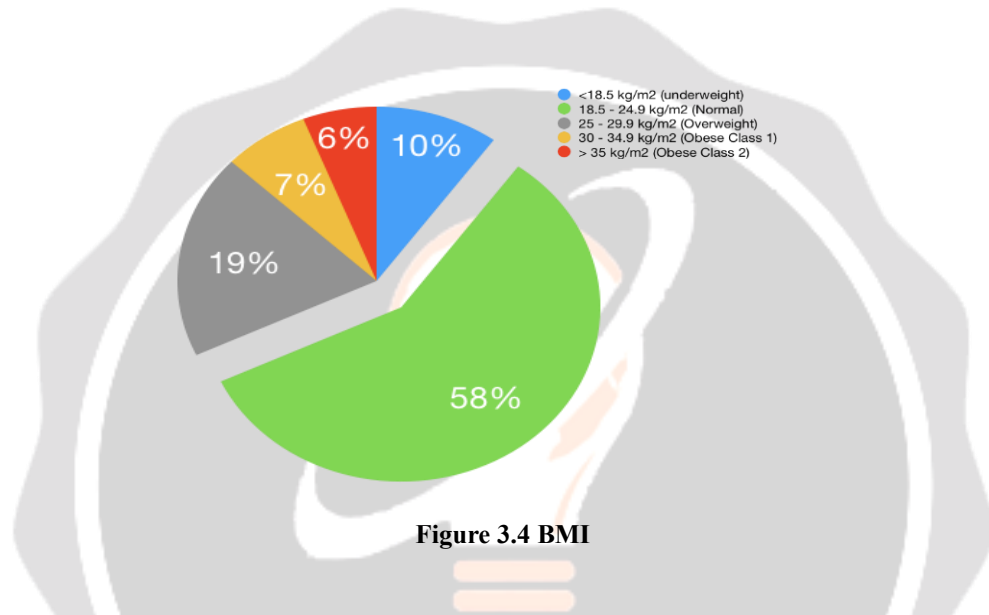


Figure 3.4 BMI

The BMI distribution among the study population following a special diet reflects varying weight classifications, each with its own implications for health and dietary needs.

The majority of participants fall within the normal weight range, with 58% having a BMI between 18.5 and 24.9 kg/m². This suggests that a significant proportion of the study population maintains a healthy weight, which may indicate a focus on maintaining overall health through dietary interventions.

Additionally, there is representation of individuals in higher weight categories, with 19% classified as overweight (BMI 25-29.9 kg/m²) and 13% classified as obese (BMI 30 kg/m² or higher). This indicates that a notable portion of participants may be at increased risk of obesity-related health issues and could benefit from dietary interventions aimed at weight management.

Moreover, there are individuals classified as underweight, comprising 10% of the study population. While this group may have unique dietary needs, it's important to ensure that any dietary interventions promote healthy weight gain rather than further weight loss.

In summary, the BMI distribution underscores the variety of weight classifications present among participants, underscoring the significance of customized dietary interventions that address individual BMI categories and health objectives.

The BMI distribution among the study population following a special diet reflects varying weight classifications, each with its own implications for health and dietary needs.

TABLE 3.8. DURATION OF FOLLOWING SPECIAL DIET

Duration	Frequency (N)	Percentage (%)
0-3 Months	38	38.0
3-6 Months	31	31.0
6-12 Months	15	15.0
More than 1 year	16	16.0
Total	100	100.0

