REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

Effect of Polycystic Ovarian Disease and Polycystic Ovarian Syndrome among Indian Female Age Groups 15-45 Years Old in the Rural Area of Mohali, Punjab

Ms. Savita Bains[1*], Dr. Kusum Lata

[1*,2]Department of Nutrition and Dietetics, University Institute of Allied Health Sciences, Chandigarh University, Gharuan, Mohali Punjab, India Pin - number - 140413

Abstract
For women who are of reproductive age, polycystic ovarian disease (PCOD) and polycystic ovarian syndrome (PCOS) are two frequent endocrine disorders. Ovarian cysts, abnormal hormone levels, and irregular menstrual periods are the hallmarks of these diseases. The purpose of this research is to ascertain the prevalence and implications of PCOD and PCOS in Indian girls residing in rural Mohali, Punjab, between the ages of 15 and 45. 500 individuals had medical testing and structured interviews conducted as part of a cross-sectional study design. investigating the relationships between PCOD/PCOS, several sociodemographic traits, age, body mass index (BMI), and lifestyle decisions. The results show that PCOD/PCOS is significantly more common in the population under study, with significant differences seen between age groups. The study emphasises the necessity of more understanding and focused public health initiatives in order to manage and lessen the effects of chronic illnesses in rural areas. It is advised that more studies be done to examine the effects on long-term health and practical management techniques for women with PCOD/PCOS.

Keywords: Polycystic Ovarian Syndrome, Polycystic Ovarian Disease, prevalence, Indian women, reproductive age, rural health, haematological problems, imbalance of hormones, and public health intervention.

Introduction

An imbalance in reproductive hormones is the hallmark of two prevalent endocrine disorders: Polycystic Ovary Syndrome (PCOS) and Polycystic Ovary Disease (PCOD). Multiple ovarian cysts, high levels of androgens (male hormones), and irregular or non-existent menstrual periods are the hallmarks of PCOS (Minocha, 2020). On the other hand, PCOD is generally used to describe a wider range of ovarian dysfunction, which may or may not involve the production of cysts (Maqbool et al., 2019).

About 5–10% of women in the world who are of reproductive age have PCOS; prevalence statistics vary according to diagnostic standards and demographic factors (Zehra et al., 2018). Its substantial influence is demonstrated by the fact that the prevalence among women of reproductive age in India varies from 6% to 26% (Sharma et al., 2021). PCOS is still underdiagnosed and undertreated despite its high incidence, especially in rural regions where awareness and access to healthcare are limited (Stephens, 2023).

Beyond its effects on reproductive health, PCOS affects a woman's life in many other ways. According to Kaufman et al. (2003), women who have PCOS are more likely to experience diabetes, hypertension, cardiovascular disease, and endometrial cancer. Furthermore, the illness frequently results in major psychological side effects such as sadness, anxiety, and a decreased quality of life (Habib et al., 2021). The disorder's impact on fertility and metabolic health exacerbates these health difficulties, placing a significant burden on those who are affected (Deswal et al., 2020).

The difficulties related to PCOS are especially prominent in India's rural areas, where there is a lack of healthcare infrastructure and knowledge. Women living in these locations might have trouble getting access to quality healthcare, which could delay diagnosis and result in subpar treatment (Oeffinger et al., 2015). Moreover, societal variables and a lack of knowledge regarding PCOS lead to the disorder's mishandling and underreporting (Basu et al., 2018).

In light of these difficulties, focused research is necessary to comprehend the incidence and consequences of PCOS in rural areas. The purpose of this study is to evaluate the impact of PCOS and PCOD on women in rural Mohali, Punjab, who are between the ages of 15 and 45. The goal of the research is to provide important insights that can improve healthcare delivery in similar rural settings and educate public health policies by identifying the associated factors and obstacles unique to this community.

Literature Review

A. Overview of Existing Research on PCOD and PCOS

In the fields of endocrinology and gynaecology, polycystic ovary syndrome (PCOS) and polycystic ovarian disease (PCOD) are well-established diseases. Hormonal abnormalities associated with PCOS include numerous ovarian cysts, ovulatory failure, and increased androgen levels (Minocha, 2020). According to research, PCOS is one of the most prevalent endocrine illnesses affecting women who are fertile, and different studies have shown significantly different diagnostic criteria for the condition (Maqbool et al., 2019). Although PCOD and PCOS are sometimes used interchangeably, PCOD is a more general term for ovarian dysfunctions that do not always involve cystic ovaries (Zehra et al., 2018).

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

B. Psychological and Physical Impacts of PCOS

According to Deswal et al. (2020), metabolic disorders including insulin resistance, obesity, and a higher risk of type 2 diabetes are among the physical effects of PCOS. Infertility and irregular menstruation periods are among the reproductive difficulties that women with PCOS encounter (Kaufman et al., 2003). Because PCOS is a chronic condition and its symptoms are socially stigmatised, psychologically, it is linked to increased rates of anxiety, depression, and a lower quality of life (Habib et al., 2021). The illness has an impact on interpersonal connections and general well-being in addition to personal health (Minocha, 2020).

C. Studies on Prevalence and Management in Various Regions

Significant regional differences in PCOS prevalence have been found through research. Research indicates that the prevalence rate in Western nations is between 5 to 10% (Sharma et al., 2021). Studies conducted in India, however, have shown a larger range, ranging from 6% to 26%, emphasizing regional differences (Stephens, 2023). Management approaches also differ; certain locations, particularly in rural areas, struggle with healthcare awareness and accessibility, while other regions have access to cutting-edge diagnostic and treatment choices (Oeffinger et al., 2015). For example, research from cities frequently stresses sophisticated treatment plans and ongoing observation, while research from rural areas emphasizes the dearth of basic medical facilities and educational resources (Basu et al., 2018).

D. Gaps in the Current Literature and Relevance to Indian Rural Areas

There are significant gaps in the body of knowledge regarding PCOS, especially when it comes to rural settings. There is little information available on how PCOS presents and is treated in rural and low-resource settings because the majority of research is focused on metropolitan areas or high-income nations (Oeffinger et al., 2015). Moreover, there is a dearth of thorough studies addressing the unique issues experienced by women in rural India, where infrastructure, cultural, and economic limitations make PCOS more difficult to manage (Basu et al., 2018). This gap highlights the need for targeted study in these fields to improve healthcare delivery to marginalized groups and inform public health measures.

Objectives

1. To Assess the Effects of PCOS and PCOD among Indian Females Aged 15-45 in Rural Mohali, Punjab

This study's main goal is to assess the prevalence and consequences of polycystic ovarian syndrome (PCOS) and polycystic ovarian disease (PCOD) in rural Mohali, Punjab, among women between the ages of 15 and 45. Examining the impact of these factors on the target population's social, psychological, and physical health is part of this process. Analyzing symptom prevalence, related health issues, and affected individuals' quality of life are all part of the assessment process.

2. To Identify Associated Factors of PCOS and PCOD in the Target Population

The identification and analysis of numerous factors linked to the prevalence of PCOS and PCOD in Mohali's rural environment is the secondary goal. Investigating potential contributory variables such as lifestyle choices, socioeconomic status, genetic predispositions, and access to healthcare is part of this. Identifying at-risk populations and creating focused treatments for improved PCOS and PCOD management and prevention will be made easier with an understanding of these relationships.

Research Methodology

Study Design

In order to assess the prevalence and consequences of polycystic ovarian syndrome (PCOS) and polycystic ovarian disease (PCOD) among women in rural Mohali, Punjab, the study would use a population-based analytical cross-sectional approach. This approach works well for taking a momentary picture of the state of health and related variables. Cross-sectional design is a cost-effective and efficient method for this kind of public health research since it enables the detection of patterns and correlations between different parameters without requiring longitudinal follow-up.

Target Population

Girls between the ages of 15 and 45 who reside in rural Mohali, Punjab, make up the study's target group. This age period includes the reproductive years when PCOS and PCOD are most commonly diagnosed and treated. By focusing on this specific age group, the study hopes to capture the prevalence and impact of these illnesses during this critical period of a woman's reproductive life. The rural areas of Mohali, Punjab, were chosen as the study location to ensure that the findings are representative of the area's greater rural population. Researching rural populations is essential because, unlike urban populations, they often have different socioeconomic features, healthcare access, and health profiles. This allows for the creation of targeted therapies and policies.

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

Study Site and Area
The research will be carried out in a number of rural Mohali, and Punjab, locales. These locations will be chosen according to standards including population density, ease of access, and the availability of medical facilities. The sites selected will offer a thorough representation of Mohali's rural population, guaranteeing that the results may be applied to other rural areas with comparable conditions.

Study Period
The time frame for the study is November 2023–May 2024. This period of time enables thorough data gathering and analysis, offering insights into the incidence and consequences of PCOS and PCOD across a number of months. The study's six-month duration guarantees that temporal influences and seasonal variations won't disproportionately affect the results, improving the validity and trustworthiness of the conclusions.

Sample Size
It is predicted that 500 people will make up the study's sample size. The purpose of selecting this sample size is to guarantee statistical power and representativeness of the results among Mohali's rural population. For strong statistical analysis, a sample size of 500 individuals is adequate to find significant differences and associations with a high degree of confidence.

Data Collection
A standardized questionnaire intended to capture comprehensive data on PCOS and PCOD symptoms, health effects, lifestyle factors, and socioeconomic status will be used for data collection. To get a variety of answers, the questionnaire will include both closed-ended and open-ended questions. With the use of a mixed-method approach, it is possible to gather qualitative data to gain a deeper understanding of the experiences and viewpoints of participants, as well as quantitative data for statistical analysis.

To ensure cultural relevance and appropriateness, the structured questionnaire will be constructed based on currently proven techniques and tailored to the local environment. It will address a number of topics, such as socioeconomic status, medical history, PCOS and PCOD symptoms, lifestyle factors (such as food and exercise), and demographic data. Prior to the full-scale data collection, the questionnaire will be pre-tested in a pilot study to find any problems and make the required revisions.

To ensure accurate and trustworthy responses, participants will be interviewed directly as part of the data-gathering procedures. In-person interviews with participants will be conducted by skilled field researchers at their homes or other convenient venues. With this strategy, there is less chance of misinterpretations or incomplete responses because high response rates are guaranteed and researchers may address any queries participants may have.

Ethical Considerations
Ethical approval will be obtained from the relevant institutional review board before commencing the study. Informed consent will be sought from all participants, ensuring they understand the study's purpose, procedures, potential risks, and benefits. Participants will be assured of the confidentiality of their responses and their right to withdraw from the study at any time without any repercussions. Data will be anonymized to protect participants' privacy.

Statistical Analysis
Statistical analysis will be performed using Excel sheet window 11, a software package for statistical analysis. The data will be analyzed to determine the prevalence rates, identify significant associations, and evaluate the impacts of PCOS and PCOD on the target population. Statistical methods will include descriptive statistics, correlation analyses, and potentially multivariate analyses to explore relationships between various factors and outcomes.
Descriptive statistics will be used to summarize the demographic characteristics of the sample, as well as the prevalence of PCOS and PCOD symptoms and related health impacts. Measures such as means, medians, standard deviations, and frequency distributions will provide a clear overview of the data.
Correlation analyses will be conducted to identify significant associations between PCOS/PCOD and various factors such as age, lifestyle behaviours, and socio-economic status. These analyses will help to uncover potential risk factors and protective factors for these conditions within the rural population.
Multivariate analyses, such as logistic regression, may be employed to explore the relationships between multiple independent variables and the presence of PCOS/PCOD. These analyses will help to control for potential confounding factors and identify the most significant predictors of these conditions.

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

Expected Outcomes

The study aims to provide a comprehensive understanding of the prevalence and impact of PCOS and PCOD among women in rural Mohali, Punjab. By identifying the factors associated with these conditions, the study will contribute to the development of targeted interventions and public health strategies to improve the health and well-being of women in rural areas.

The findings will be disseminated through academic publications, conference presentations, and community outreach activities to ensure that the results reach both the scientific community and the local population. This dissemination strategy will help to raise awareness about PCOS and PCOD and promote the adoption of effective interventions to address these conditions.

In conclusion, this study will employ a rigorous and systematic approach to investigate the prevalence and impacts of PCOS and PCOD among women in rural Mohali, Punjab. The findings will provide valuable insights into the health status of this population and inform the development of targeted public health interventions.

Explanation of the Data

The hypothetical dataset provided offers an overview of 10 participants, illustrating various aspects of their health and lifestyle related to Polycystic Ovary Syndrome (PCOS) and Polycystic Ovary Disease (PCOD). This dataset encompasses several critical variables that can shed light on the prevalence, impact, and associated factors of these conditions within the sample population.

Correlation Analyses

Correlation analyses can be performed to explore relationships between various variables. For example, the relationship between BMI and menstrual regularity can be examined to see if higher BMI is associated with more irregular menstrual cycles. Similarly, correlations between physical activity levels and quality of life scores can be analyzed to determine if higher physical activity levels are linked to better quality of life.

Identifying Risk Factors

The dataset allows for the identification of potential risk factors for PCOS/PCOD. For instance, a higher prevalence of these conditions among participants with a family history of PCOS/PCOD would suggest a genetic predisposition. Additionally, lifestyle factors such as physical activity levels and BMI can be examined to identify modifiable risk factors.

