

**SRI VENKATESWARA INTERNSHIP PROGRAM
FOR RESEARCH IN ACADEMICS
(SRI-VIPRA)**

Project Report of 2022: SVP-2250

*“Awareness of the importance of food and lifestyle choices
on the Reproductive health of females and males.”*



IQAC

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SRIVIPRA-2022

(Sri Venkateswara College Internship Program in
Research and Academics)

This is to certify that this project on *“Awareness of the importance of food and lifestyle choices on the Reproductive health of females and males”* was registered under SRIVIPRA and completed under the mentorship of *Dr. Namita Nayyar, Department of Zoology* during the period from 21st June to 7th October 2022.




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Awareness of the importance of food and lifestyle choices on the Reproductive health of females and males.

List of students under the SRIVIPRA Project

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1	Anshika Bhati	B.A (H) History	
2	Aparna kumari	B.Sc.(honours) Biological sciences	 A portrait of a young woman with long dark hair, wearing a black dress with a colorful floral pattern. She is standing in what appears to be a greenhouse or a conservatory with plants and a glass roof.
3	Avantika	B.Sc. (honours) Biological sciences	 A portrait of a young woman with long dark hair, wearing a blue and white striped top with a large floral pattern on the chest. She is smiling and looking towards the camera.

4	Bhawna Sharma	B.Sc. Life Sciences	
5	Bismillah	B.Sc. Life Science	
6	Chahat	B.Sc. Life Sciences	
7	Gyanendra Avtar Aingh	B.Sc. life sciences	

8	Komal	B.Sc. Life Science (Program)	
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INTRODUCTION

The lifestyle factor plays an important role in the reproductive health of males and females. For maintaining physical and mental well-being a healthy lifestyle and awareness about reproductive health is very crucial. On an average 10 to 15 % of couples are having issues of infertility. Many lifestyle factors such as age, weight, physical exercise, stress and others can have considerable effect on reproductive health ; factors such as smoking, alcohol, and caffeine consumption can negatively influence the reproductive health of the individual. Thus it is very necessary to be aware about the factors which affect our reproductive health in our daily lifestyle.

The present survey encompasses multiple lifestyle factors which may affect the reproductive health of an individual.

Not only females, males are also equally affected by different lifestyle factors such as obesity, smoking, alcohol, stress and cell phone usage have been postulated to have a negative effect on sperm quality.

With the increase in prevalence of disorders like PCOS, it is important to have sufficient awareness about it. There are multiple myths and taboos related to reproductive health. So the main aim of this survey is all about awareness so that further you can make and choose your lifestyle according to that.

METHODOLOGY

A Google form with a pre-designed questionnaire was circulated on social media platforms. The form was made available online on 11 August 2022 and was closed on 23 August 2022. Responses were received from a diverse group of individuals from almost every strata of society and from various parts of INDIA. These responses were analysed and a report was prepared.

Link to a blank Questionnaire is provided here:

<https://drive.google.com/file/d/1cdlYnYrXIOEAmKZDxebIBkf9qLDHv9OE/view?usp=sharing>

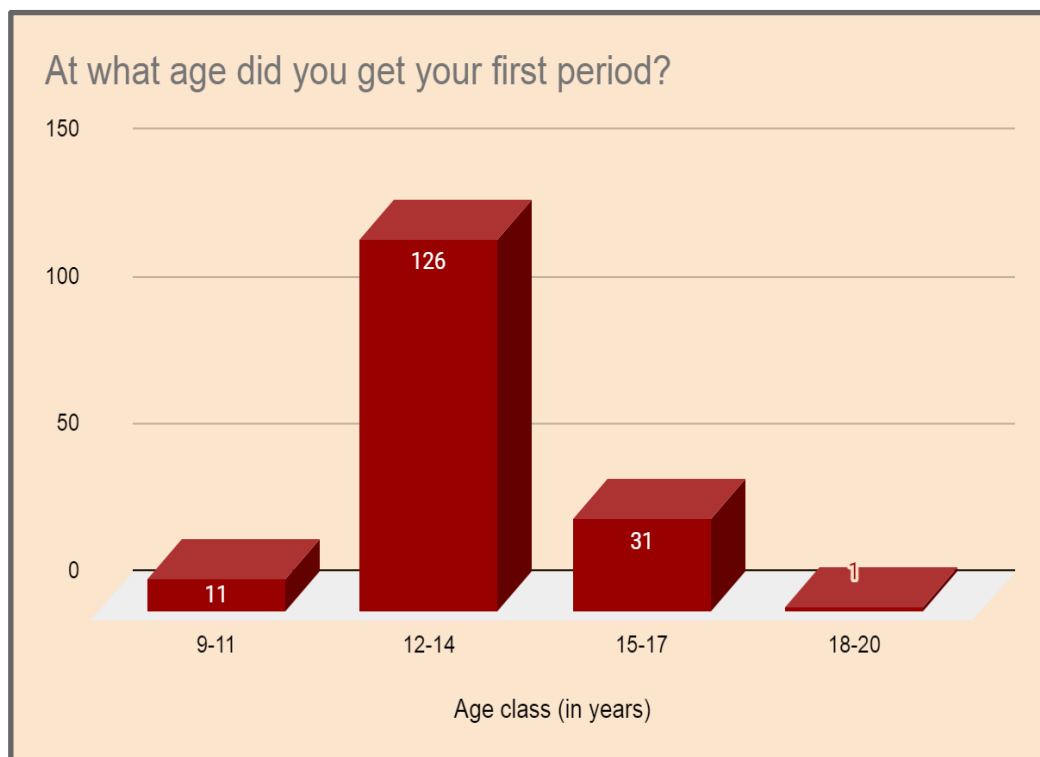
RESULTS AND DISCUSSION

In the study, a total of 296 people responded, out of which 169 were females and 127 were males. They surveyed through questionnaire methods to identify the food and lifestyle choices that cause infertility among males and females.