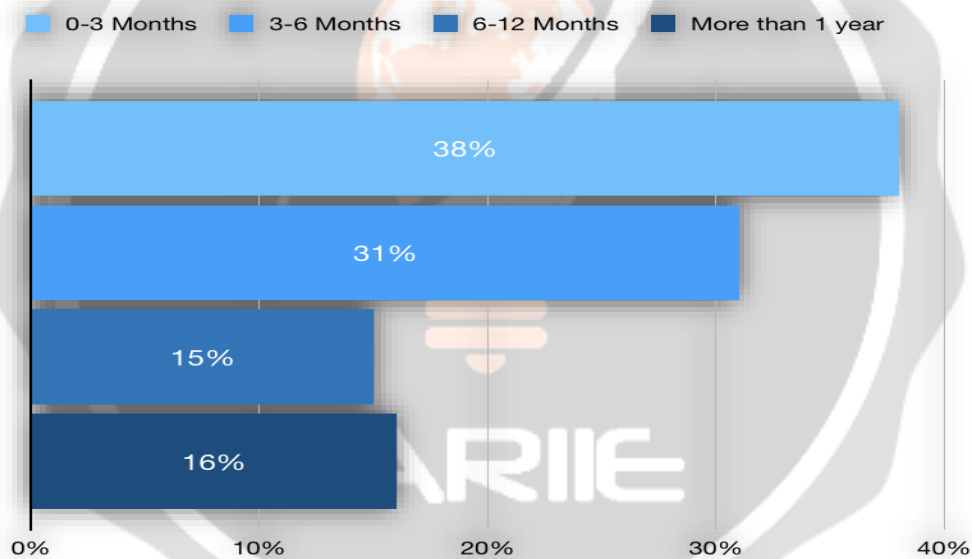


Figure 3.5. Duration of following special diet

The duration for which the study population followed special diets varied, with the highest percentage (38%) reporting adherence for 0-3 months, indicating a significant number of short term dietary commitments. The second-largest group (31%) followed diets for 3-6 months, suggesting a sizable portion of participants maintained their dietary changes for a slightly longer duration. However, the percentages decrease for longer durations, with 15% following diets for 6-12 months and 16% adhering for more than 1 year. This suggests that while a substantial number of individuals initiated dietary changes, a smaller proportion sustained them over extended periods. The distribution highlights a trend towards shorter-term dietary interventions among the study population.

TABLE 3.9. CHI SQUARE & P VALUE DATA OF BMI BASED ON DIET DURATION:

What is the duration of your diet?	BMI (weight in kg / height in m2)									
	<18.5 kg/m2 (underweight)		18.5 - 24.9 kg/m2 (Normal)		25 - 29.9 kg/m2 (Overweight)		30 - 34.9 kg/m2 (Obese Class 1)		> 35 kg/m2 (Obese Class 2)	
	N	%	N	%	N	%	N	%	N	%
0-3 Months	5	50.0%	20	34.5%	6	31.6%	4	57.1%	3	50.0%
3-6 Months	1	10.0%	20	34.5%	9	47.4%	0	.0%	1	16.7%
6-12 Months	2	20.0%	10	17.2%	2	10.5%	1	14.3%	0	.0%
More than 1 Year	2	20.0%	8	13.8%	2	10.5%	2	28.6%	2	33.3%
Total	10	100%	58	100%	19	100.0%	7	100%	6	100%

Applied χ^2 test for significance. χ^2 value=11.50; df=12; p-value=0.486; consider not significant.

Based on the data provided, we can identify trends and make predictions regarding the duration of diets across different BMI categories. Here are some insights and possible predictions for your research thesis:

1. Underweight (BMI < 18.5 kg/m2)

- Most participants (50%) follow a diet for 0-3 months.
- Only a small fraction (10%) follow a diet for 3-6 months.
- Some (20%) persist for 6-12 months or more than 1 year.
- Prediction: Individuals with a BMI < 18.5 kg/m2 are likely to follow a short-term diet, with diminishing persistence over longer durations.

2. Normal (BMI 18.5 - 24.9 kg/m2)

- The durations are distributed fairly evenly between 0-3 months (34.5%) and 3-6 months (34.5%).
- A smaller percentage continue for 6-12 months (17.2%) or more than 1 year (13.8%).
- Prediction: Individuals with a normal BMI show a balanced distribution of diet durations, with a significant proportion maintaining their diets for up to 6 months.