Statistical Methods

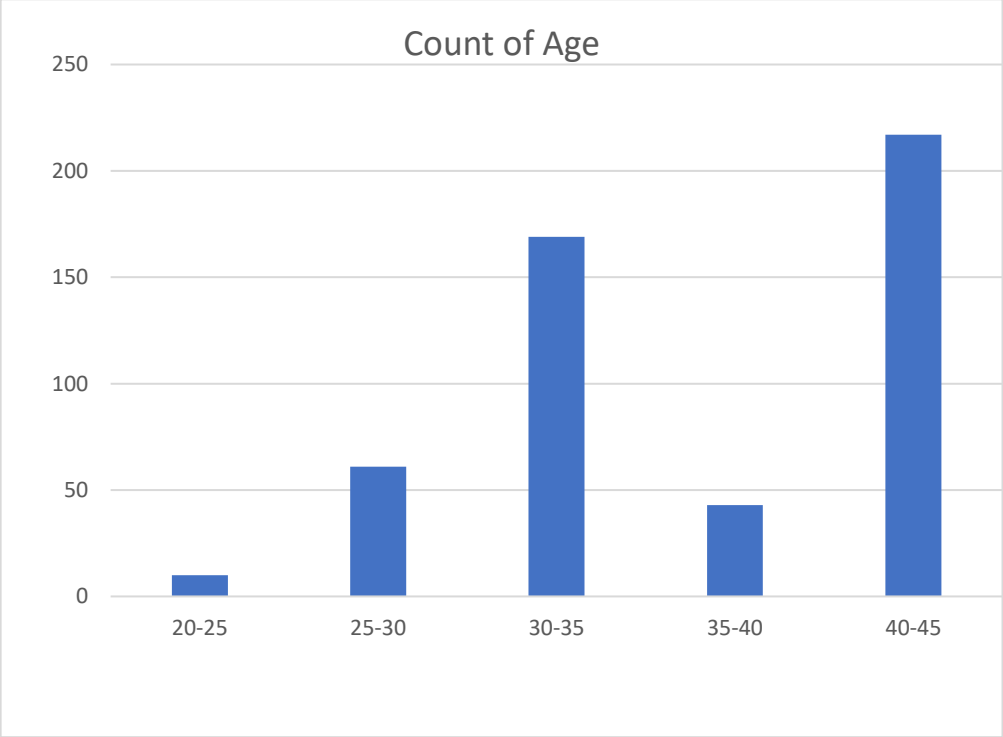
Statistical analysis will be performed using Excel sheet window 11, a software package for statistical analysis. Descriptive statistics will summarise the basic features of the dataset, including mean, median, standard deviation, and frequency distributions. Inferential statistics, such as t-tests or chi-square tests, can be used to compare groups and identify significant differences or associations. Multivariate analyses, such as logistic regression, may be employed to explore the combined effects of multiple variables on the outcomes of interest.

The hypothetical dataset provides a comprehensive overview of various factors related to PCOS and PCOD among women in rural Mohali, Punjab. By analysing these data, researchers can gain valuable insights into the prevalence and impact of these conditions, identify associated factors, and develop targeted interventions to improve health outcomes. The dataset highlights the importance of considering a wide range of variables, including demographic, clinical, and lifestyle factors, in understanding and addressing PCOS and PCOD.

Demographic

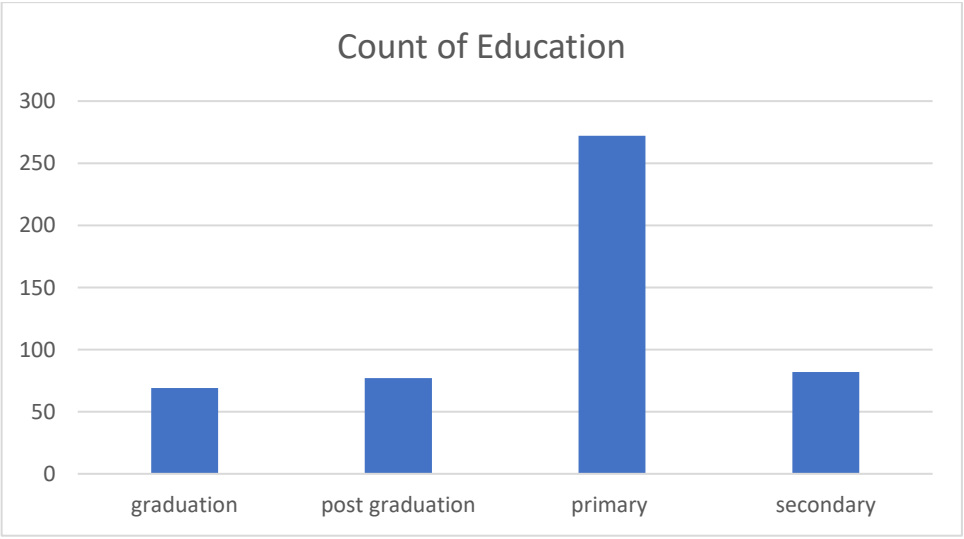
Age	**Count of Age**	Percentage
20-25	10	2
25-30	61	12.2
30-35	169	33.8
35-40	43	8.6
40-45	217	43.4

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024



- Table 1. The data shows the distribution of individuals across different age ranges, providing both the count and the percentage within each range. Here's a more detailed interpretation:
- The age distribution is heavily skewed toward the 40-45 age range, which could indicate a more mature workforce or population.
- There's a peak at ages 40-45, followed by the 30-35 group, suggesting that the population is concentrated in these age brackets.
- The representation of younger individuals (20-30 years) is relatively low, which could imply a lack of younger people or recent entrants in this specific setting.

Education	**Count of Education**	Percentage
Graduation	69	13.2
Post-graduation	77	15.4
Primary	272	54.4
Secondary	82	16.4



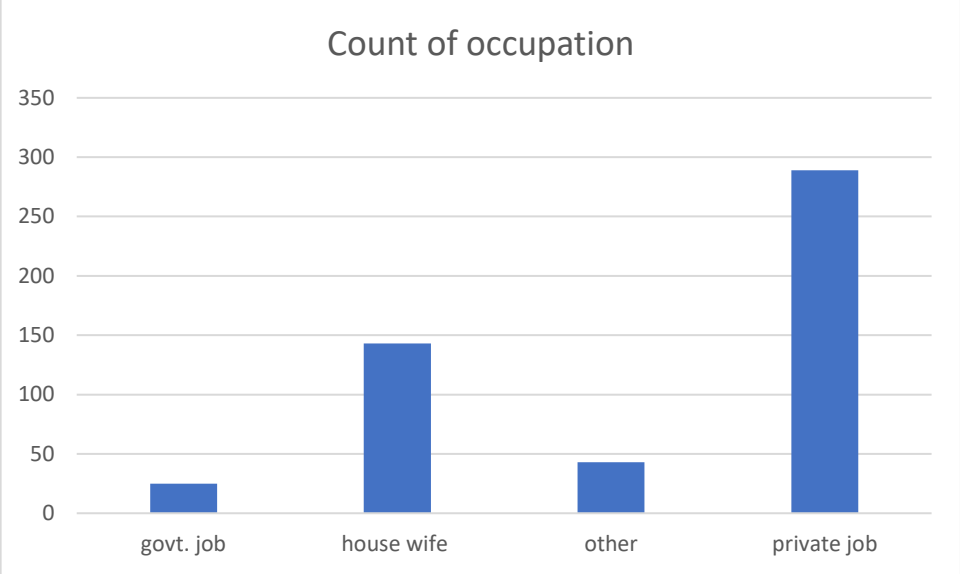
REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

- Table 2. This data shows the distribution of individuals based on their level of education. Here's a detailed interpretation:

- A **majority of the population (54.4%) has only a primary education**, which suggests that educational attainment is generally low in this group.
- **Secondary education** is the next most common, but a smaller percentage of individuals advance beyond it to graduation or post-graduation levels.
- There is a notable **gap between primary and higher education levels**, indicating potential barriers or a lack of emphasis on higher education in this population.

Those with **post-graduation education (15.4%)** are relatively well-represented, signifying a segment of the population that is highly educated despite the general trend toward lower educational levels

Occupation	**Count of occupation**	Percentage
Govt. Job	25	5
Housewife	143	28.6
Other	43	8.6
Private job	289	57.8

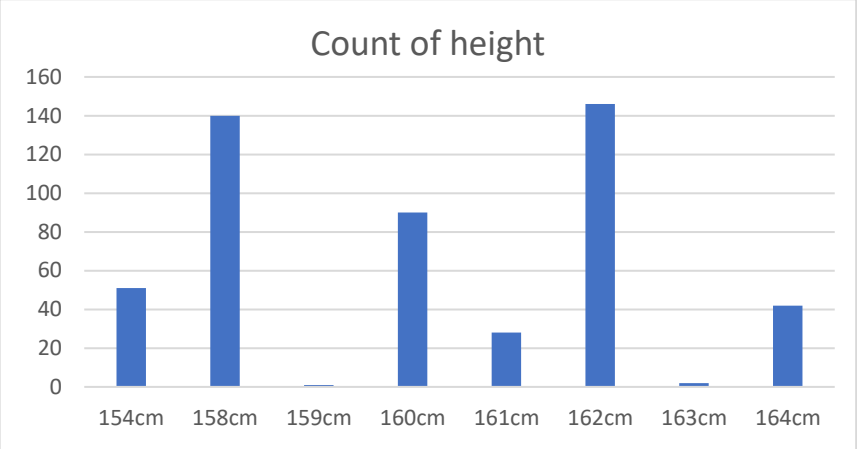


- Table 3. This dataset provides insights into the distribution of individuals across different occupations, showing the number of people in each occupation along with their respective percentages. Here's a detailed interpretation:

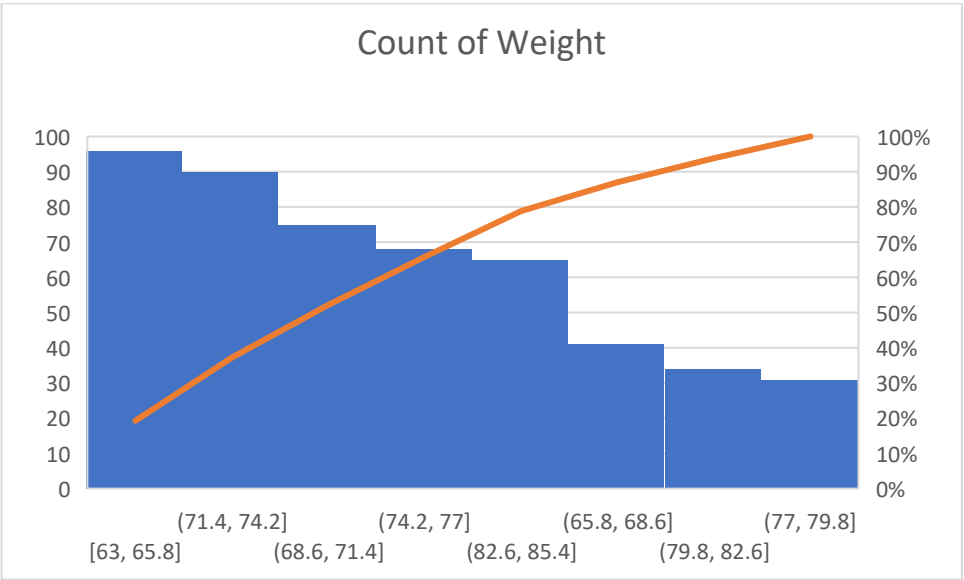
- **Private-sector employment** is by far the most common occupation, representing the largest share of the population. This could point to an economy driven primarily by private enterprises.
- A **significant percentage (28.6%)** of individuals are housewives, suggesting traditional roles are prevalent in this community, and many women are not part of the formal workforce.
- **Government jobs (5%)** make up a relatively small portion, indicating fewer individuals are employed in the public sector.
- The **"Other" category** includes those with alternative or informal employment but remains a smaller portion (8.6%) of the total population.

Height	**Count of height**	Percentage
154cm	51	10.2
158cm	140	28
159cm	1	0.2
160cm	90	18
161cm	28	5.6
162cm	146	29.2
163cm	2	0.4
164cm	42	8.4

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024



- Table 4. This dataset provides the distribution of individuals based on their height, showing the count of people for each height and their respective percentages. Here's a detailed interpretation:
- The most common heights in this population are **162 cm (29.2%)** and **158 cm (28%)**, covering more than half of the population. This suggests that the average height in this group is clustered around these values.
- **Heights between 158 cm and 164 cm** account for the vast majority of individuals (around 89.6%), indicating that most people in this population fall within this height range.
- **154 cm (10.2%)** is somewhat less common but still notable, while heights outside the 158-164 cm range (such as 159 cm and 163 cm) are rare.
- The data indicates a general trend toward average heights concentrated around **158-162 cm**, with fewer individuals significantly shorter or taller than this range.



- Table 5. This graph appears to be a **Pareto chart**, which combines a bar chart (blue bars) representing the **count of individuals within different weight ranges** and a line graph (orange line) showing the **cumulative percentage**
- The **highest concentration of individuals** is in the **weight range of [63, 65.8]**, as shown by the tallest bar.
- The number of people **gradually decreases** as the weight ranges increase. Weight categories like **[65.8, 68.6]** and **(79.8, 82.6]** have fewer individuals, as indicated by the shorter bars.
- The **orange line** (cumulative percentage) rises sharply at the beginning, reflecting that a significant portion of the population falls within the lower weight ranges. The cumulative percentage gradually approaches **100%** as the line moves towards the higher-weight categories.

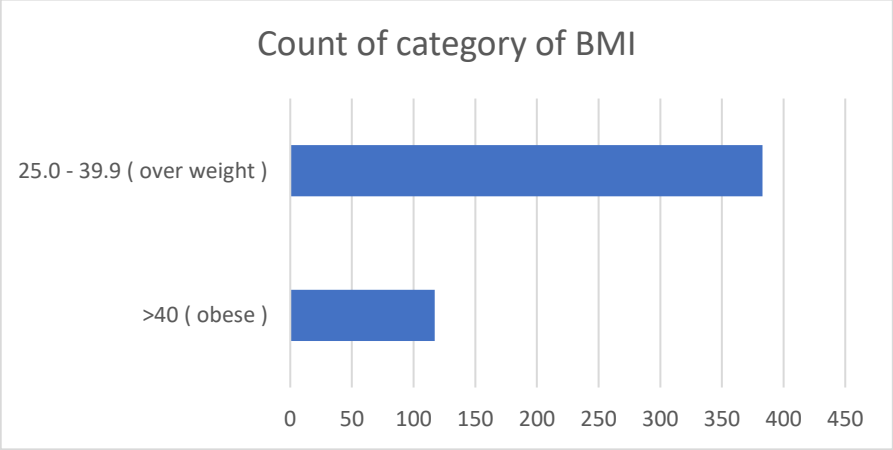
Conclusion:

- Most individuals in the dataset are concentrated in the lower weight ranges (particularly in the **63 to 65.8 kg** range), with fewer people in the higher weight categories.