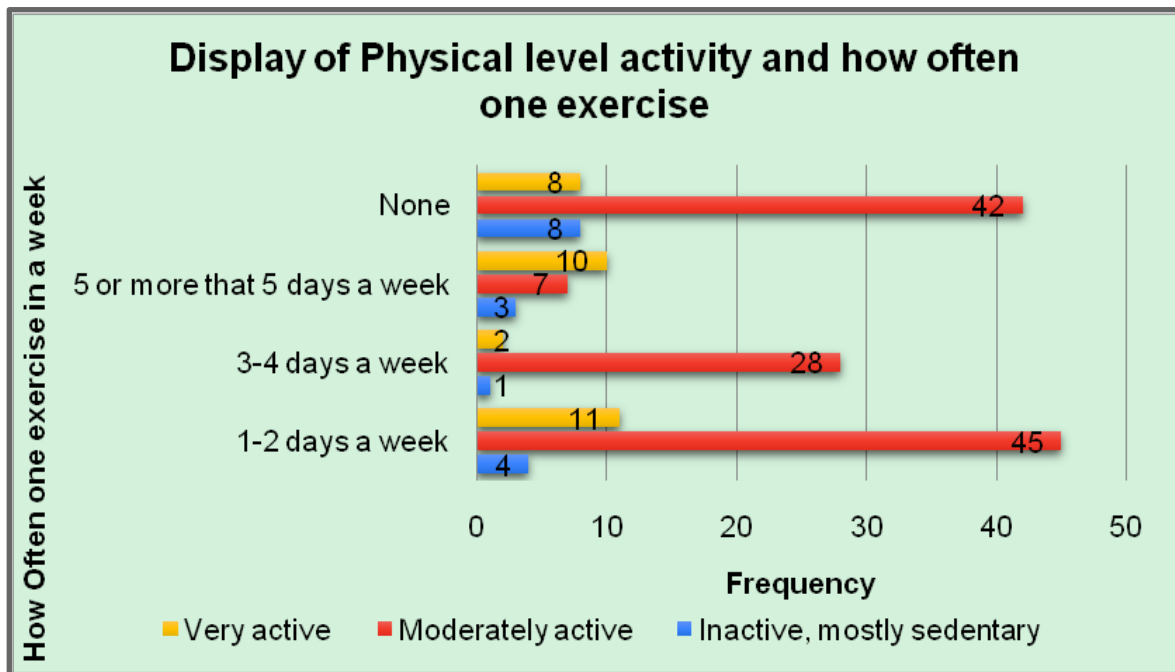
Female section

We observed a wide range of responses from the female section, Maximum responses were from age ranges between 15-30 years.

Most of the females responded belong to weight ranges between 40-70 kg, it falls within the normal to healthy weight range. Few of responses collected also below 40 kg (7 females) which falls within the underweight range, indicating imbalance diet intake and possible undernourishment.



The onset of menstruation is one of the most important changes occurring among the female during adolescent years. The majority lies in the age group of 12-14 years of age, few responses also indicate early onset of menstruation which could be due to a variety of different reasons like obesity, inactive lifestyle, toxin intake.



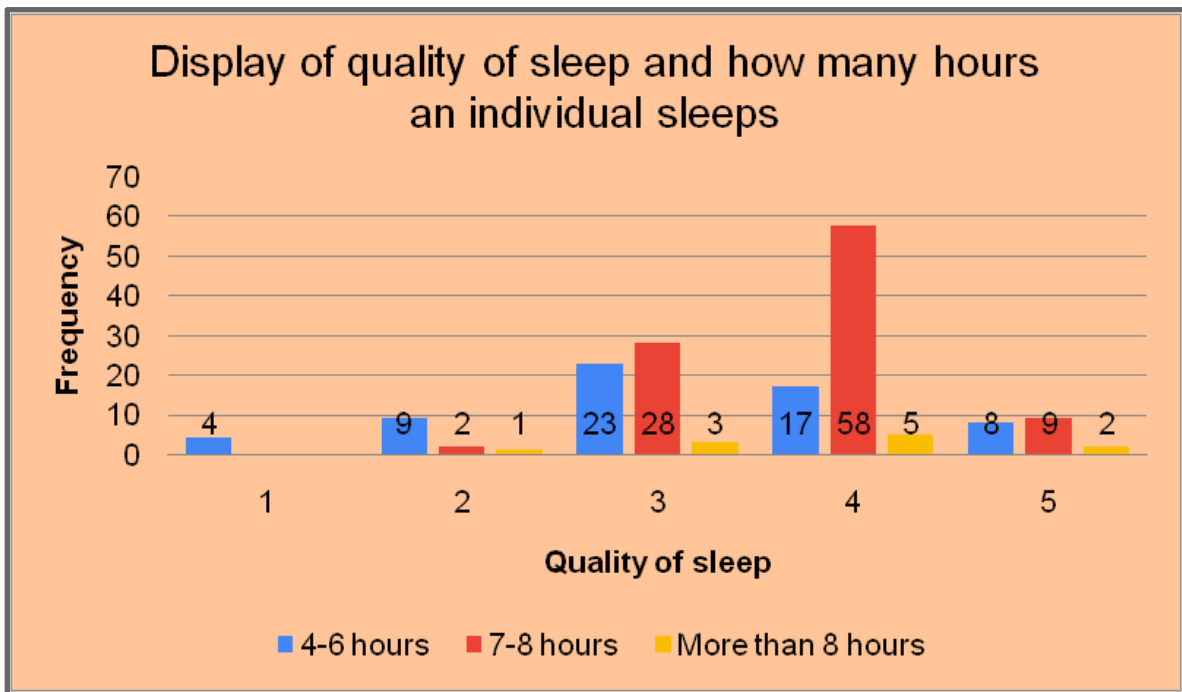
How often they do exercise in a week

- Out of total, 61 (35.5%) female respondents do exercise for 1-2 days in a week while
- 31 (18%) female respondents do exercise for 3-4 days in a week
- 22 (12.8%) female respondents do exercise for 5 or more than 5 days in a week
- And 58 (33.7%) female respondents don't do any kind of exercise in a whole week .