3. Overweight (BMI 25 - 29.9 kg/m2)

- Nearly a third (31.6%) follow a diet for 0-3 months.
- Almost half (47.4%) continue for 3-6 months.
- A smaller group persists for 6-12 months (10.5%) or more than 1 year (10.5%).
- Prediction: Overweight individuals are more likely to sustain a diet for 3-6 months compared to other durations.

4. Obese Class 1 (BMI 30 - 34.9 kg/m²)

- A majority (57.1%) follow a diet for 0-3 months.
- None of the participants continue for 3-6 months.
- Few maintain their diet for 6-12 months (14.3%) or more than 1 year (28.6%).
- Prediction: Individuals in the Obese Class 1 category tend to start diets but have difficulty maintaining them beyond 3 months, with a small fraction showing long-term commitment.

5. Obese Class 2 (BMI > 35 kg/m²)

- Half (50%) follow a diet for 0-3 months.
- A few (16.7%) continue for 3-6 months.
- None maintain their diet for 6-12 months.
- A third (33.3%) persist for more than 1 year.
- Prediction: While many in Obese Class 2 start with short-term diets, a significant proportion exhibit long-term commitment, potentially due to greater health motivations.

- Short-term Commitment: Across all BMI categories, there is a tendency for higher percentages of individuals to start with short-term diet plans (0-3 months).
- Medium-term Commitment: The 3-6 month duration shows the highest adherence in the Normal and Overweight categories, suggesting a critical period for sustaining dietary changes.
- Long-term Commitment: Higher BMI categories (Obese Class 1 and 2) show a more polarized distribution, with some individuals committing to diets for more than a year, possibly indicating the necessity for sustained efforts due to health concerns.

These trends suggest that interventions aimed at increasing diet adherence should consider the varying commitment levels across BMI categories, with tailored support for those at risk of short-term dropouts.

TABLE 3.10. PURPOSE OF FOLLOWING SPECIAL DIET

Purpose	Frequency (N)	Percentage (%)
Weight Loss	37	37.0
Weight Gain	32	32.0
Maintenance	31	31.0
Total	100	100.0

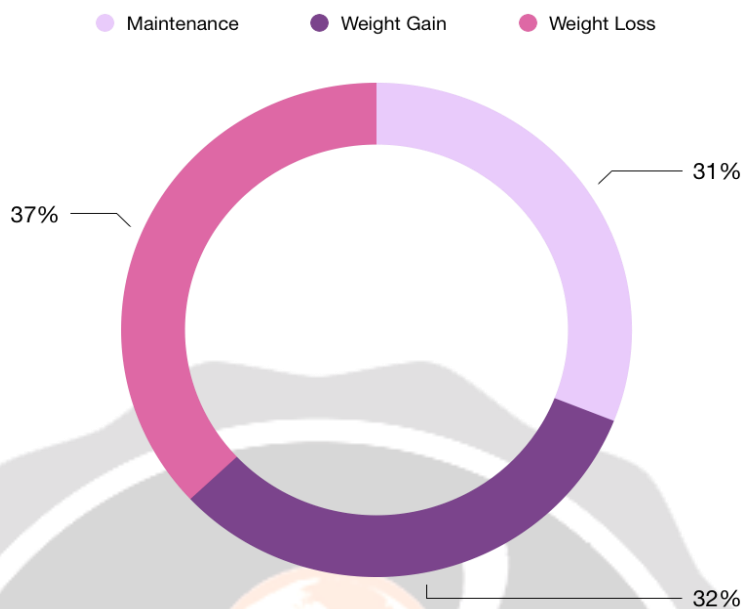


Figure 3.6. Purpose of following special diet

The study population’s purpose for following special diets varied, with the majority focusing on Weight Loss (37%) and Weight Gain (32%). This suggests that a significant portion of participants had specific goals related to altering their body weight. The nearly equal distribution between Weight Loss and Weight Gain indicates a balanced representation of individuals aiming to either lose or gain weight within the study population. Additionally, Maintenance (31%) was also a notable purpose, indicating a substantial portion of participants focused on sustaining their current weight. This balanced distribution reflects a diverse range of goals and objectives among the study population, with a significant emphasis on weight management.