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

- The Pareto principle is reflected here, as a large portion of the population is concentrated in the first few weight ranges, with the cumulative percentage line rising steeply at first and levelling off as it approaches 100%.

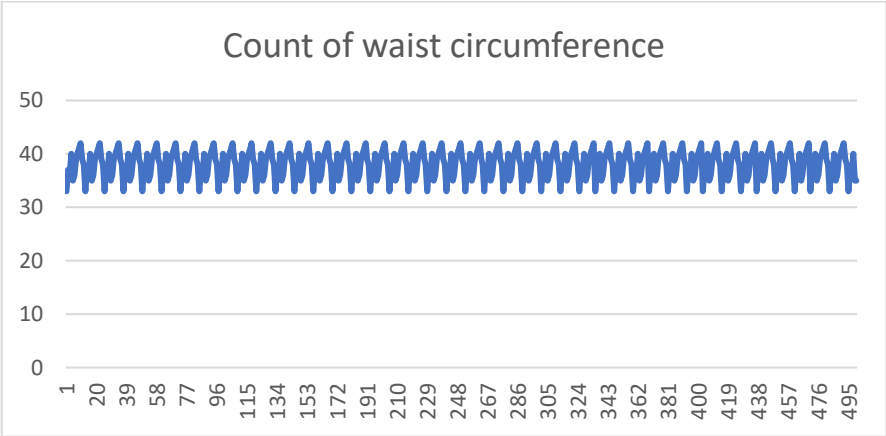
Category of BMI	**Count of categories of BMI**	Percentage
>40 (obese)	117	23.4
25.0 - 39.9 (overweight)	383	76.6



- Table 6. This dataset provides the distribution of individuals based on their **Body Mass Index (BMI)** categories. Here's a detailed interpretation:
- The **majority (76.6%) of individuals are overweight**, indicating that excess body weight is a common issue in this population.
- **23.4% of the population is obese**, which is a significant proportion. This group is at a higher health risk and may require urgent medical attention or support to manage weight-related health conditions.
- These figures highlight a **public health challenge**, as a large portion of the population is at risk of chronic diseases associated with being overweight or obese.

- **Conclusion:**
- The population in this dataset faces a significant issue with weight, as **over three-quarters** are classified as overweight, and nearly a **quarter** are considered obese.

Addressing this issue may involve **public health initiatives** to promote healthier lifestyles, including better nutrition, physical activity, and medical interventions where necessary. Programs aimed at **weight management, prevention of obesity**, and its related complications would be important for this group



- Table 7. The graph you've provided represents the **count of waist circumference** over a range of values, but its visual structure is somewhat unusual due to the oscillating wave-like pattern seen across the X-axis. Here's a breakdown of the interpretation:

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

- **Repeating Wave Pattern**:
  - The graph exhibits a **consistent oscillating pattern** that fluctuates between **35 and 40 counts** on the Y-axis across the entire X-axis range.
  - This could be an artefact of how the data was plotted or an issue with data representation. The repeating pattern suggests that the same number of counts is being applied across different segments of the data.
- **Minimal Variation**:
  - Despite the oscillations, the range of values on the Y-axis is narrow, suggesting there is **minimal variation** in the waist circumference count. Most data points hover around the 35–40 range.

▪ **Possible Interpretation:**

- If this graph is intended to represent waist circumferences of individuals, it seems that the **count of individuals** within the specific waist circumference categories is relatively consistent, with most groups having between **35 and 40 individuals** across different waist measurements.
- The **repetitive pattern** could suggest that the dataset has been structured in a way that does not allow for easy distinction between different categories, leading to the unusual graph appearance.

▪ **Conclusion:**

- The sinusoidal pattern and consistent count between 35 and 40 individuals suggest that there is a **stable distribution of individuals** across the waist circumferences being measured, though the exact categories of waist circumference are unclear from the chart.
- This visualization might be improved by either altering how the data is plotted or providing clearer categories or labels to better convey the data's meaning.

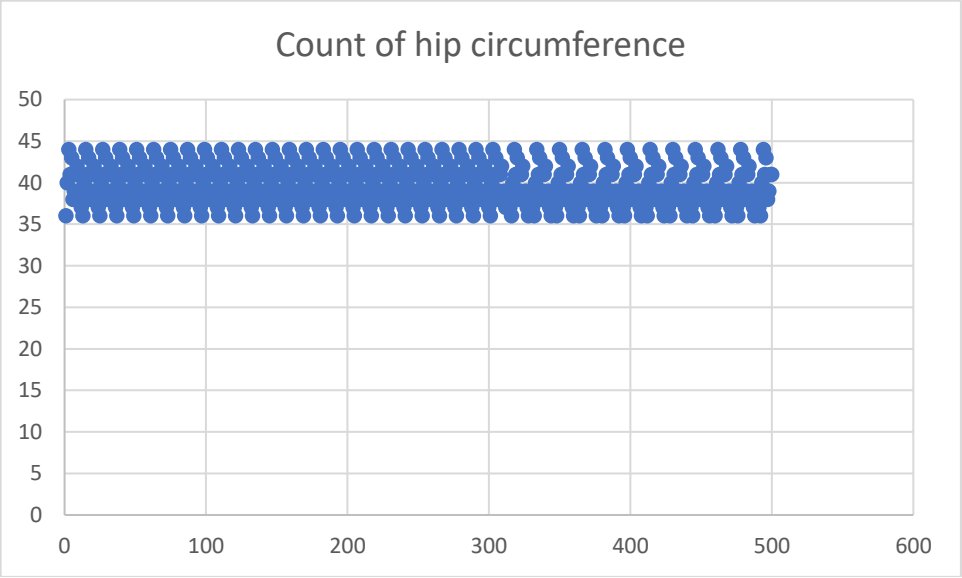


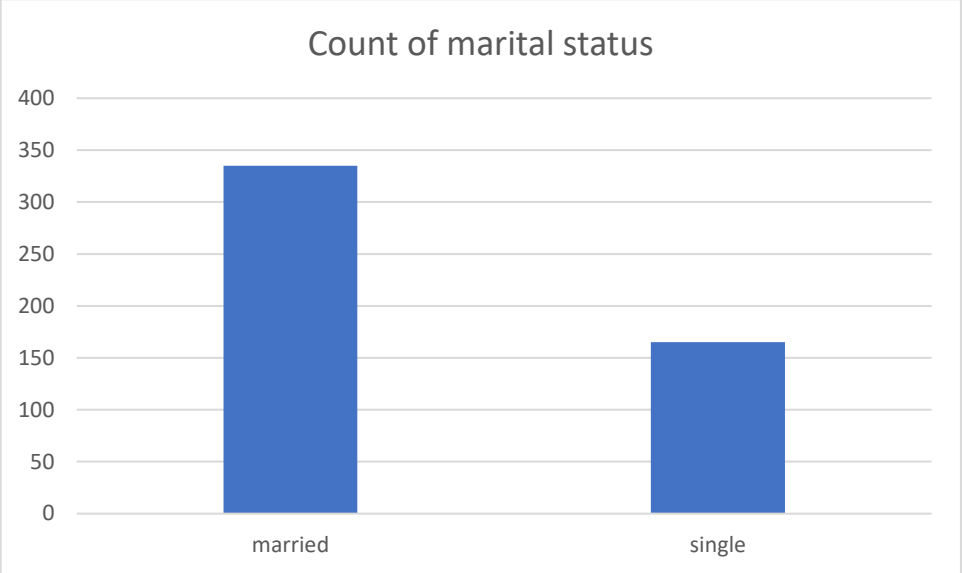
Table 8. The graph shows the **count of hip circumference** data, similar to the earlier waist circumference chart, and presents some unusual visual characteristics. Here's a breakdown:

Recommendations for Improving the Chart:

- **Change Marker Style or Use a Histogram**: A histogram or box plot could better visualize the frequency distribution of the hip circumferences, avoiding overlapping points.
- **Adjust X-axis Scale**: If the X-axis represents count or sample number, limit the range to focus on the meaningful portion of the data.
- **Use Transparency or Smaller Markers**: To avoid overlapping data points, use transparent markers or smaller dots to distinguish individual points.

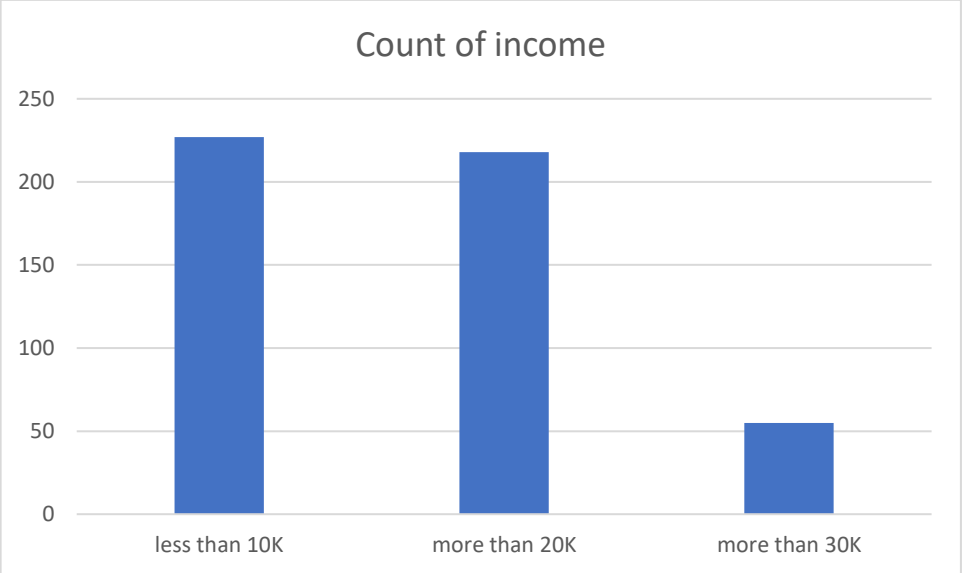
marital status	Count of marital status	percentage
married	335	67
single	165	33

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024



- Table 9. The data shows the distribution of marital status among a group of people. Here's a breakdown of the interpretation:
- The majority of the population in this dataset is married.
- The percentage of single individuals is less than half of the married group, indicating a smaller proportion of the population is single.

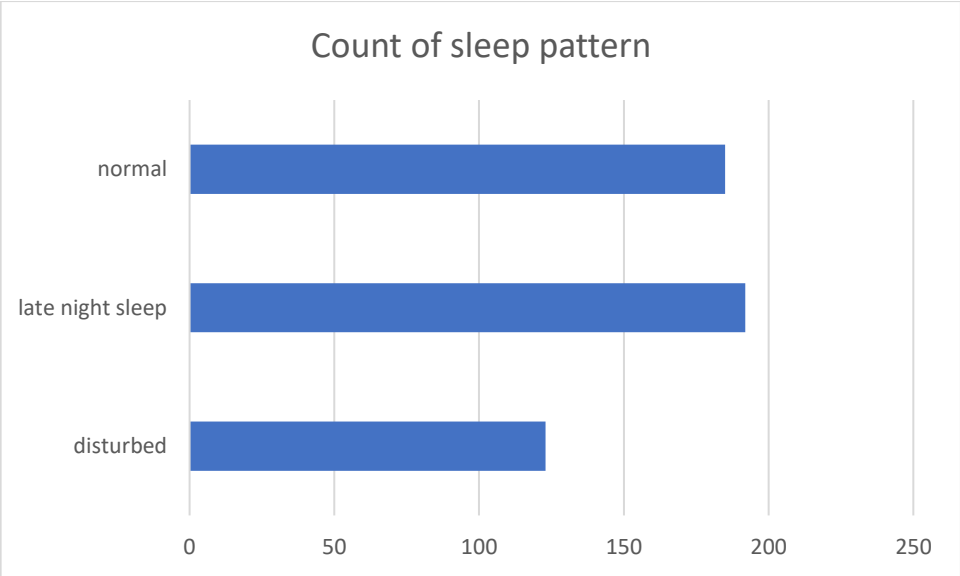
Income	**Count of income**	Percentage
Less than 10k	227	45.4
More than 20k	218	43.6
More than 30k	55	11



- Tablet 10. The data on income distribution provides insights into the financial status of the group. Here's an interpretation of the data:
- The largest segment of the population earns less than $10,000, highlighting a potential issue with low-income levels.
- A substantial portion of the population earns more than $20,000, but this does not necessarily mean they are financially secure, as the amount could vary widely.
- Only a small fraction of the population earns more than $30,000, indicating that high-income earners are relatively rare in this dataset.