Activity level on a regular working day

- Out of total, 124 (72.1%) female respondents are moderately active
- 32 (18.6%) are very less active while
- 16 (9.3%) are inactive, mostly sedentary.

The above responses could be concluded that the majority of the respondents are less likely to exercise regularly. But most of them are moderately active on a regular working day. It is important to balance both active and passive activity in your lifestyle as your body needs to keep active and moving for you to become healthy and fit ,whilst allowing your body to relax and rejuvenate.



Hours of sleep

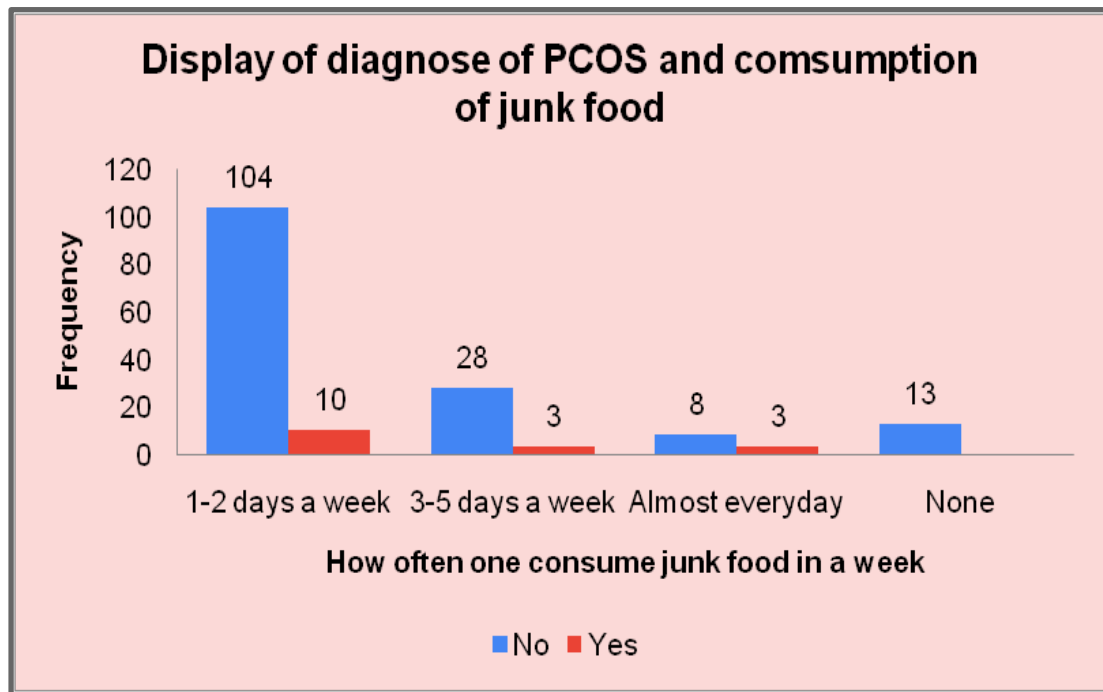
- Out of total, 97 (56.4%) respondents are getting 7-8 hours of sleep
- 64 (37.2%) respondents are getting 4-6 hours of sleep
- And 11 (6.4%) respondents are getting more than 8 hours of sleep.

Quality of sleep (on a scale of 1-5, 1 being least satisfied and 5 being the most satisfied)

- Out of total, 19 (11%) female respondents rate their sleep on 5.
- 81 (47.1%) on 4
- 55 (32%) on 3
- 13 (7.6%) on 2
- And 4 (2.3%) on 1

It could be interpreted that people who sleep for 4-6 hours a day have complaints about quality of sleep. *"There's more to good sleep than just the hours spent in bed"*. Good sleep improves your brain performance, mood, Physical and mental health.

Junk foods are great as an appetiser but it is as harmful as eating trash. Junk foods like burgers and pizzas are not only high in salt content, they also have high sugar and fat content as well.



From the survey it was found out that out of 172 respondents, 68% females consume junk food 1-2 days a week ,18% consume 3-5 times a day and almost 6.4% females consume junk food almost every day. Consumption of junk food results in increased chances of PCOS in girls. PCOS further leads to complications during pregnancy. Women who eat a lot of fast food may take longer to become pregnant and be more likely to experience infertility.