TABLE 3.11. PHYSICAL CHANGES WHILE FOLLOWING SPECIAL DIET

Changes	Frequency (N)	Percentage (%)
Gained weight	28	28.0
Lost weight	43	43.0
Maintained weight	16	16.0
No significant change	13	13.0
Total	100	100.0

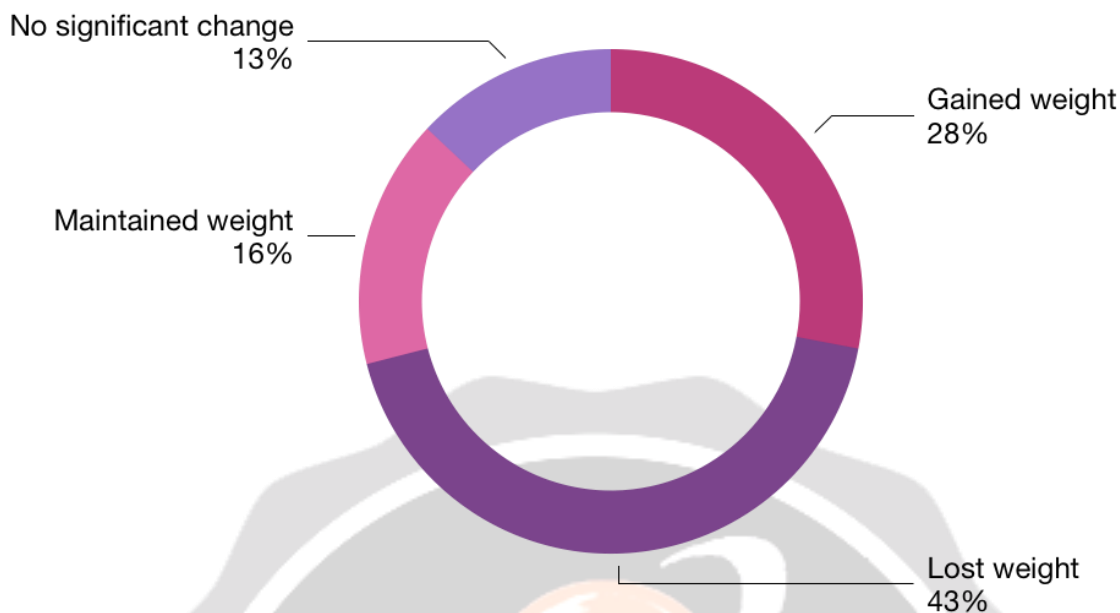


Figure 3.7. Physical changes while following special diet

The physical changes observed during the special diet varied among participants. While 43% experienced weight loss and 28% gained weight, 16% maintained their weight, and 13% saw no significant change. These outcomes reflect diverse responses to the diet.

These changes also suggest that participants had different goals for the diet. While some aimed to lose weight, others wanted to gain weight or maintain their current weight. These varying objectives influenced the outcomes, underscoring the importance of personalised dietary approaches.

TABLE 3.12. CHI SQUARE & P VALUE DATA OF EFFECTS BASED ON DIET PURPOSE:

What is the purpose of your diet?	Have you observed any differences in your body weight since beginning this diet?							
	Gained weight		Lost weight		Maintained weight		No significant change	
	N	%	N	%	N	%	N	%
Maintenance	5	17.9%	11	25.6%	11	68.8%	4	30.8%
Weight Gain	23	82.1%	2	4.7%	4	25.0%	3	23.1%
Weight Loss	0	.0%	30	69.8%	1	6.2%	6	46.2%
Total	28	100.0%	43	100.0%	16	100.0%	13	100.0%

Applied χ^2 test for significance. χ^2 value=69.164; df=6; p-value= <0.001; consider highly significant.