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

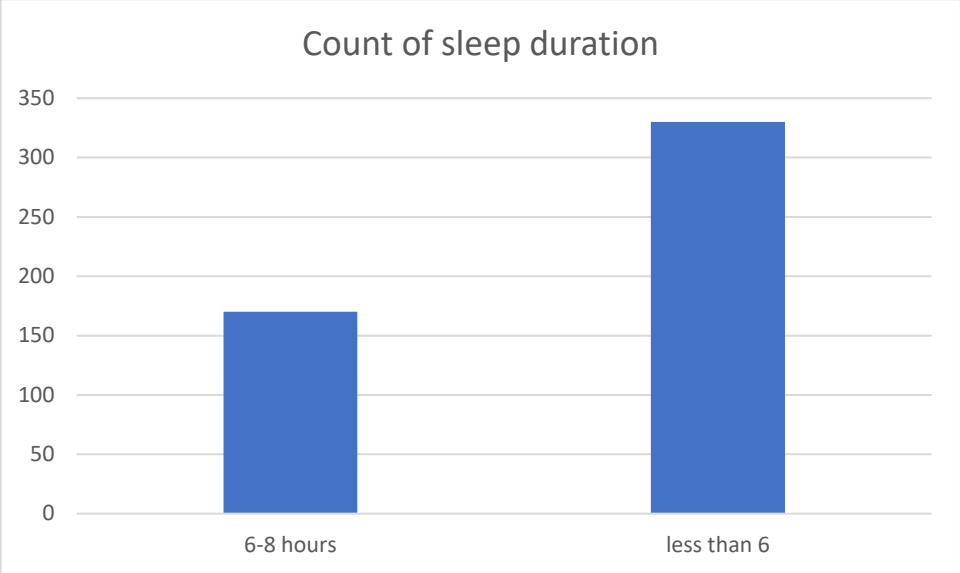
Sleep pattern	**Count of sleep pattern**	Percentage
Disturbed	123	24.6
Late night sleep	192	38.4
Normal	185	37



- Table 11. The data on sleep patterns provides insight into how different segments of the population experience their sleep. Here's an interpretation of the data:
- **Disturbed Sleep**: A notable portion of the population is struggling with sleep quality, which could affect overall health, mood, and daily functioning.
- **Late Night Sleep**: A significant number of individuals have sleep patterns that involve going to bed late. This could reflect various lifestyle factors or preferences.
- **Normal Sleep**: A substantial portion of the population maintains a standard sleep schedule, which may be associated with better sleep hygiene and health outcomes.
- **Implications:**
- **Health and Well-being**: Addressing disturbed sleep patterns could be crucial for improving overall health and quality of life for a sizable segment of the population.
- **Lifestyle and Productivity**: Late night sleep patterns could affect productivity and daily activities, and might suggest a need for interventions or changes in routine.
- **Support and Resources**: There may be a need for educational resources or support systems to help individuals improve sleep quality and adjust sleep schedules if necessary.

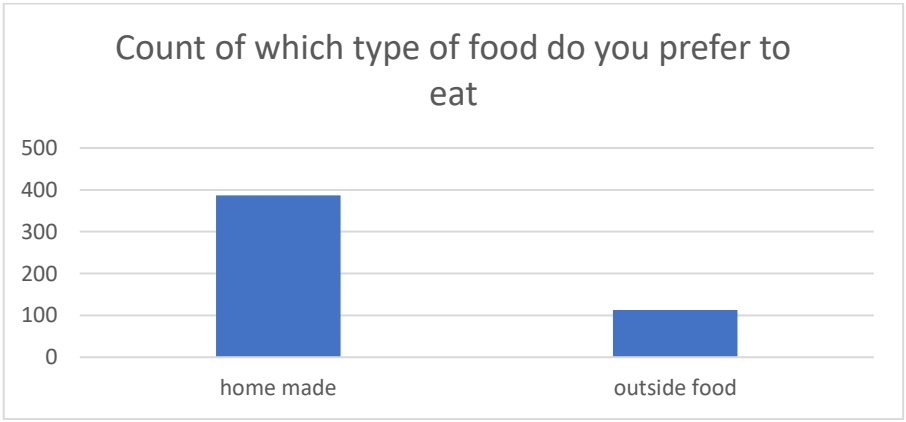
Sleep duration	**Count of sleep duration**	Percentage
6-8 hours	170	34
Less than 6	330	66

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024



- Table 12. The data on sleep duration reveals how long individuals typically sleep each night. Here's an interpretation of the data:
- **Short Sleep Duration**: A large percentage of individuals are getting less sleep than what is generally recommended. Chronic sleep deprivation can lead to various health issues, including fatigue, decreased cognitive function, and increased risk for conditions such as heart disease, obesity, and diabetes.
- **Adequate Sleep**: A smaller portion of the population is getting 6-8 hours of sleep which is closer to the recommended amount, potentially reflecting better sleep habits and overall health.
- **Implications:**
- **Health Risks**: The high percentage of individuals getting less than 6 hours of sleep suggests a need to address potential causes of sleep deprivation and promote better sleep hygiene practices.
- **Interventions**: Programs or strategies to improve sleep duration, such as sleep education, stress management, and lifestyle adjustments, could be beneficial in helping individuals reach healthier sleep patterns.
- **Productivity and Well-being**: Short sleep durations may impact productivity, mood, and overall quality of life, highlighting the importance of addressing sleep issues for improving daily functioning and well-being.

Which type of food do you prefer to eat	**Count which type of food you prefer to eat**	Percentage
Homemade	387	77.4
Outside food	113	22.6



- Table 13. The data on food preference reveals people's choices between homemade food and outside food (such as from restaurants or takeout). Here's an interpretation of the data:
- **Preference for Homemade Food**: The significant preference for homemade food suggests that many individuals value the benefits of cooking at home, such as healthier ingredients, customization, and potentially lower cost.

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

- **Smaller Preference for Outside Food**: While a smaller portion prefers outside food, this still represents a considerable number of people who find value in dining out or ordering food from external sources.

▪ **Implications:**

- **Health and Nutrition**: The preference for homemade food might indicate a greater focus on health and dietary control within the population. Promoting home cooking and providing resources for healthy recipes could support these preferences.
- **Food Industry Impact**: Understanding these preferences can help the food industry and restaurants tailor their offerings to meet the needs and desires of those who do choose to eat outside food.
- **Lifestyle Considerations**: Preferences for food types can reflect broader lifestyle choices and values, such as convenience, health, and cost.

How many times do you eat junk food in a month	Count of how many times do you eat junk food in a month	Percentage
More than three-time	198	38.6
Three-time	169	33.8
Two time	133	26.6

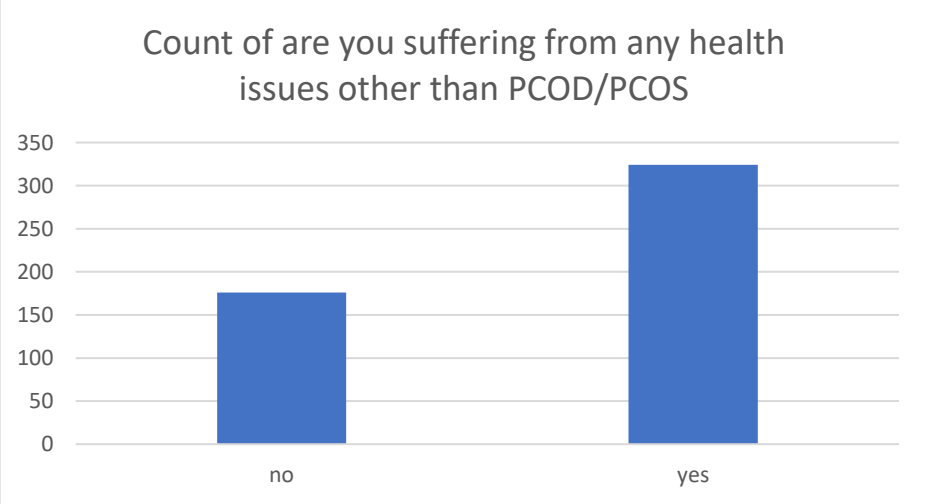
▪ Table 14. The data on the frequency of eating junk food in a month provides insights into how often individuals consume junk food. Here's an interpretation of the data:

- **High Frequency**: Nearly 40% of individuals consume junk food more than three times a month, highlighting a potential concern for frequent consumption, which could be linked to unhealthy dietary patterns and associated health risks.
- **Moderate Frequency**: About 34% of individuals have a moderate frequency of junk food consumption, which could still impact health but might be more manageable compared to higher frequencies.
- **Lower Frequency**: Roughly 27% of individuals consume junk food only twice a month, suggesting more controlled or healthier eating habits.

▪ **Implications:**

- **Health Risks**: Frequent consumption of junk food can contribute to various health issues, including weight gain, cardiovascular problems, and nutritional deficiencies. Addressing this behaviour could be important for public health.
- **Dietary Interventions**: Understanding these consumption patterns can help in designing targeted dietary interventions and education programs to promote healthier eating habits and reduce junk food intake.
- **Behavioral Insights**: The data reveals different levels of junk food consumption, which can provide insights into dietary behaviours and preferences, helping to tailor health recommendations and support services.

Are you suffering from any health issues other than PCOD/PCOS	Count of Are you suffering from any health issues other than PCOD/PCOS	Percentage
No	176	35.2
Yes	324	64.8



REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

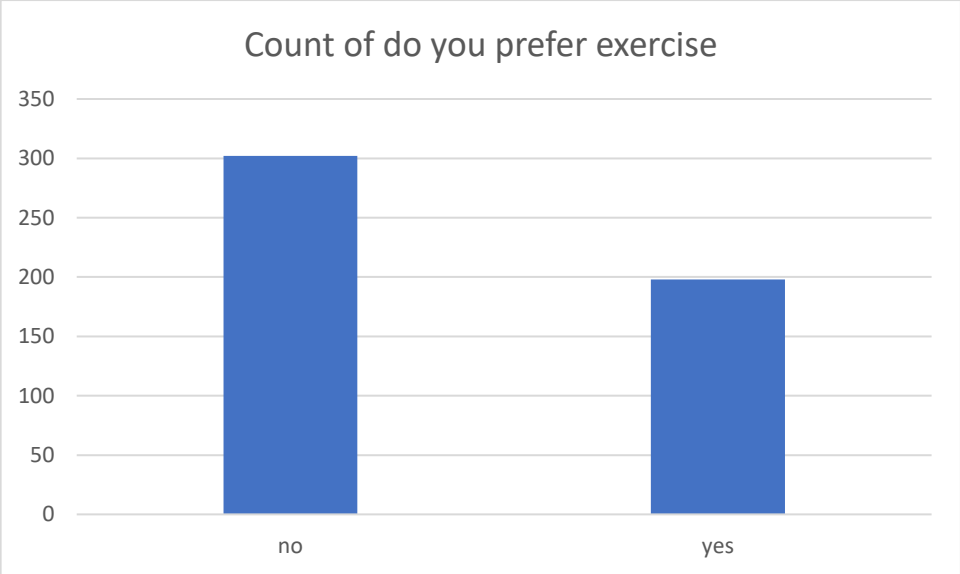
▪ Table 15. The data on whether individuals are suffering from health issues other than PCOD/PCOS provides insight into the prevalence of additional health conditions within the population. Here's an interpretation of the data:

- **High Prevalence of Additional Health Issues**: The majority of individuals are experiencing other health problems alongside PCOD/PCOS. This highlights the complexity of managing multiple health conditions and the potential need for comprehensive healthcare approaches.
- **Impact on Health Management**: Dealing with multiple health issues can have a significant impact on an individual's quality of life and may require integrated care strategies to address all health concerns effectively.

▪ **Implications:**

- **Healthcare Needs**: The data underscores the importance of addressing not only PCOD/PCOS but also any additional health issues individuals may be facing. Healthcare providers may need to adopt a holistic approach to manage multiple conditions.
- **Support and Resources**: There may be a need for increased support and resources to help individuals manage their health comprehensively. This could include educational resources, support groups, and tailored healthcare plans.
- **Research and Awareness**: Understanding the prevalence of additional health issues can inform research and increase awareness about the interconnectedness of various health conditions.

Do you prefer to exercise	Count of Do you prefer exercise	Percentage
No	302	60.4
Yes	198	39.6



▪ Table 16. The data on exercise preference indicates how individuals feel about exercising. Here's an interpretation of the data:

- **Majority Disinterest**: The larger percentage of individuals who do not prefer to exercise highlights a potential barrier to physical activity and underscores the need for strategies to increase exercise engagement.
- **Significant Interest**: Despite the majority, a notable portion of the population does prefer to exercise, suggesting that there is interest in physical activity that could be encouraged and supported.

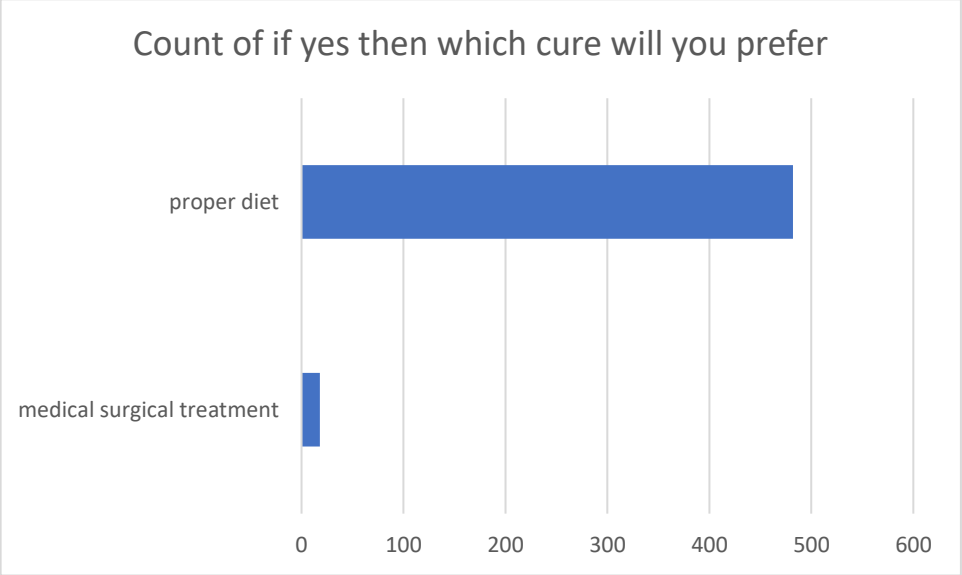
▪ **Implications:**

- **Encouraging Exercise**: For the majority who do not prefer to exercise, it may be beneficial to explore ways to make physical activity more appealing or accessible. This could include offering diverse exercise options, creating motivating environments, or integrating physical activity into daily routines.
- **Tailoring Programs**: Exercise programs or interventions can be tailored to address the interests and needs of those who do prefer to exercise, potentially enhancing their experiences and encouraging more consistent participation.