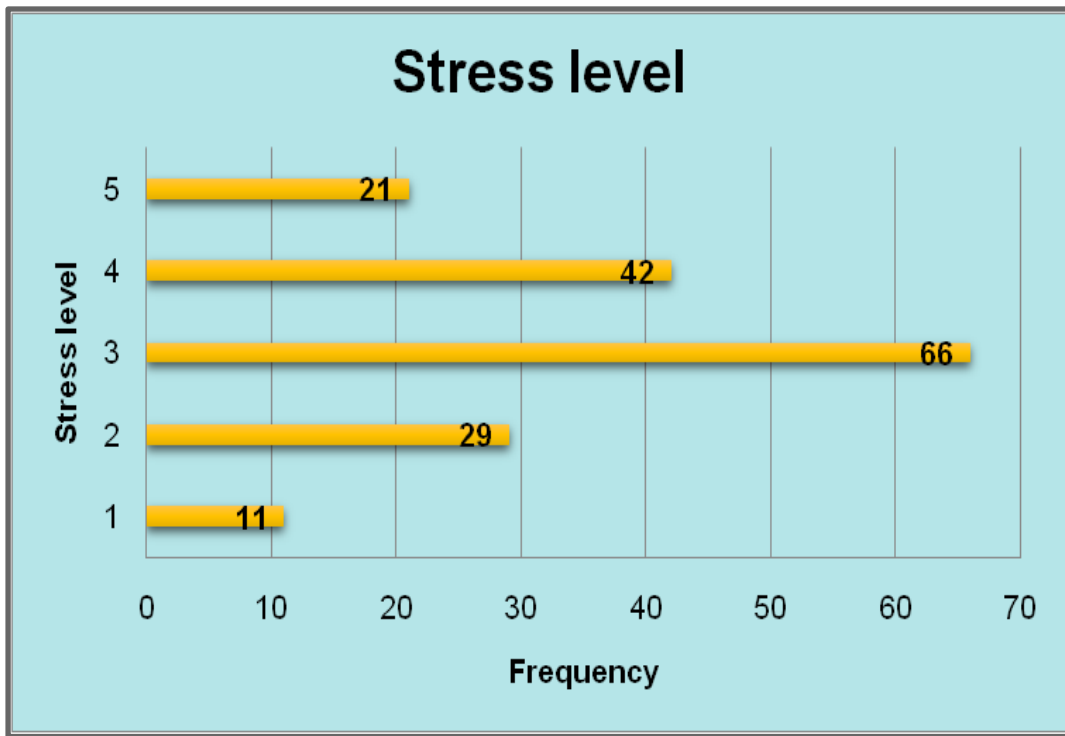
13% of female infertility is due to **smoking**. Female smoking can lead to gamete mutagenesis, early loss of reproductive function, and thus advance the time to menopause. It has been also associated with ectopic pregnancy and spontaneous abortion.

- It seems that the female respondents in the survey are very well aware about the negative effects of smoking on human health as 96.5% of them never smoke.
- However, 2.3% were found to be passive smokers

For women, **heavy drinking** can cause changes in ovulation, cycle regulation and ovarian reserve. A recent review has shown that light drinking reduces fertility in women, and fertility is reduced even further in women drinking moderately or heavily.

- Out of 169 females, 151 have never consumed alcohol and only 18 females drink occasionally.
- This indicates that there is alcohol awareness among women and they are beware of the devastating consequences of inappropriate or excessive **alcohol consumption**.

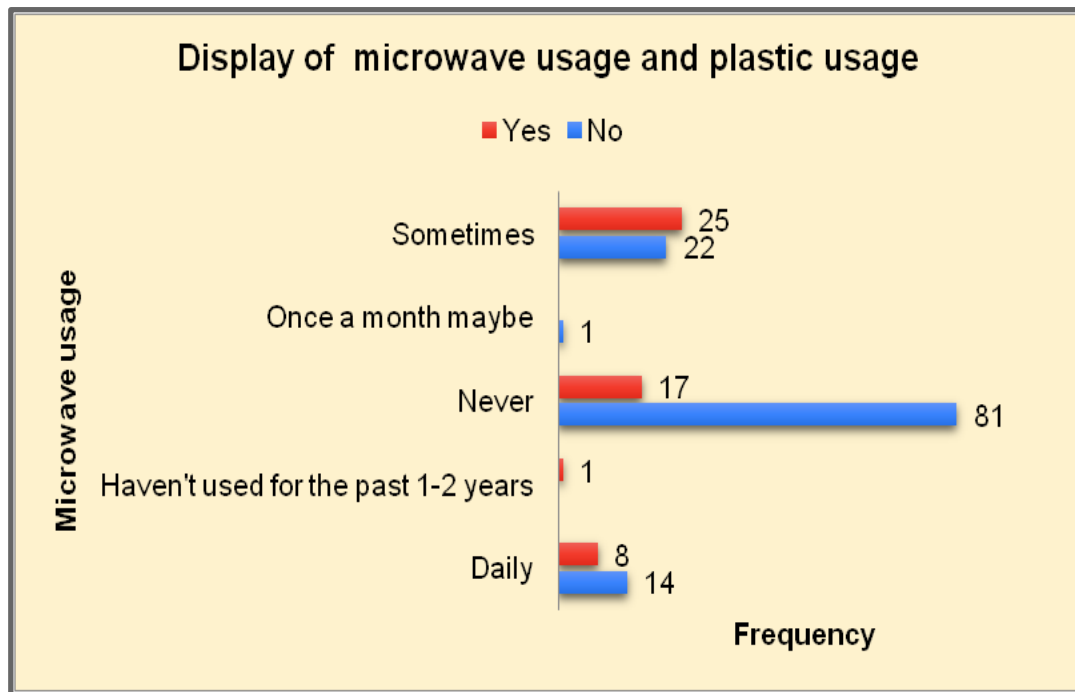
Recent studies have found links between the **women's levels of day-to-day stress** and lowered chances of pregnancy. Stress levels increase the longer you have difficulty conceiving. The chart below depicts that majority of respondents consider themselves stressed



Microwave/ovens are mainly used for convenience and energy efficiency. Cooking with a microwave oven is unnatural and unhealthy.

- Results of the survey show that 57.6% females never use microwaves to heat their food while 27.9% heat food in microwaves frequently.
- Over 13.4% females answered that they heat the food in microwaves every day.

People often order from restaurants and heat the food in the same **takeaway containers**. Over 90% takeaway packaging is not microwave safe and can leach out chemicals on heating which mix into the food and get ingested which further causes high blood pressure, affects fertility and damages brain functioning.



From what started as an easy and convenient material for kitchen use, **plastic**, sadly has emerged as a major health hazard which must be replaced for specific purposes-especially for microwave heating and storing of food items.