The chi-square test results ($\chi^2 = 69.164$, $df = 6$, $p < 0.001$) indicate a highly significant association between the purpose of the diet and observed weight changes, revealing distinct patterns in outcomes based on dietary goals. For maintenance diets, 68.8% of participants successfully maintained their weight, while 25.6% lost weight and 17.9% gained weight, with 30.8% reporting no significant change, suggesting moderate variability influenced by adherence or external factors. Weight gain diets proved most effective, with 82.1% gaining weight; however, some maintained (25.0%) or observed no significant change (23.1%). Conversely, weight loss diets achieved their intended outcome for 69.8% of participants, but a notable 46.2% experienced no significant change, indicating potential challenges in adherence or other factors. No participants on weight loss diets gained weight, which underscores the partial success of these diets. The significant chi-square result underscores that diet purpose is a strong predictor of weight change, with weight gain diets showing the highest effectiveness, followed by weight loss diets, which still face substantial obstacles. To improve outcomes, especially in weight maintenance and loss, tailored interventions, regular monitoring, and psychological support are recommended. Further research should explore the specific factors impacting diet adherence and effectiveness, particularly for those on weight loss diets. Overall, these findings emphasize the need for individualised, comprehensive dietary strategies to enhance adherence and achieve desired weight management goals.

TABLE 3.13. LEARNING ABOUT THE SPECIAL DIET

Source	Frequency (N)	Percentage (%)
Dietitian/Nutritionist	39	39.0
Friends or family	20	20.0
Internet (websites, social media)	35	35.0
Books or magazines	2	2.0
Other	4	4.0
Total	100	100.0

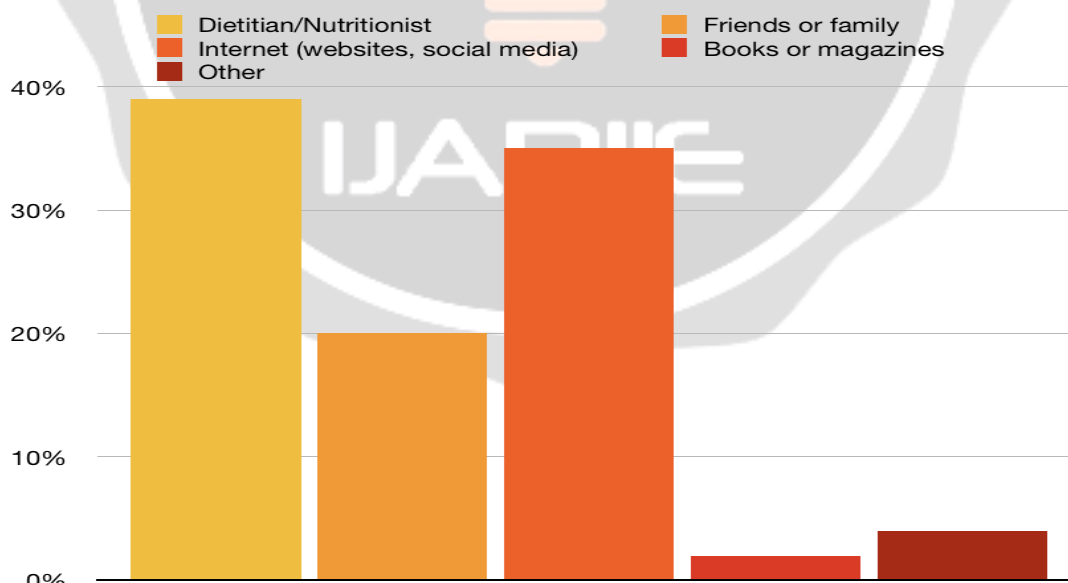


Figure 3.8. Learning about the special diet

The study population obtained dietary advice from various sources while following the special diet. A significant portion, comprising 39%, consulted dietitian or nutritionists, indicating a preference for professional guidance. Additionally, 35% relied on the internet, including websites and social media platforms, suggesting the widespread use

of online resources for dietary information. Friends or family members served as sources of dietary advice for 20% of participants, while only a small percentage, 2%, referred to books or magazines. Other miscellaneous sources accounted for 4%.