Health and Well-being: Understanding preferences can help in developing strategies to improve overall health and well-being by addressing barriers to exercise and promoting its benefits

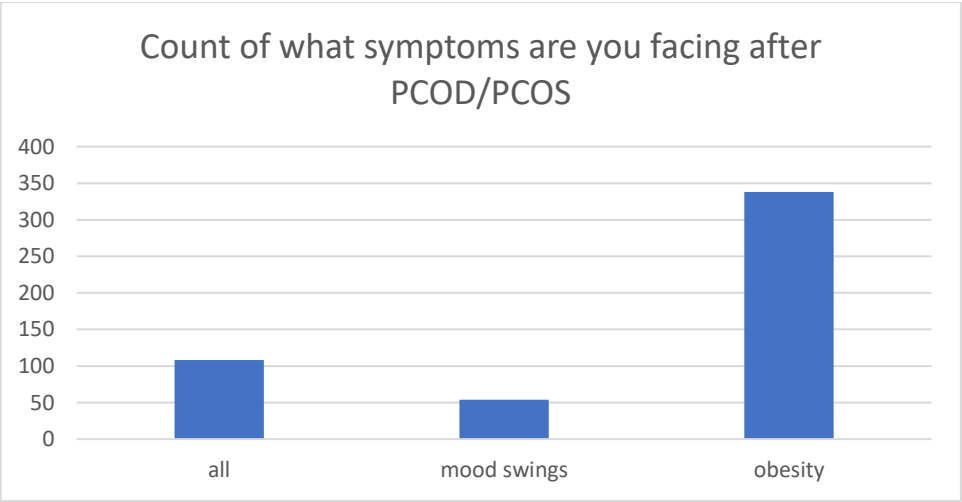
If yes then which cure will you prefer	Count if yes then which cure will you prefer	Percentage
Medical surgical treatment	18	3.6
Proper diet	482	96.4

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024



- Table 17. The data on preferred cures, if individuals do prefer to exercise, shows how they would like to manage their health conditions. Here's an interpretation of the data:
- **Strong Preference for Diet**: The overwhelming preference for proper diet indicates a high level of belief or confidence in the effectiveness of dietary changes for managing health conditions. This could reflect a broader trend towards nutrition-based health management.
- **Minimal Preference for Medical/Surgical Treatment**: The low percentage favouring medical or surgical treatments suggests that these options are less popular or seen as less desirable compared to dietary approaches.
- **Implications:**
- **Focus on Nutrition**: Healthcare providers and wellness programs might consider emphasizing the role of diet in health management, given the strong preference for this approach among individuals.
- **Support and Resources**: There may be a need for increased resources and support to help individuals implement and maintain a proper diet. This could include educational materials, nutritional counselling, and meal-planning assistance.
- **Holistic Health Approaches**: While dietary changes are preferred, it is important to acknowledge that different individuals may require different approaches based on their specific health conditions. Providing options for medical, surgical, and dietary treatments can ensure that all preferences and needs are addressed.

What symptoms are you facing after PCOD/ PCOS	**Count what symptoms you are facing after PCOD/PCOS**	Percentage
All	108	21.6
Mood swings	54	10.8
Obesity	338	67.6

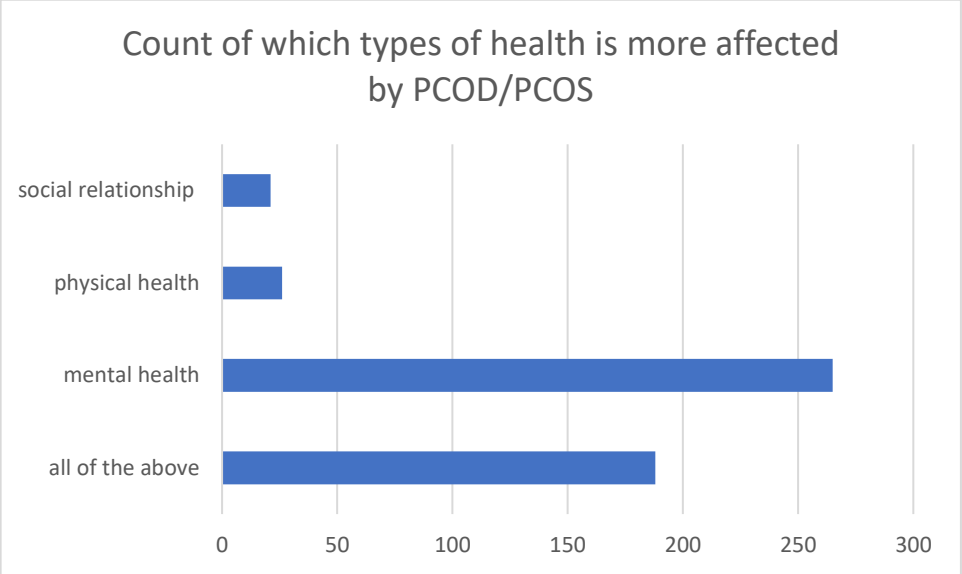


REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

▪ Table 18. The data on symptoms faced after a PCOD/PCOS diagnosis provides insights into the common issues experienced by individuals. Here's an interpretation of the data:

- **Prevalence of Obesity**: Obesity is the most commonly reported symptom, reflecting its significant impact on individuals with PCOD/PCOS. This symptom is strongly associated with the condition and may require targeted interventions, such as lifestyle changes and medical management.
- **Combination of Symptoms**: A notable portion of individuals experience multiple symptoms, highlighting the complexity of PCOD/PCOS and the need for comprehensive management strategies.
- **Mood Swings**: While mood swings are reported by some individuals, they are less common compared to obesity, indicating that this may be a less prominent issue for the majority of people with PCOD/PCOS.
- **Implications:**
- **Management Focus**: Addressing obesity should be a primary focus in managing PCOD/PCOS, given its high prevalence. This may involve weight management programs, dietary modifications, and physical activity.
- **Holistic Approach**: For individuals experiencing a combination of symptoms, a holistic approach to treatment that addresses multiple issues simultaneously may be beneficial.
- **Support and Resources**: Providing support for managing symptoms such as obesity and mood swings, including access to healthcare professionals, nutritionists, and mental health resources, can help improve the overall quality of life for individuals with PCOD/PCOS.

Which types of health is more affected by PCOD / PCOS	Count of which types of health is more affected by PCOD / PCOS	Percentage
All of the above	188	37.6
Mental health	265	53
Physical health	26	5.2
Social relationship	21	4.2

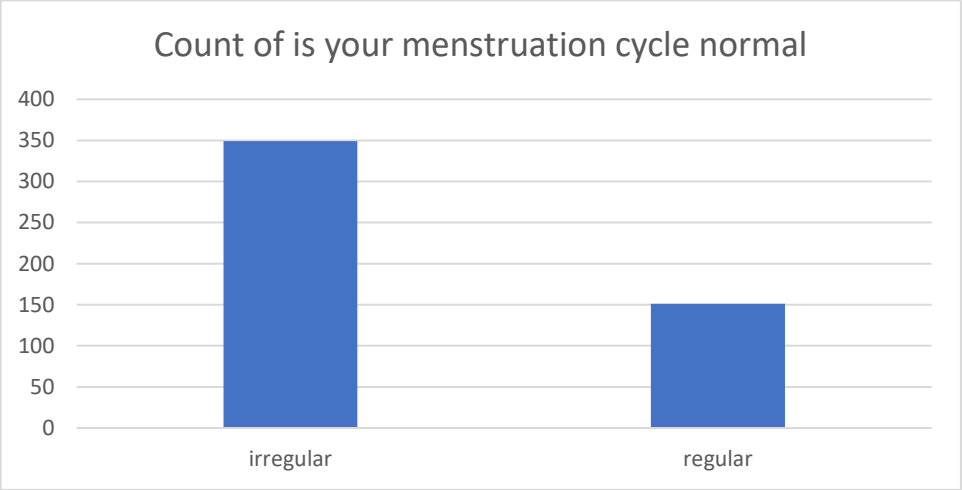


- Table . 19. The data on which types of health are most affected by PCOD/PCOS indicates how different aspects of well-being are impacted by the condition. Here's an interpretation of the data:
- **Mental Health Impact**: The high percentage of individuals reporting mental health issues underscores the importance of addressing psychological well-being as a key component of managing PCOD/PCOS.
- **Comprehensive Impact**: The significant portion of people who believe all areas of their health are affected highlights the comprehensive nature of the condition and the need for integrated management strategies.
- **Less Common Impacts**: The relatively lower percentages for physical health and social relationships suggest these are less commonly reported as the primary concern but are still important aspects to consider.
- **Implications:**
- **Focus on Mental Health**: Mental health support and interventions should be a priority in managing PCOD/PCOS, given its widespread impact.
- **Holistic Approach**: Acknowledging that PCOD/PCOS can affect multiple areas of life, a holistic approach to treatment that addresses mental, physical, and social aspects may be beneficial.

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

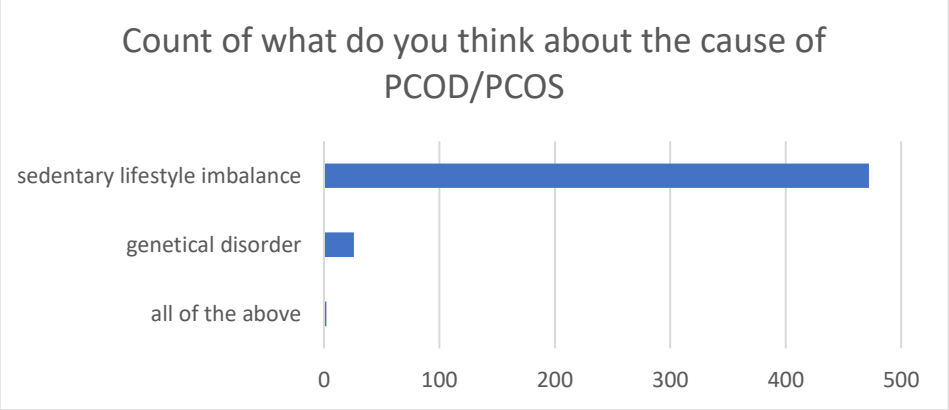
- **Support Resources**: Providing comprehensive support that includes mental health services, physical health management, and assistance with social relationships can help individuals better cope with the effects of PCOD/PCOS.

Is your menstruation cycle normal?	Count of is your menstruation cycle normal	Percentage
Irregular	349	69.8
Regular	151	30.2



- Table. 20. The data on menstrual cycle regularity provides insight into how individuals experience their menstrual cycles. Here's an interpretation of the data:
- **Prevalence of Irregular Cycles**: The high percentage of individuals with irregular menstrual cycles reflects the impact of hormonal disruptions often associated with PCOD/PCOS. Irregular cycles are a hallmark symptom of these conditions.
- **Regular Cycles**: While less common, the presence of regular menstrual cycles among some individuals indicates that not everyone with PCOD/PCOS or similar conditions experiences irregularity.
- **Implications:**
- **Management and Treatment**: The predominance of irregular cycles suggests a need for management strategies that address menstrual irregularity, which may include hormonal treatments, lifestyle changes, and monitoring by healthcare providers.
- **Monitoring and Support**: For individuals with regular cycles, ongoing monitoring is still important to ensure that their condition is well-managed and to address any potential symptoms or complications.

What do you think about the cause of PCOD / PCOS	Count what do you think about the cause of PCOD / PCOS	Percentage
All of the above	2	0.4
Genetical disorder	26	5.2
Sedentary lifestyle imbalance	472	94.4



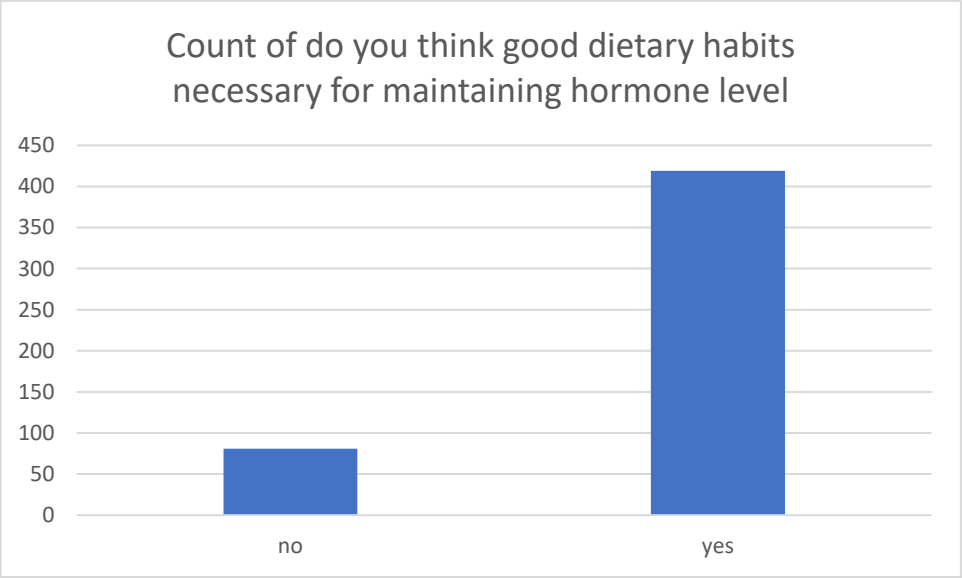
REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

▪ Table 21. The data on perceptions about the cause of PCOD/PCOS reveals how individuals understand or attribute the origins of this condition. Here's an interpretation of the data:

- **Lifestyle Factors Dominance**: The overwhelming belief that sedentary lifestyle imbalances are the primary cause of PCOD/PCOS underscores the common perception that lifestyle choices play a crucial role in the condition. This highlights the importance of promoting physical activity and healthy living as part of prevention and management strategies.
- **Genetic Factors Less Emphasized**: The lower percentage attributing PCOD/PCOS to genetic disorders suggests that while genetics are acknowledged, lifestyle factors are seen as more impactful or relevant in the general understanding of the condition.
- **Limited Recognition of Multifactorial Causes**: The minimal acknowledgement of a combination of factors indicates a more simplified view of the causes of PCOD/PCOS, rather than a complex interplay of genetic, lifestyle, and other factors.
- **Implications:**

- **Health Education**: There may be a need for increased education on the multifactorial nature of PCOD/PCOS, including the roles of both genetic and lifestyle factors, to provide a more comprehensive understanding of the condition.
- **Lifestyle Interventions**: Given the strong emphasis on sedentary lifestyle imbalance, health interventions should focus on promoting physical activity and addressing lifestyle factors as key components of managing and preventing PCOD/PCOS.
- **Comprehensive Approach**: Acknowledging both lifestyle and genetic factors in the discussion of PCOD/PCOS can help in developing more effective and individualized treatment and prevention strategies.