According to the World Health Organisation(WHO), microwaving food in glass or microwave-safe porcelain is generally safe. However, microwaving in plastic containers is associated with increased leaching-the transfer or leaking of chemicals into food.

- But it seems that the 30% female population of this survey is still unaware about this fact as they continue to store and eat in plastic containers.

Women have begun taking extra care with what they eat in general or while trying to conceive but they also need to take a closer look at the pots and pans that food is cooked in too. A study published in Human Reproduction found that preparing food in **non-stick cookware** could significantly increase the time it takes to conceive.

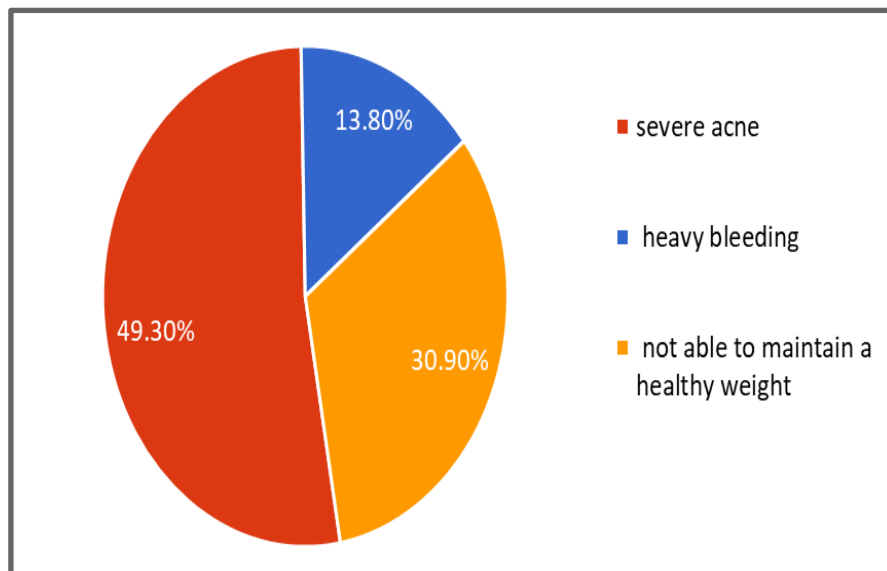
Female infertility may be aggravated and prolonged by the cookware choices.

- From the survey it was learned that 66.7% females use non-stick cookware probably because it facilitates cooking with minimum usage of oil.
- Shockingly, 16.7% of the respondents do not even know whether non-stick cookware products are used for preparing food in their households or not.

This shows that they are ignorant and uninformed about their lifestyle choices and its further consequences.

PCOS analysis

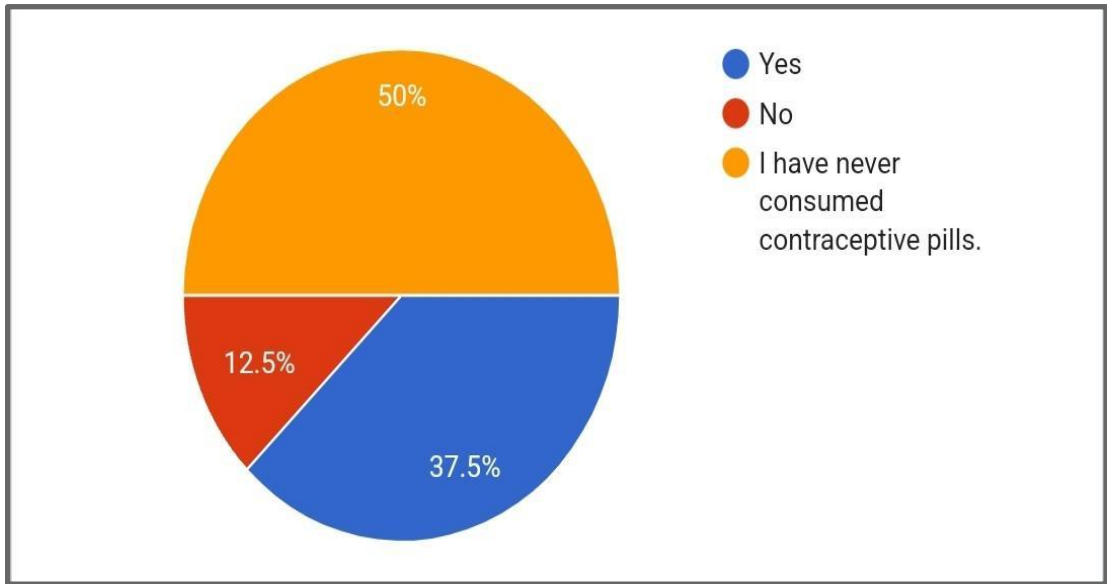
Most of the females were diagnosed with PCOS at the age of 17 to 19. We observed that out of 156 responses 15 females had a family history of PCOS and the rest 141 did not have any family history of PCOS. The most common symptoms which they suffered were Irregular periods, Weight gain, skin problem and scalp hair loss, acne, heavy bleeding and were not able to maintain a healthy body weight.



Contraceptive pills:

When asked about consumption of contraceptive pills we observe that out of 16 responses 6 females (37.5%) used contraceptive pills and remaining 10 responded females (62.5%) never used them.

- Out of 16 responses 6 females (37.5%) tried to leave the contraceptive pill and tried to manage PCOS through lifestyle changes.
- 2 female (12.5%) never tried to leave contraceptive pill
- 8 females (50%) never consumed a contraceptive pill.