Comparing these sources highlights the prevalence of seeking guidance from dietitian or nutritionists, indicating trust in expert advice. The reliance on the internet underscores its role as a readily accessible and convenient source of information. Consulting friends or family members suggests the influence of personal networks and social support in dietary decision making. Overall, these findings emphasize the importance of considering a diverse range of sources when seeking dietary advice and the need for evidence-based and personalised approaches to nutrition.

TABLE 3.14. ACHIEVEMENT OF GOAL

Achievement	Frequency (N)	Percentage (%)
Yes	45	45.0
No	28	28.0
Maybe	27	27.0
Total	100	100.0

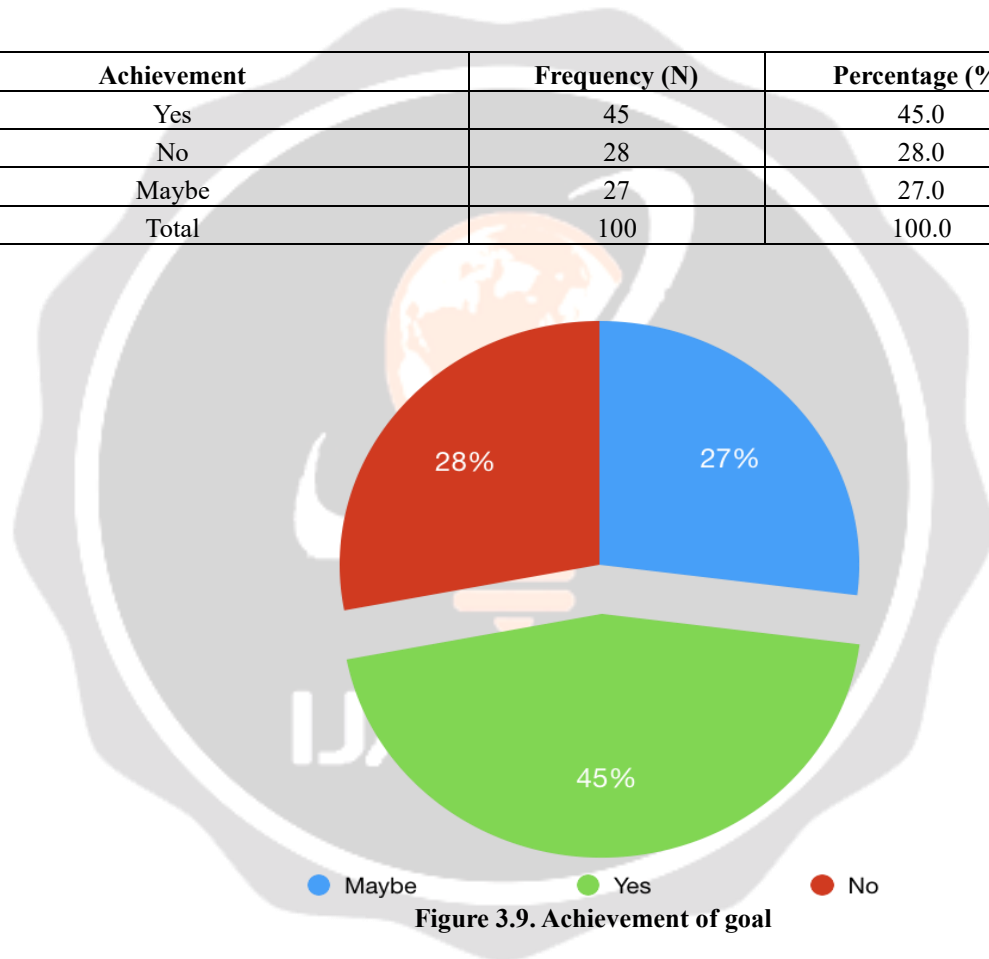


Figure 3.9. Achievement of goal

The achievement of goals among the study population following the special diet varied, with 45% reporting success, 28% indicating failure, and 27% uncertain about their outcomes.