Do you think good dietary habits are necessary for maintaining hormone levels?	**Count do you think good dietary habits are necessary for maintaining hormone level**	Percentage
No	81	16.2
Yes	419	83.8



▪ Table 22. The data on the necessity of good dietary habits for maintaining hormone levels provides insight into general beliefs about diet's role in hormonal health. Here's an interpretation of the data:

- **Strong Support for Dietary Influence**: The overwhelming majority view good dietary habits as essential for hormone regulation, highlighting the importance of nutrition in managing and balancing hormones.
- **Minority Perspective**: The smaller group that does not see dietary habits as necessary indicates that there are varying opinions about the relationship between diet and hormonal health.

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

Demographic characteristics

Age	Count of Age	Total observation	Percentage
20-25	10	500	2
25-30	61	500	12.2
30-35	169	500	33.8
35-40	43	500	8.6
40-45	217	500	43.4
Education	**Count of Education**		
Graduation	69	500	13.2
Post-graduation	77	500	15.4
Primary	272	500	54.4
Secondary	82		16.4
Occupation	**Count of occupation**		
Govt. Job	25	500	5
Housewife	143	500	28.6
Other	43	500	8.6
Private job	289	500	57.8
Height	**Count of height**		
154cm	51	500	10.2
158cm	140	500	28
159cm	1	500	0.2
160cm	90	500	18
161cm	28	500	5.6
162cm	146	500	29.2
163cm	2	500	0.4
164cm	42		8.4
Category of BMI	**Count of categories of BMI**		
>40 (obese)	117	500	23.4
25.0 - 39.9 (overweight)	383	500	76.6
marital status	**Count of marital status**		
married	335	500	67
Single	165	500	33
Income	**Count of income**		
Less than 10k	227	500	45.4
More than 20k	218	500	43.6
More than 30k	55	500	11
Sleep pattern	**Count of sleep pattern**		
Disturbed	123	500	24.6

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

Late night sleep	192	500	38.4
Normal	185	500	37
Sleep duration	**Count of sleep duration**		
6-8 hours	170	500	34
Less than 6	330	500	66
Which type of food do you prefer to eat	**Count which type of food you prefer to eat**		
Homemade	387	500	77.4
Outside food	113	500	22.6
How many times do you eat junk food in a month	**Count of how many times do you eat junk food in a month**		
More than three-time	198	500	38.6
Three-time	169	500	33.8
Two time	133	500	26.6
Are you suffering from any health issues other than PCOD/PCOS	**Count of Are you suffering from any health issues other than PCOD/PCOS**	total observation	Percentage
No	176	500	35.2
Yes	324	500	64.8
Do you prefer to exercise	**Count of do you prefer exercise**		
No	302	500	60.4
Yes	198	500	39.6
If yes then which cure will you prefer	**Count if yes then which cure will you prefer**		
Medical surgical treatment	18	500	3.6
Proper diet	482	500	96.4
What symptoms are you facing after PCOD/ PCOS	**Count what symptoms you are facing after PCOD/PCOS**		
All	108	500	21.6
Mood swings	54	500	10.8
Obesity	338	500	67.6
Which types of health is more affected by PCOD / PCOS	**Count of which types of health is more affected by PCOD / PCOS**		
All of the above	188	500	37.6
Mental health	265	500	53
Physical health	26	500	5.2
Social relationship	21	500	4.2
Is your menstruation cycle normal?	**Count of is your menstruation cycle normal**		
Irregular	349	500	69.8
Regular	151	500	30.2
What do you think about the cause of PCOD/ PCOS	**Count what do you think about the cause of PCOD/ PCOS**		

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

All of the above	2	500	0.4
Genetical disorder	26	500	5.2
Sedentary lifestyle imbalance	472	500	94.4

Results

This dataset provides insights into a study involving 500 participants, focusing on various factors related to age, education, occupation, physical health, and lifestyle habits, particularly in the context of PCOD/PCOS.

Age distribution shows that most participants are in the 40-45 age group (43.4%), followed by 30-35 (33.8%). Education levels reveal that the majority have completed only primary education (54.4%), while a smaller percentage holds post-graduation degrees (15.4%). Occupational data highlight that most participants are engaged in private jobs (57.8%), while 28.6% are housewives. In terms of height, the most common heights are 162 cm (29.2%) and 158 cm (28%).

When it comes to BMI, 76.6% of the participants fall into the overweight category, while 23.4% are obese. Marital status data shows that a significant majority (67%) are married. Regarding income, nearly half of the participants (45.4%) earn less than 10k, and 43.6% make over 20k. Sleep patterns indicate that 38.4% experience late-night sleep, while 66% report sleeping less than 6 hours.

A high proportion (77.4%) prefer homemade food, and a significant number (38.6%) eat junk food more than three times a month. Notably, 64.8% suffer from health issues other than PCOD/PCOS. In terms of exercise, 60.4% do not engage in it. However, those who do overwhelmingly prefer proper diet management (96.4%) over medical or surgical treatments. Obesity is the most common symptom faced by participants with PCOD/PCOS (67.6%).

Mental health is the most affected area due to PCOD/PCOS (53%), with 69.8% experiencing irregular menstruation cycles. The majority (94.4%) attribute PCOD/PCOS to a sedentary lifestyle and imbalance, underscoring the importance of lifestyle in managing these conditions.

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

t-Test: Two-Sample Assuming Equal Variances

	Age	Height
Mean	3.246	5.71
Variance	1.131747	2.374649
Observations	500	500
Pooled Variance	1.753198	
Hypothesised Mean Difference	0	
DF	998	
t Stat	-29.4236	
P(T<=t) one-tail	8.1E-138	
t Critical one-tail	1.646382	
P(T<=t) two-tail	1.6E-137	
t Critical two-tail	1.962344	

The output presented is from a two-sample t-test assuming equal variances, used to compare two groups: Age and Height. This statistical test is designed to determine whether there is a significant difference between the means of these two groups, assuming that both have equal variances.

The mean value for Age is 3.246, and for Height, it is 5.71. This difference suggests that, on average, individuals in the Height group are taller. The variances (1.131747 for Age and 2.374649 for Height) show that the data in the Height group has greater dispersion. Both groups have an equal number of observations, 500 each, which helps maintain balance in the comparison. The pooled variance, which is a weighted average of the variances for the two groups, is calculated to be 1.753198. This is used in calculating the t-statistic.

The hypothesized mean difference is set to 0, meaning the test is examining if the two groups' means are statistically different from each other. The degree of freedom (DF) is 998, calculated based on the total number of observations from both groups minus two.

The t-statistic of -29.4236 is a large negative value, indicating that the mean of the Age group is significantly lower than the mean of the Height group. The p-value for a one-tailed test (8.1E-138) and a two-tailed test (1.6E-137) are both exceedingly small, effectively zero. These p-values are far below any conventional significance threshold (such as 0.05), meaning the result is highly statistically significant. Thus, the null hypothesis, which assumes no difference between the means, can be confidently rejected.

The critical t-values, which represent the threshold above which the null hypothesis would be rejected, are 1.646382 for a one-tailed test and 1.962344 for a two-tailed test. Since the absolute value of the t-statistic (29.4236) is far greater than these critical values, it further supports the conclusion that there is a statistically significant difference between the means of Age and Height.

t-Test: Two-Sample Assuming Equal Variances

	Weight	Category of BMI
Mean	72.872	1.234
Variance	41.40242	0.179603
Observations	500	500
Pooled Variance	20.79101	
Hypothesised Mean Difference	0	
DF	998	
t Stat	248.4138	
P(T<=t) one-tail	0	
t Critical one-tail	1.646382	
P(T<=t) two-tail	0	
t Critical two-tail	1.962344	

The output provided is from a two-sample t-test assuming equal variances, comparing two groups: Weight and Category of BMI (Body Mass Index). This test is conducted to determine whether there is a statistically significant difference between the means of these two variables, assuming that they share equal variances.

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

The mean value for Weight is 72.872, while the mean for the Category of BMI is 1.234. This indicates that, on average, individuals in the Weight group have much higher values than those in the Category of BMI group. The variances are 41.40242 for Weight and 0.179603 for the Category of BMI, showing that Weight values are spread more widely around the mean compared to the Category of BMI. Both groups have the same number of observations (500 each), which strengthens the reliability of the comparison. The pooled variance, a weighted average of the variances for both groups, is 20.79101 and is used in further calculations.
The hypothesized mean difference is set to 0, meaning the test is investigating whether there is any difference between the two groups' means. The degrees of freedom (DF) for the test is 998, calculated from the total number of observations across the two groups minus two.
The t-statistic is 248.4138, a very large positive value, indicating a highly significant difference between the means of Weight and Category of BMI. A t-statistic this large reflects that the difference between the groups is far greater than what would be expected due to random variation alone. The p-value for both the one-tailed and two-tailed tests is effectively 0, meaning that the probability of observing this difference (or a larger one) under the null hypothesis is essentially zero. These p-values are far below any conventional significance threshold (such as 0.05), confirming that the result is extremely statistically significant.
The critical t-values, which represent the threshold above which the null hypothesis would be rejected, are 1.646382 for a one-tailed test and 1.962344 for a two-tailed test. Since the t-statistic of 248.4138 is far greater than both critical values, the null hypothesis can be strongly rejected. This means there is overwhelming evidence of a significant difference between the means of Weight and Category of BMI, suggesting that these two variables are not equal in terms of their average values.

t-Test: Two-Sample Assuming Equal Variances

	Waist circumference	Hip circumference
Mean	37.966	39.626
Variance	6.65816	5.541206
Observations	500	500
Pooled Variance	6.099683	
Hypothesised Mean Difference	0	
DF	998	
t Stat	-10.6273	
P(T<=t) one-tail	2.29E-25	
t Critical one-tail	1.646382	
P(T<=t) two-tail	4.59E-25	
t Critical two-tail	1.962344	

The output presented is from a two-sample t-test assuming equal variances, comparing two groups: Waist Circumference and Hip Circumference. This test is used to determine if there is a statistically significant difference between the means of these two groups, assuming that their variances are equal.
The mean for Waist Circumference is 37.966, while the mean for Hip Circumference is 39.626. This suggests that, on average, individuals have a larger Hip Circumference compared to their Waist Circumference. The variances for Waist Circumference (6.65816) and Hip Circumference (5.541206) show the degree of variability within each group, with Waist Circumference having slightly more variability. Both groups consist of 500 observations each, providing a balanced comparison. The pooled variance, a weighted average of the two variances, is calculated to be 6.099683.
The hypothesized mean difference is set to 0, meaning the test is checking whether the difference in means between Waist and Hip Circumference is statistically different from zero. The degrees of freedom (DF) for the test is 998, derived from the total number of observations across the two groups minus two.
The t-statistic is -10.6273, a large negative value. This indicates that the mean of Waist Circumference is significantly smaller than that of Hip Circumference. The extremely small p-values for both the one-tailed test (2.29E-25) and the two-tailed test (4.59E-25) confirm the statistical significance of this difference. These p-values are far below any conventional significance level, such as 0.05, which means the probability of observing such a difference due to random chance is virtually zero.
The critical t-values represent the thresholds at which the null hypothesis would be rejected. For the one-tailed test, the critical value is 1.646382, and for the two-tailed test, it is 1.962344. Since the absolute value of the t-statistic (10.6273) is much larger than these critical values, it provides strong evidence against the null hypothesis. Therefore, the test concludes that there is a statistically significant difference between Waist Circumference and Hip Circumference, with the latter being larger on average.

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

t-Test: Two-Sample Assuming Equal Variances

	Education	Occupation
Mean	1.922	2.044
Variance	1.334585	1.773611
Observations	500	500
Pooled Variance	1.554098	
Hypothesised Mean Difference	0	
DF	998	
t Stat	-1.54736	
P(T<=t) one-tail	0.061047	
t Critical one-tail	1.646382	
P(T<=t) two-tail	0.122094	
t Critical two-tail	1.962344	

The output presented is from a two-sample t-test assuming equal variances, which compares the variables Education and Occupation. The goal of this test is to determine whether there is a statistically significant difference between the means of these two groups, assuming that their variances are equal.

The mean for Education is 1.922, while the mean for Occupation is slightly higher at 2.044. This suggests a small difference between the average values of these two variables. The variance for Education is 1.334585, while the variance for Occupation is 1.773611, indicating that the data in the Occupation group is slightly more spread out. Both groups have the same number of observations (500 each), which ensures an equal sample size for comparison. The pooled variance, a weighted average of the variances, is 1.554098 and is used in the t-test calculation.

The hypothesized mean difference is set to 0, meaning the test is checking whether the difference between the means of Education and Occupation is statistically significant. The degrees of freedom (DF) is 998, which is based on the total number of observations minus 2.

The t-statistic is -1.54736, a negative value, suggesting that the mean of Education is slightly lower than the mean of Occupation. However, the magnitude of this t-statistic is not large, indicating that the difference may not be substantial. The p-value for the one-tailed test is 0.061047, which is greater than the common significance level of 0.05, meaning the result is not statistically significant at this level. For the two-tailed test, the p-value is 0.122094, which also exceeds the 0.05 threshold, further indicating that the difference between the two groups' means is not statistically significant.

The critical t-values, which define the thresholds for rejecting the null hypothesis, are 1.646382 for the one-tailed test and 1.962344 for the two-tailed test. Since the absolute value of the t-statistic (1.54736) is smaller than both of these critical values, the null hypothesis cannot be rejected. This means there is no statistically significant difference between the means of Education and Occupation based on this data. Therefore, the test suggests that the two variables are similar in terms of their average values.

t-Test: Two-Sample Assuming Equal Variances

	Marital status	Income
Mean	1.67	1.674
Variance	0.221543	0.440605
Observations	500	500
Pooled Variance	0.331074	
Hypothesised Mean Difference	0	
DF	998	
t Stat	-0.10992	
P(T<=t) one-tail	0.456248	
t Critical one-tail	1.646382	
P(T<=t) two-tail	0.912497	
t Critical two-tail	1.962344	

The output provided is from a two-sample t-test assuming equal variances, comparing two groups: Marital Status and Income. The purpose of this test is to determine if there is a statistically significant difference between the means of these two variables, assuming that their variances are equal.