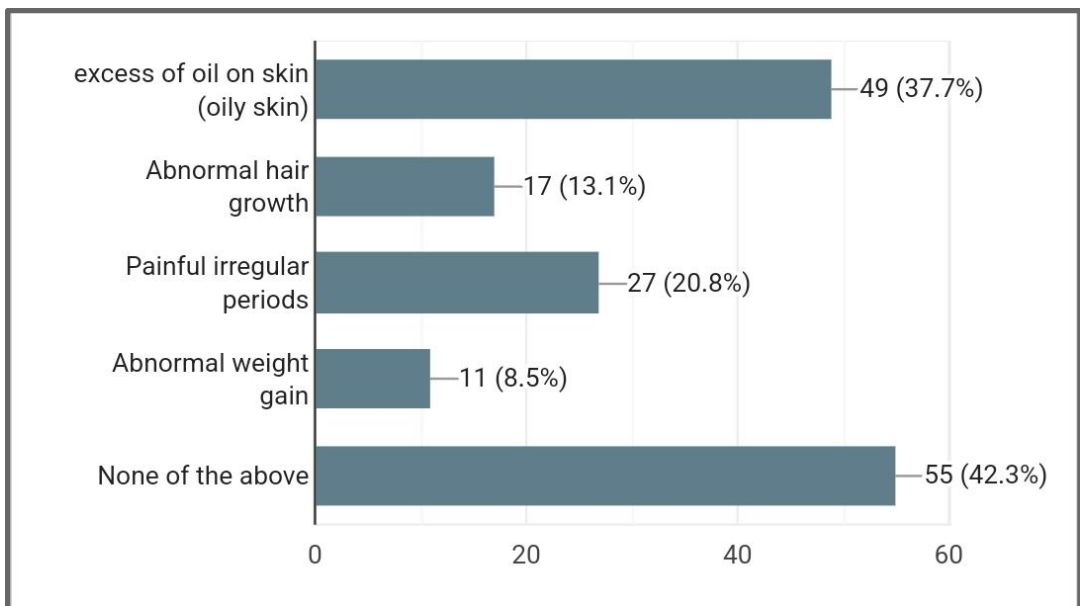


We observed that out of 16 responses of females

- 3 female (18.8%) on discontinuation of contraceptive pills revert to their regular periods.
- 3 female (18.8%) didn't revert to their regular periods after discontinuation of contraceptive pills
- 10 female (62.5%) never consumed contraceptive pills

We observed out of 156 responses

- 15 people (9.6%) have close relatives who are suffering from PCOS.
- 141 person (90.4%) don't have any family history of PCOS



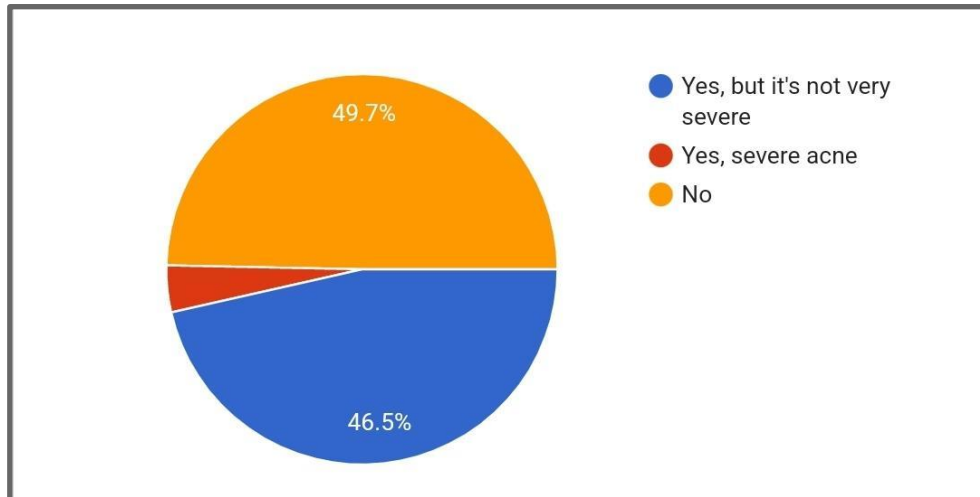
Out of 130 person responses on their past 3-4 months symptoms

- 49 person (37.7%) notice excess of oil on their skin

- 17 person (13.1%) notice abnormal hair growth
- 27 person (20.8%) notice painful Irregular period
- 11 person (8.5%) notice abnormal weight gain
- 55 person (42.3%) notice none of above symptoms

Out of 155 responses -

- 72 people (46.5%) suffering with skin problem like acne but it's not very severe
- 6 people (3.9%) suffering from acne it terms of severe acne
- 77 people (49.7%) not suffering from skin problem like acne issues



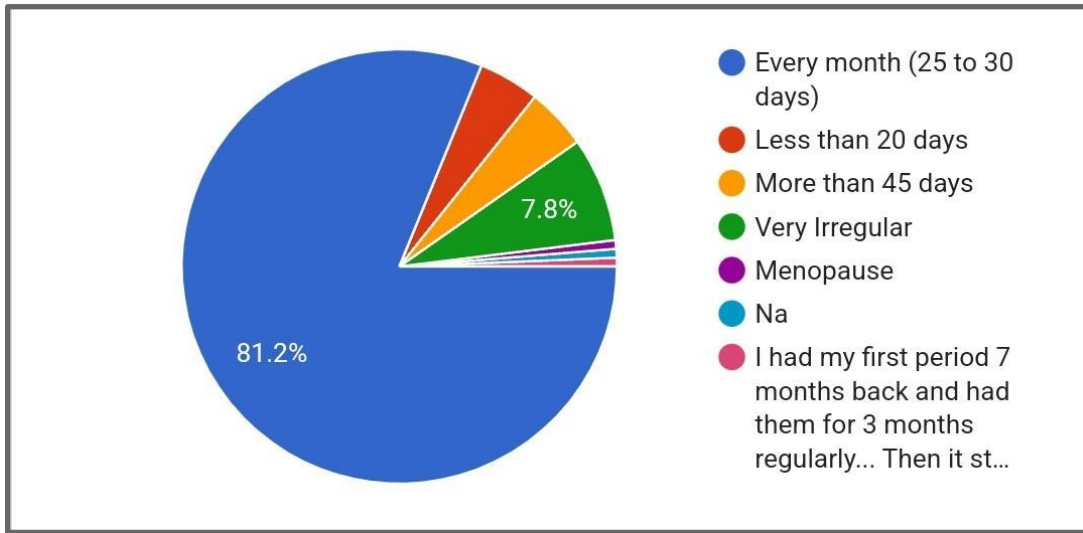
Out of 144 females responses

- 3 female (2.1%) facing difficulty in trying to get pregnant
- 65 female (45.1%) not facing difficulties
- 76 female (52.8%) choosed not applicable