This distribution suggests a mixed response to the dietary interventions, with a notable proportion experiencing success in achieving their goals. Conversely, a significant portion did not achieve their desired outcomes, while others remained unsure about their achievements.

Comparing these results highlights the diverse experiences and outcomes among participants, indicating that success in following the special diet was not universal. These findings underscore the need for personalised approaches to dietary interventions, tailored to individual goals and needs, to enhance the likelihood of achieving desired outcomes.

TABLE 3.15. CHI SQUARE & P VALUE DATA OF ACHIEVEMENTS BASED ON SOURCE PLAN

How did you learn about your diet plan?	Have you achieved your desired goals with this diet?					
	Maybe		No		Yes	
	N	%	N	%	N	%
Books or magazines	1	3.7%	1	3.6%	0	.0%
Dietitian/Nutritionist	8	29.6%	4	14.3%	27	60.0%
Friends or family	6	22.2%	7	25.0%	7	15.6%
Internet (websites, social media)	11	40.7%	15	53.6%	9	20.0%
Other	1	3.7%	1	3.6%	2	4.4%
Total	27	100.0%	28	100.0%	45	100.0%

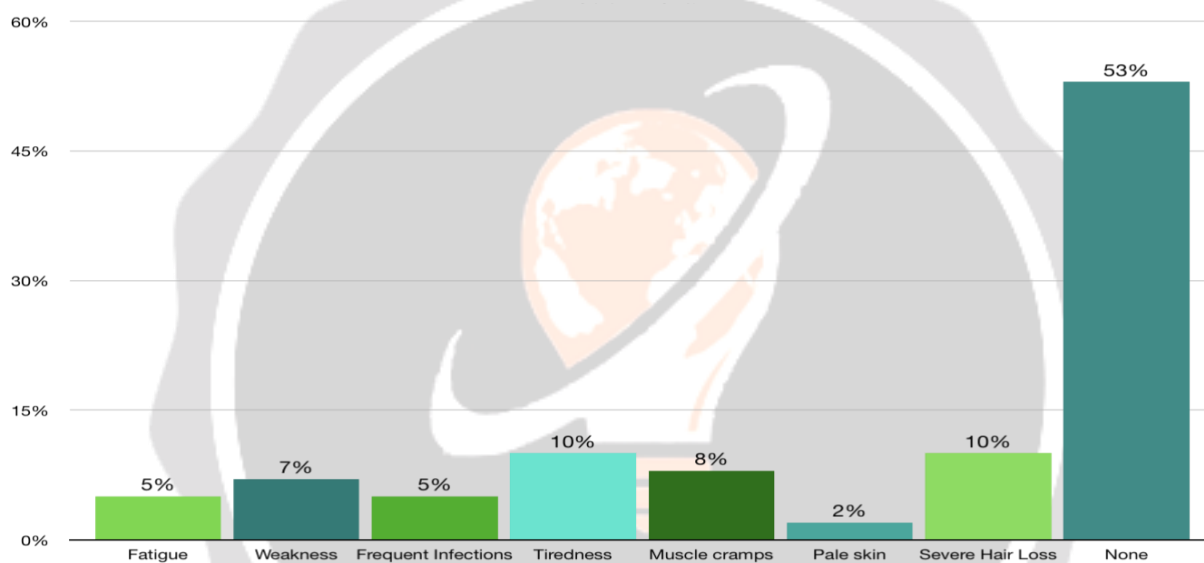
Applied χ^2 test for significance. χ^2 value=18.53; df=8; p-value= <0.001; consider highly significant. Based on the data and chi-square test results ($\chi^2 = 18.53$, df = 8, p < 0.001), there is a highly significant association between the source of diet information and the achievement of desired goals. Participants who learned about their diet plan from a dietitian/nutritionist had the highest success rate, with 60% achieving their goals, indicating professional guidance significantly enhances the likelihood of success. Those who got their information from the internet showed the highest uncertainty, with 53.6% reporting “maybe” in achieving their goals and only 20% achieving their goals, suggesting that online information might be less reliable or harder to implement effectively. Friends or family as a source led to mixed outcomes, with 25% reporting “no” and 15.6% achieving their goals, indicating varied reliability. Books or magazines and other sources had the least impact, with very few participants achieving their goals. The chi-square result confirms that the source of diet information is a crucial factor in determining diet success.