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

The mean for Marital Status is 1.67, while the mean for Income is 1.674, indicating that the average values for these two groups are almost identical. The variance for Marital Status is 0.221543, while for Income, it is 0.440605, showing that Income has slightly more variability or spread in its data. Both groups consist of 500 observations, which helps ensure a balanced and fair comparison. The pooled variance, which combines the variances of the two groups into a single measure, is calculated to be 0.331074.

The hypothesized mean difference is set to 0, meaning the test checks whether the difference between the means of marital status and income is significantly different from zero. The degree of freedom (DF) is 998, which is calculated based on the total number of observations across the two groups minus two.

The t-statistic is -0.10992, a very small negative value, indicating that the difference between the means of the two groups is minimal and not substantial. The p-value for the one-tailed test is 0.456248, which is much larger than the typical significance level of 0.05. Similarly, the two-tailed p-value is 0.912497, also far above 0.05. These high p-values suggest that there is no statistically significant difference between the means of Marital Status and Income.

The critical t-values are 1.646382 for the one-tailed test and 1.962344 for the two-tailed test. Since the absolute value of the t-statistic (0.10992) is much smaller than both critical values, the null hypothesis cannot be rejected. This means there is no evidence of a significant difference between the two groups. In conclusion, the data shows that Marital Status and Income are nearly equal in terms of their means, and any observed difference is likely due to random chance rather than a meaningful relationship

t-Test: Two-Sample Assuming Equal Variances

	Sleep pattern	Sleep duration
Mean	1.876	1.66
Variance	0.601828	0.22485
Observations	500	500
Pooled Variance	0.413339	
Hypothesised Mean Difference	0	
DF	998	
t Stat	5.312155	
P(T<=t) one-tail	6.68E-08	
t Critical one-tail	1.646382	
P(T<=t) two-tail	1.34E-07	
t Critical two-tail	1.962344	

The output provided is from a two-sample t-test assuming equal variances, comparing two variables: Sleep Pattern and Sleep Duration. This test is designed to determine whether there is a statistically significant difference between the means of these two groups, assuming that their variances are equal.

The mean for Sleep Pattern is 1.876, while the mean for Sleep Duration is 1.66, indicating that, on average, Sleep Pattern values are slightly higher than Sleep Duration. The variance for Sleep Pattern is 0.601828, while the variance for Sleep Duration is 0.22485, suggesting that Sleep Pattern data is more spread out compared to Sleep Duration. Both groups have an equal number of observations (500 each), ensuring a balanced comparison. The pooled variance, a weighted average of the two variances, is 0.413339.

The hypothesized mean difference is 0, meaning the test is examining whether the difference between the means of Sleep Pattern and Sleep Duration is significantly different from zero. The degrees of freedom (DF) is 998, calculated as the total number of observations from both groups minus two.

The t-statistic is 5.312155, a large positive value, indicating that the mean of Sleep Pattern is significantly higher than the mean of Sleep Duration. The p-value for the one-tailed test is 6.68E-08, and for the two-tailed test, it is 1.34E-07. Both p-values are extremely small, far below the commonly used significance level of 0.05, meaning the result is highly statistically significant. This suggests that the difference in means is not due to random chance.

The critical t-values represent the thresholds at which the null hypothesis would be rejected. For the one-tailed test, the critical value is 1.646382, and for the two-tailed test, it is 1.962344. Since the t-statistic of 5.312155 is far larger than both of these critical values, the null hypothesis is strongly rejected. This means there is a statistically significant difference between the means of Sleep Pattern and Sleep Duration.

In conclusion, the test shows that Sleep Patterns and Sleep Duration are not equal in terms of their average values, with Sleep Patterns having a higher mean than Sleep Duration. The difference is highly statistically significant, providing strong evidence that these two variables are distinct.

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

t-Test: Two-Sample Assuming Equal Variances

	Which type of food do you prefer to eat	How many times do you eat junk food in a month?
Mean	1.226	2.058
Variance	0.175275	0.7321
Observations	500	500
Pooled Variance	0.453687	
Hypothesised Mean Difference	0	
DF	998	
t Stat	-19.5306	
P(T<=t) one-tail	1.71E-72	
t Critical one-tail	1.646382	
P(T<=t) two-tail	3.42E-72	
t Critical two-tail	1.962344	

The output presented is from a two-sample t-test assuming equal variances, which compares two variables: the type of food one prefers to eat and the number of times one eats junk food in a month. This test is used to determine if there is a statistically significant difference between the means of these two groups, assuming their variances are equal.

The mean for "Which type of food do you prefer to eat" is 1.226, while the mean for "How many times do you eat junk food in a month?" is 2.058. This suggests that, on average, people eat junk food more frequently than their preferred type of food. The variance for the preferred food type is 0.175275, and for the frequency of eating junk food, it is 0.7321, indicating that there is more variation in how often people eat junk food than in their preferred food choices. Both groups have the same number of observations (500 each), making the comparison balanced. The pooled variance, which is a combined measure of variability from both groups, is calculated to be 0.453687.

The hypothesized mean difference is set to 0, meaning the test examines whether there is a significant difference between the means of the two groups. The degree of freedom (DF) is 998, calculated based on the total number of observations across both groups minus two.

The t-statistic is -19.5306, a large negative value, indicating that the mean for preferred food type is significantly lower than the mean for the number of times junk food is eaten in a month. The p-value for the one-tailed test is 1.71E-72, and for the two-tailed test, it is 3.42E-72. These extremely small p-values are far below any conventional significance level, such as 0.05, which means the result is highly statistically significant.

The critical t-values, which represent the threshold above which the null hypothesis would be rejected, are 1.646382 for the one-tailed test and 1.962344 for the two-tailed test. Since the absolute value of the t-statistic (19.5306) is much larger than these critical values, the null hypothesis is rejected with overwhelming confidence. This means that there is a statistically significant difference between the two variables: the type of food people prefer to eat and how often they eat junk food.

In conclusion, the test shows a clear and highly significant difference between these two variables. People tend to eat junk food more frequently than their preferred food type, and the difference in their means is statistically significant beyond any reasonable doubt.

t-Test: Two-Sample Assuming Equal Variances

	Do you prefer exercise?	Are you suffering from any health issues other than PCOD/PCOS?
Mean	1.604	1.352
Variance	0.239663	0.228553
Observations	500	500
Pooled Variance	0.234108	
Hypothesised Mean Difference	0	
DF	998	
t Stat	8.234974	

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

P(T<=t) one-tail	2.79E-16
t Critical one-tail	1.646382
P(T<=t) two-tail	5.59E-16
t Critical two-tail	1.962344

The output provided is from a two-sample t-test assuming equal variances, comparing two variables: the preference for exercise and the presence of health issues other than PCOD/PCOS. This statistical test aims to determine whether there is a significant difference between the means of these two groups, assuming their variances are equal.

The mean for "Do you prefer to exercise?" is 1.604, while the mean for "Are you suffering from any health issues other than PCOD/PCOS?" is 1.352. This indicates that, on average, individuals who prefer exercise tend to have a higher mean score compared to those who report having health issues, suggesting a potential relationship between exercise preference and overall health. The variances for the two groups are 0.239663 for exercise preference and 0.228553 for health issues, indicating that the variability in responses is relatively similar for both groups. Both categories contain 500 observations, ensuring a balanced and robust comparison. The pooled variance, which is a combined measure of variability for the two groups, is calculated to be 0.234108.

The hypothesized mean difference is set to 0, indicating that the test is examining whether the means of the two groups are significantly different from each other. The degrees of freedom (DF) is 998, calculated as the total number of observations across both groups minus two.

The t-statistic is 8.234974, a large positive value, suggesting that the mean for exercise preference is significantly higher than the mean for health issues. The p-value for the one-tailed test is 2.79E-16, and for the two-tailed test, it is 5.59E-16. Both p-values are extraordinarily small, well below the conventional significance level of 0.05, indicating that the result is highly statistically significant.

The critical t-values, which indicate the threshold at which the null hypothesis would be rejected, are 1.646382 for the one-tailed test and 1.962344 for the two-tailed test. Since the t-statistic of 8.234974 is much greater than both of these critical values, the null hypothesis can be confidently rejected.

In summary, the test reveals a significant difference between the two variables, suggesting that individuals who prefer exercise tend to report fewer health issues other than PCOD/PCOS. The difference in means is statistically significant, providing strong evidence that a preference for exercise is associated with better overall health outcomes in this sample.

t-Test: Two-Sample Assuming Equal Variances

	If yes then which cure will you prefer	What symptoms are you facing after PCOD/PCOS?
Mean	1.036	2.46
Variance	0.034774	0.681764
Observations	500	500
Pooled Variance	0.358269	
Hypothesised Mean Difference	0	
DF	998	
t Stat	-37.6163	
P(T<=t) one-tail	7.7E-194	
t Critical one-tail	1.646382	
P(T<=t) two-tail	1.5E-193	
t Critical two-tail	1.962344	

The output provided is from a two-sample t-test assuming equal variances, comparing two variables: the preferred cure for PCOD/PCOS and the symptoms experienced after PCOD/PCOS. This statistical test aims to determine if there is a significant difference between the means of these two groups, under the assumption that their variances are equal.

The mean for "If yes, then which cure will you prefer?" is 1.036, while the mean for "What symptoms are you facing after PCOD/PCOS?" is significantly higher at 2.46. This suggests that, on average, respondents report more severe or frequent symptoms related to PCOD/PCOS compared to their preferred choice of cure. The variance for the preferred cure is 0.034774, indicating very little variability in responses for this category, while the variance for the symptoms experienced is 0.681764, suggesting a much greater spread in how symptoms are reported. Both groups have 500 observations each, ensuring a balanced comparison, and the pooled variance, which combines the variances of both groups, is calculated to be 0.358269.

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

The hypothesized mean difference is set to 0, meaning the test examines whether the difference between the means of the two groups is significantly different from zero. The degrees of freedom (DF) is 998, calculated from the total number of observations minus two.
The t-statistic is -37.6163, a large negative value indicating that the mean for preferred cure is significantly lower than the mean for symptoms faced. The p-value for the one-tailed test is 7.7E-194, and for the two-tailed test, it is 1.5E-193. Both p-values are exceedingly small, far below the conventional significance level of 0.05, indicating that the result is extremely statistically significant.
The critical t-values that define the threshold for rejecting the null hypothesis are 1.646382 for the one-tailed test and 1.962344 for the two-tailed test. Since the absolute value of the t-statistic (37.6163) is much greater than these critical values, the null hypothesis can be rejected with strong confidence.
In summary, the test reveals a highly significant difference between the two variables, indicating that the preferred cure for PCOD/PCOS is significantly lower in mean than the severity or frequency of symptoms experienced after the condition. This suggests that individuals report far more severe symptoms compared to their preferences for cures, highlighting a notable disparity between perceived health status and treatment choices in this population.

t-Test: Two-Sample Assuming Equal Variances

	Which types of health is more affected by PCOD/PCOS	Is your menstruation cycle normal?
Mean	2.274	1.302
Variance	2.014954	0.211218
Observations	500	500
Pooled Variance	1.113086	
Hypothesised Mean Difference	0	
DF	998	
t Stat	14.56706	
P(T<=t) one-tail	4.99E-44	
t Critical one-tail	1.646382	
P(T<=t) two-tail	9.97E-44	
t Critical two-tail	1.962344	

The output provided is from a two-sample t-test assuming equal variances, comparing the impacts of PCOD/PCOS on different health aspects and the normality of menstruation cycles. This statistical analysis aims to assess whether there is a significant difference between the means of these two variables.
The mean score for "Which types of health are more affected by PCOD/PCOS?" is 2.274, while the mean for "Is your menstruation cycle normal?" is significantly lower at 1.302. This substantial difference suggests that individuals perceive a greater impact of PCOD/PCOS on their overall health compared to the regularity of their menstruation cycles. The variance for the health impact score is 2.014954, indicating considerable variability in the responses regarding how PCOD/PCOS affects different health aspects, whereas the variance for menstruation cycle normality is much lower at 0.211218, reflecting less variability in how individuals perceive their menstrual regularity. With both groups having 500 observations, the sample sizes are equal and provide a robust basis for comparison. The pooled variance, which combines the variances from both groups into a single measure, is calculated to be 1.113086.
The hypothesized mean difference is set at 0, meaning the test is specifically examining whether the difference between the two group means is significantly different from zero. The degrees of freedom (DF) for this analysis is 998, calculated as the total number of observations from both groups minus two.
The t-statistic calculated is 14.56706, a large positive value that indicates a significant difference between the means, with the health impact mean being considerably higher than that of menstruation cycle normality. The one-tailed p-value is reported at 4.99E-44, while the two-tailed p-value is 9.97E-44. These extraordinarily small p-values are far below the typical significance threshold of 0.05, signifying that the results are highly statistically significant and that the likelihood of this observed difference occurring by random chance is negligible.
The critical t-values that delineate the threshold for rejecting the null hypothesis are 1.646382 for the one-tailed test and 1.962344 for the two-tailed test. Given that the t-statistic of 14.56706 is substantially greater than these critical values, the null hypothesis can be confidently rejected.
In summary, this analysis indicates a significant difference in how individuals perceive the impact of PCOD/PCOS on their health compared to the normality of their menstruation cycles. The data suggests that while PCOD/PCOS may lead to various health issues, many individuals do not experience significant disruptions in their menstrual regularity, highlighting the multifaceted nature of symptoms associated with this condition.

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

t-Test: Two-Sample Assuming Equal Variances

	What do you think about the cause of PCOD/PCOS?	Do you think good dietary habits are necessary for maintaining hormone levels?
Mean	1.108	1.162
Variance	0.200737	0.136028
Observations	500	500
Pooled Variance	0.168383	
Hypothesised mean difference	0	
DF	998	
t Stat	-2.08073	
P(T<=t) one-tail	0.018857	
t Critical one-tail	1.646382	
P(T<=t) two-tail	0.037714	
t Critical two-tail	1.962344	

The output presented is from a two-sample t-test assuming equal variances, comparing the perceptions about the cause of PCOD/PCOS and the belief in the necessity of good dietary habits for maintaining hormone levels. This statistical test aims to determine if there is a significant difference between the means of these two groups.