Time period of periods:-

Out of 169 female responses

- 125 female (81.2%) get their periods in every month (25 to 30 days)
- 7 female (4.5%) get their periods in less than 20 days
- 7 female (4.5%) get their periods in more than 45 days
- 1 female (0.6%) get their menopause
- 1 female (0.6%) haven't got their periods
-NA
- 1 female (0.6%) had their first period 7 months back and had them for 3 months regular then it stopped for 4 months and just got it back this month

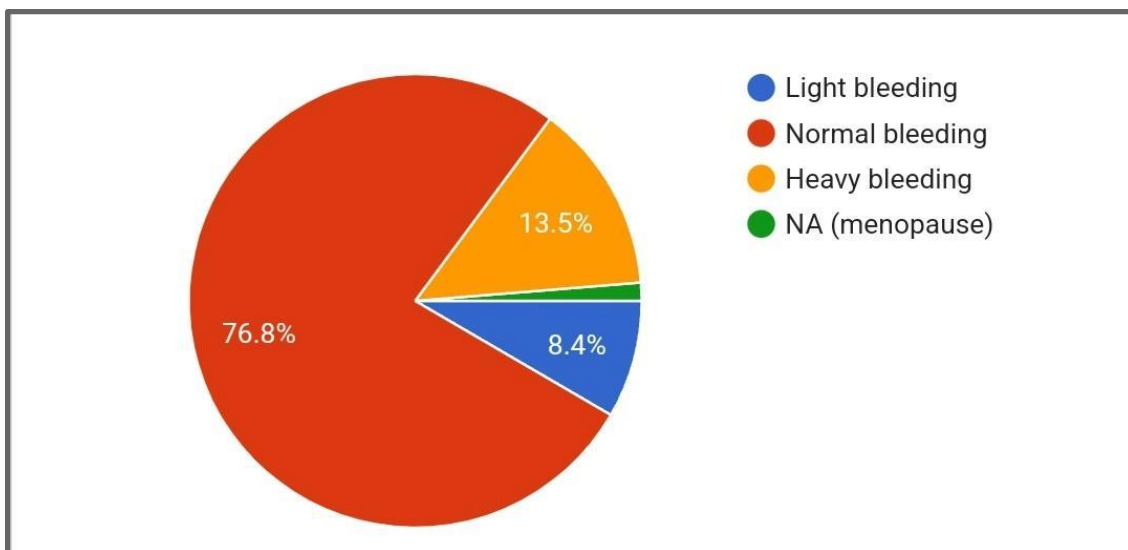


Bleeding during period-

Usually, menstrual bleeding lasts about 4 to 5 days and the amount of blood lost is small (2 to 3 tablespoons).

Out of 155 female responses:-

- 119 female (76.8%) faces normal bleeding during period
- 21 female (13.5%) faces heavy bleeding
- 13 female (8.4%) faces light bleeding
- 2 female (1.3%) goes menopause- NA

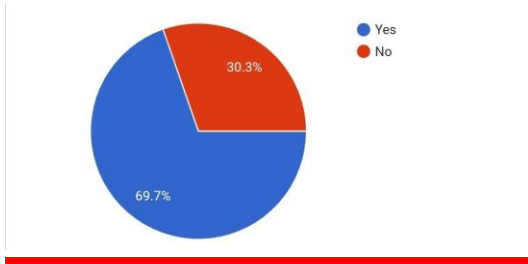


Healthy body weight

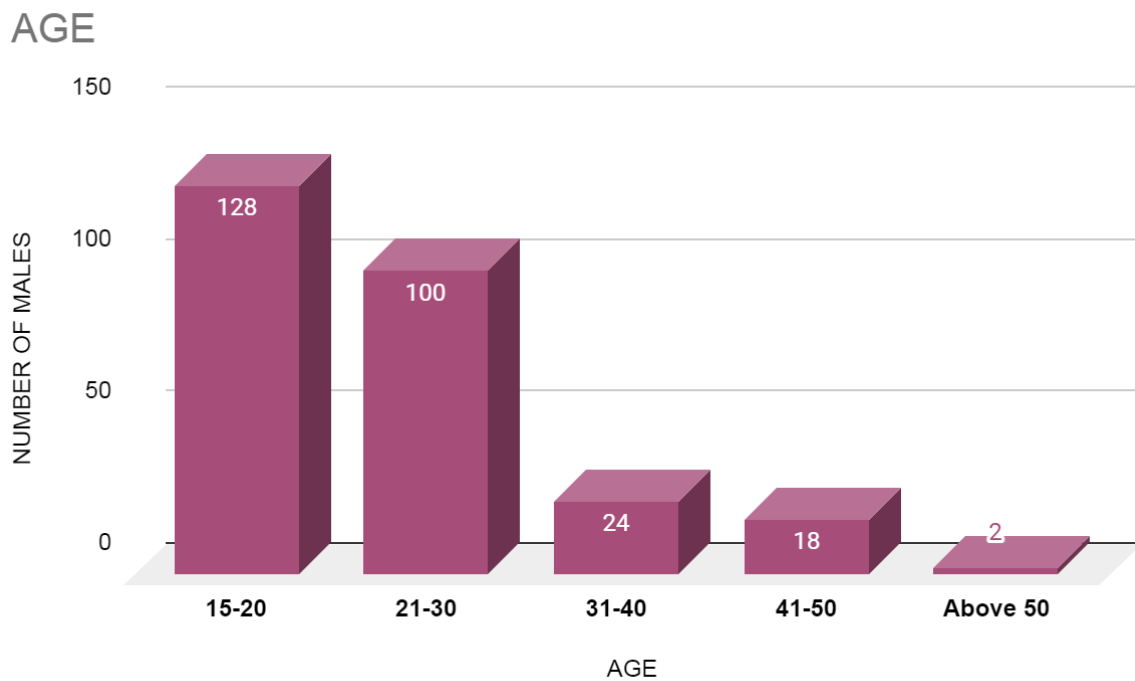
A healthy weight is a number that is associated with a low risk of weight-related diseases and health issues.