1. Dietitian/Nutritionist as Key to Success: Professional guidance is the most effective way to achieve diet goals, highlighting the importance of expert advice in dietary planning.
2. Internet as a Double-Edged Sword: While the internet is a popular source, the high percentage of “maybe” responses indicates that information obtained online is often insufficient or challenging to apply correctly without professional help.
3. Variability in Informal Sources: Friends or family provide mixed outcomes, reflecting the inconsistency and potential lack of expertise in their advice.

Limited Impact of Books/Magazines and Other Sources: These sources are less effective in helping individuals achieve their diet goals, potentially due to outdated information or lack of personalized advice.

TABLE 3.16. OBSERVATION OF ANY SYMPTOMS WHILE FOLLOWING DIET

Symptoms	Frequency (N)	Percentage (%)
Fatigue	5	5.0
Weakness	7	7.0
Frequent Infections	5	5.0
Tiredness	10	10.0
Muscle cramps	8	8.0
Pale skin	2	2.0
Severe Hair Loss	10	10.0
None	53	53.0
Total	100	100.0

**Figure 3.10. Observation of any symptoms while following diet**

The symptoms reported while following the special diet among the study population varied, with fatigue, weakness, frequent infections, tiredness, muscle cramps, and pale skin being among the notable ones.

Fatigue and tiredness were the most commonly reported symptoms, with 10% of participants experiencing each. Weakness and muscle cramps were reported by 7% and 8% of individuals, respectively. Frequent infections and pale skin were less commonly reported, each at 5%. Surprisingly, the majority, comprising 53% of participants, reported experiencing no symptoms.

Comparing these symptoms underscores the varied experiences among participants, with fatigue and tiredness being the most prevalent concerns. These findings highlight the importance of monitoring and addressing potential adverse effects of dietary interventions, as well as the need for personalised approaches to optimize health outcomes while following special diets.

4. CONCLUSION

In conclusion, the study "To Study Special Diets Followed by Young Adults for Weight Management: Assessing Effects and Outcomes" underscores the significance of understanding the diverse dietary practices and outcomes among young adults engaged in weight management. The findings highlight the prevalence of various types of diets, ranging from High Protein to Vegan, and the different purposes behind adopting these diets, whether it's for weight loss, weight gain, or weight maintenance.

While many participants reported success in achieving their intended goals, there were also instances of partial success or failure, emphasizing the individual variability in response to dietary interventions. Moreover, the study revealed challenges in maintaining dietary changes over extended periods, suggesting the need for ongoing support and interventions to sustain healthy dietary habits.

The reliance on various sources of dietary advice, including the internet and professional guidance from dietitian, underscores the importance of accessible and evidence-based nutritional information in guiding dietary choices among young adults. However, the study also identified common symptoms experienced by participants, highlighting the importance of monitoring and addressing potential adverse effects of dietary interventions.

Overall, the study provides valuable insights into the complex relationship between special diets, weight management, and health outcomes among young adults. It emphasizes the need for personalized approaches to dietary interventions tailored to individual goals and needs to optimize health outcomes effectively.

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