The mean for "What do you think about the cause of PCOD/PCOS?" is 1.108, while the mean for "Do you think good dietary habits are necessary for maintaining hormone levels?" is slightly higher at 1.162. This indicates that respondents generally view dietary habits as somewhat more critical for hormone maintenance than their perceptions regarding the causes of PCOD/PCOS. The variances for the two groups are 0.200737 for the perceptions about causes and 0.136028 for dietary habits, suggesting that there is more variability in the responses concerning the causes of PCOD/PCOS compared to the beliefs about dietary habits. Both groups consist of 500 observations, ensuring a balanced comparison, and the pooled variance, which provides a combined measure of variability for both groups, is calculated to be 0.168383.

The hypothesized mean difference is set to 0, meaning the test examines whether the difference between the means is significantly different from zero. The degree of freedom (DF) for this analysis is 998, derived from the total number of observations across both groups minus two.

The t-statistic is -2.08073, a negative value suggesting that the mean for the perceived cause of PCOD/PCOS is lower than that for the importance of dietary habits. The p-value for the one-tailed test is 0.018857, while the two-tailed p-value is 0.037714. Both p-values are below the conventional significance threshold of 0.05, indicating that the results are statistically significant.

The critical t-values that define the rejection region for the null hypothesis are 1.646382 for the one-tailed test and 1.962344 for the two-tailed test. Since the absolute value of the t-statistic (2.08073) exceeds the critical value for the one-tailed test, the null hypothesis can be rejected, suggesting that there is a statistically significant difference between the two means.

In summary, the analysis indicates a significant difference in respondents' beliefs about the causes of PCOD/PCOS compared to the necessity of good dietary habits for hormone maintenance. Specifically, the results suggest that individuals tend to view good dietary habits as slightly more important for maintaining hormone levels than their perceptions regarding the causes of PCOD/PCOS, highlighting the emphasis placed on dietary factors in managing health and hormonal balance in this population.

Observation and Possible Outcomes

The study aims to generate several key outcomes and insights into the effects of Polycystic Ovary Syndrome (PCOS) and Polycystic Ovary Disease (PCOD) among women aged 15-45 in the rural area of Mohali, Punjab. This research is crucial for understanding how these conditions impact women's health in a rural setting and for informing public health strategies that address the unique challenges faced by this population.

Expected Outcomes

Increased Awareness

One of the primary expected outcomes of the study is an increased awareness of PCOS and PCOD among the target population. By identifying and disseminating information about the prevalence and symptoms of these conditions, the study can help develop tailored interventions that address the specific needs of women in rural Mohali. This heightened awareness can lead to earlier diagnosis and better management of PCOS and PCOD, ultimately improving reproductive health outcomes. The dissemination of findings through community outreach, healthcare providers, and educational programs will be critical in achieving this outcome.

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

Healthcare Access and Quality
Additionally, the study is expected to highlight the gaps in healthcare access and quality in rural areas. By documenting the experiences and challenges faced by women with PCOS and PCOD, the research can provide valuable insights into the healthcare needs of this population. This information can inform policy recommendations aimed at improving healthcare infrastructure and access in rural regions. For instance, the study may reveal a lack of specialized care or diagnostic facilities, prompting healthcare authorities to allocate resources and training to address these deficiencies.

Impact on Quality of Life
The study will also provide insights into the impact of PCOS and PCOD on the quality of life of affected women. Understanding how these conditions affect various aspects of daily life, including physical health, mental well-being, and social interactions, can guide the development of comprehensive health education programs. These programs can educate women on managing symptoms and improving their overall quality of life. The findings may also highlight the psychological burden of PCOS and PCOD, emphasizing the need for mental health support as part of the management strategy.

Socio-Economic Implications
Moreover, the study will explore the socio-economic implications of PCOS and PCOD. These conditions can affect women's ability to work, pursue education, and participate in community activities. By analyzing data on employment status, educational attainment, and economic activity, the study can provide a holistic view of how PCOS and PCOD influence socioeconomic outcomes. This information can be used to advocate for policies that support women with these conditions, such as workplace accommodations and financial assistance programs.

Limitations
Despite the anticipated benefits, the study is subject to several limitations.

Generalizability
One significant limitation is the issue of generalizability. Since the study focuses on a specific rural area in Mohali, Punjab, the findings may not be applicable to other regions with different socio-economic and cultural contexts. The unique characteristics of the study population, such as lifestyle, healthcare access, and cultural beliefs, may limit the extent to which the results can be extrapolated to other settings. Future research should consider including diverse geographical areas to enhance the generalizability of the findings.

Cross-Sectional Design
The cross-sectional design of the study also poses limitations. While this design allows for a snapshot of the current state of PCOS and PCOD among the participants, it does not enable the establishment of causation. Longitudinal studies would be needed to track changes over time and better understand the progression and long-term effects of these conditions. A longitudinal approach would provide more comprehensive insights into the natural history of PCOS and PCOD and the effectiveness of various interventions over time.

Recall Bias
Potential recall bias is another limitation, as the study relies on self-reported data collected through structured questionnaires. Participants may not accurately recall or may underreport certain symptoms or behaviours, affecting the accuracy of the data. Additionally, cultural factors may influence participants' willingness to disclose personal health information, further impacting data quality. To mitigate this limitation, the study will incorporate strategies such as using validated questionnaires, providing clear instructions, and ensuring confidentiality to encourage honest reporting.

Sample Size and Selection Bias
The estimated sample size of 500 participants, while adequate for statistical analysis, may still pose limitations. Selection bias can occur if the sample is not representative of the broader population. For example, women who are more health-conscious or have easier access to healthcare may be more likely to participate. To address this, the study will employ random sampling techniques and outreach efforts to include a diverse range of participants, ensuring that the sample accurately reflects the rural population of Mohali.

Data Collection and Measurement Errors
Measurement errors can arise from the use of structured questionnaires, particularly if questions are not clearly understood by participants. The study will conduct a pilot test of the questionnaire to identify and rectify any ambiguities or misunderstandings. Training field researchers to administer the questionnaire consistently and accurately will also help minimize measurement errors. Additionally, the study will use multiple data collection methods, such as interviews and medical record reviews, to triangulate data and enhance its validity.

REDVET - Revista electrónica de Veterinaria - ISSN 1695-7504
Vol 25, No. 1 (2024)
http://www.veterinaria.org
Received: 30/04/2024 Revised: 05/05/2024 Accepted: 05/06/2024

This study aims to provide a comprehensive understanding of the prevalence and impact of PCOS and PCOD among women in rural Mohali, Punjab. The expected outcomes include increased awareness, identification of healthcare gaps, insights into quality-of-life impacts, and an understanding of socio-economic implications. While the study has several limitations, such as issues with generalizability, recall bias, and the cross-sectional design, it also presents significant opportunities to inform public health strategies and policies. By addressing these limitations through careful study design and methodology, the research can contribute valuable knowledge to the field of women's health and support the development of targeted interventions for women with PCOS and PCOD in rural settings.

References:

1. Anjana, R. M., Mohan, V., Kamalesh, R., Mehreen, T. S., Ranjani, H., & Ram, U. (2021). Polycystic Ovarian Syndrome prevalence among Indian youth and young adult women. Diabetology Journal.
2. Bashir, R. (2020). Prevalence Of Polycystic Ovarian Syndrome In Women Of Different Age Groups In Hazratbal Area Of Srinagar By Ultrasonographic Evaluation – Hospital Data-Based Study.
3. Basu, S., et al. (2018). The relationship between stress and body composition in women with PCOS. Journal of Endocrinology & Metabolism.
4. Bharali, M. D., Rajendran, R., Goswami, J., Singal, K., & Rajendran, V. (2022). Prevalence Of Polycystic Ovarian Syndrome In India: A Systematic Review And Meta-Analysis. Cureus.
5. Chaudhari, A. P., Mazumdar, K., & Mehta, P. D. (2018). Anxiety, Depression, And Quality Of Life In Women With Polycystic Ovarian Syndrome. Indian Journal Of Psychological Medicine.
6. De Medeiros, S. F., Yamamoto, M. M. W., De Medeiros, M. A. S., Barbosa, B. B., Soares, J. M., & Baracat, E. C. (2020). Changes In Clinical And Biochemical Characteristics Of Polycystic Ovary Syndrome With Advancing Age. Endocrine Connections.
7. Deswal, R., Narwal, V., Dang, A., & Pundir, C. S. (2020). The Prevalence Of Polycystic Ovary Syndrome: A Brief Systematic Review. Journal Of Human Reproductive Sciences.
8. E. G. Chainani (2019). In Western India, young women are aware of polycystic ovarian syndrome. International Journal of Obstetrics, Gynecology, Contraception, and Reproduction.
9. Guz H., Ozkan A., Sarisoy G., Yanik F., Yanik A. (2003). Psychiatric symptoms in Turkish infertile women. Journal of Psychosomatic Obstetrics & Gynaecology.
10. Habib, S., Anwar, A., Hoda, F. R. S., Verma, R., Akhtar, M., & Najmi, A. K. (2021). Prevalence Of Depression, Anxiety And Quality Of Life Among North Indian Polycystic Ovary Syndrome Women: Evidence From A Prospective Observational Study. International Journal of Basic And Clinical Pharmacology, 10(12), 1360.
11. Hussain, A., Chandel, R. K., Ganie, M. A., Dar, M. A., Rather, Y. H., Wani, Z. A., & Shah, M. S. (2015). Prevalence Of Psychiatric Disorders In Patients With A Diagnosis Of Polycystic Ovary Syndrome In Kashmir. Indian Journal Of Psychological Medicine, 37(1), 66-70.
12. In 2018, Desai, N. A., Patel, S. S., and Tiwari, R. Y. The prevalence of polycystic ovarian syndrome and the risk factors linked to it in young girls and adolescents in the Ahmedabad region. 11(3) of the Indian Journal of Pharmacy Practice.
13. In 2018, Gupta, P., Singh, D., Toppo, M., Priya, A., and Sethia, S. A cross-sectional study was conducted in Bhopal, Central India, on young women with polycystic ovarian syndrome. 95–100 in Int J Community Med Public Health.
14. In 2018, Patel, J., and Rai, S. Central Indian young women's awareness of PCOS, or polycystic ovarian syndrome. International Journal of Obstetrics, Gynecology, Contraception, and Reproduction.
15. In 2020, Babu, A. R., Sekar, P., Dhanaraj, F. M., Vanitha, J., and Selvaraj, V. Effects of yoga and exercise on the risk of polycystic ovarian syndrome in teenage South Indian schoolgirls. e212 in Health Science Reports.
16. In 2021, Sharma, M., Kaushal, P., Saxena, V., and Khapre, M. A systematic study and meta-analysis of Indian teenage girls with polycystic ovarian syndrome. 11(3), 1063; Nepal Journal of Epidemiology.
17. Kaufman, R., et al. (2003). Cardiovascular and metabolic risk in women with polycystic ovary syndrome. Journal of Clinical Endocrinology & Metabolism.
18. Kaur, R., Kumar, R., & Gupta, M. (2023). Food Image-Based Nutritional Management System To Overcome Polycystic Ovary Syndrome Using Deep Learning: A Systematic Review. International Journal Of Image And Graphics.
19. Laxmi, K. S., Vijaya, K., and Singh, A. (2018). A prospective study looking at the prevalence of polycystic ovarian syndrome in teenage girls. 7(11), 4375–4378 in Int J Reprod Contracept Obstet Gynecol.
20. Maqbool, M., Gani, I., & Geer, M. I. (2019). Polycystic Ovarian Syndrome-A Multifaceted Disease: A Review. International Journal of Pharma Sciences.
21. Minocha, N. (2020). Polycystic Ovarian Disease Or Polycystic Ovarian Syndrome: How To Identify And Manage-A Review. Journal Of Pharmacy Practice.
22. Oeffinger, K. C., Fontham, E. T., Etzioni, R., Herzig, A., Michaelson, J. S., Shih, Y. C. T., & Wender, R. (2015). Breast cancer screening for women at average risk: 2015 guideline update from the American Cancer Society. JAMA.

23. Qadri, S., Hussain, A., Bhat, M. H., & Baba, A. A. (2018). Polycystic Ovary Syndrome In Bipolar Affective Disorder: A Hospital-Based Study. Indian Journal of Psychological Medicine.
24. Rajendran, R., Goswami, J., Singal, K., Bharali, M. D., & Rajendran, V. (2022). A comprehensive study and meta-analysis were conducted to determine the prevalence of polycystic ovarian syndrome in India. Cureus.
25. Sharma, M., Khapre, M., Saxena, V., & Kaushal, P. (2021). Polycystic Ovary Syndrome Among Indian Adolescent Girls–A Systematic Review and Meta-analysis. Nepal Journal Of Epidemiology.
26. Stephens, G. (2023). Quality Of Life In Menopausal Women With Polycystic Ovarian Syndrome (Doctoral Dissertation, Walden University).
27. Sunanda, S., et al. (2016). Knowledge of polycystic ovarian syndrome among nursing students in Mangalore. International Journal of Reproductive Medicine.
28. Vadakedath, S., Begum, G. S., Jabeen, A., Yamini, V., Amberina, A. R., Eshwar, M. D., & Kandi, V. (2022). The frequency, risk factors, and knowledge of polycystic ovarian syndrome in young girls and adolescents in South India. Cureus.
29. Yang, Y. C., Tu, H. P., Hong, C. H., Chang, W. C., Fu, H. C., Ho, J. C. (2014). Female gender and acne disease are jointly and independently associated with the risk of major depression and suicide: A national population-based study. International Journal of Biomedical Research.
30. Zehra, B., & Khursheed, A. A. (2018). Polycystic Ovarian Syndrome: Symptoms, Treatment, And Diagnosis: A Review. Journal Of Pharmacognosy and Phytochemistry.