Out of 155 person response:-

- 108 person (69.7%) are able to maintain healthy body weight
- 47 person (30.3%) are not able to maintain healthy body weight

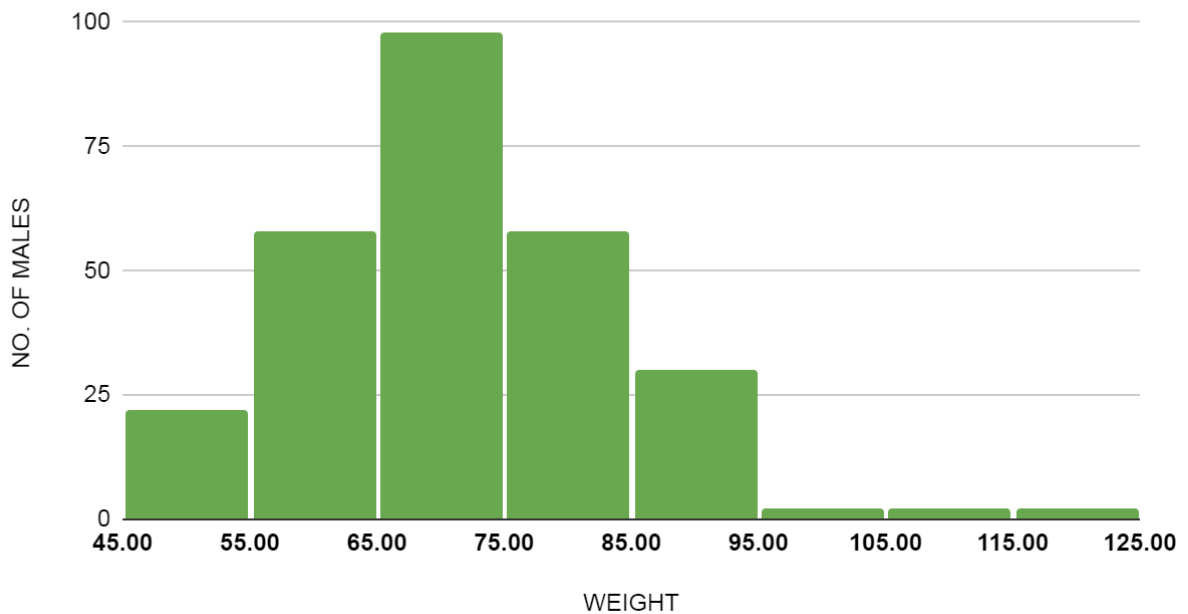


Male section



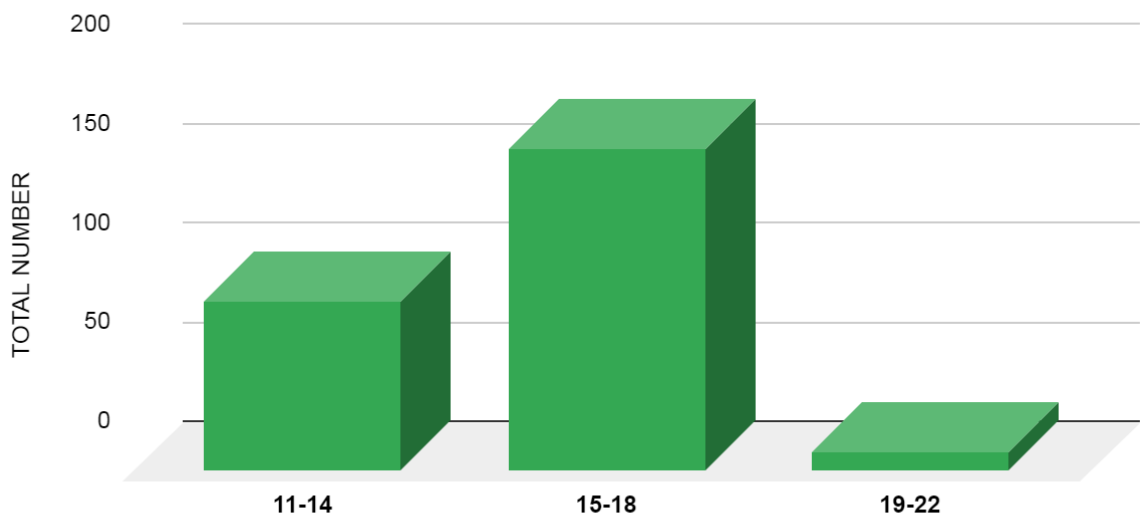
We observed a wide range of responses from male section, Maximum responses are from age ranges between 15-30 years.

Weight



- Most of the male responded belong to weight ranges between 55-85 kg, it falls within the normal to healthy weight range.
- Few of responses collected above 90 kg which falls within the overweight range, indicating imbalance diet intake and probably sedentary lifestyle.

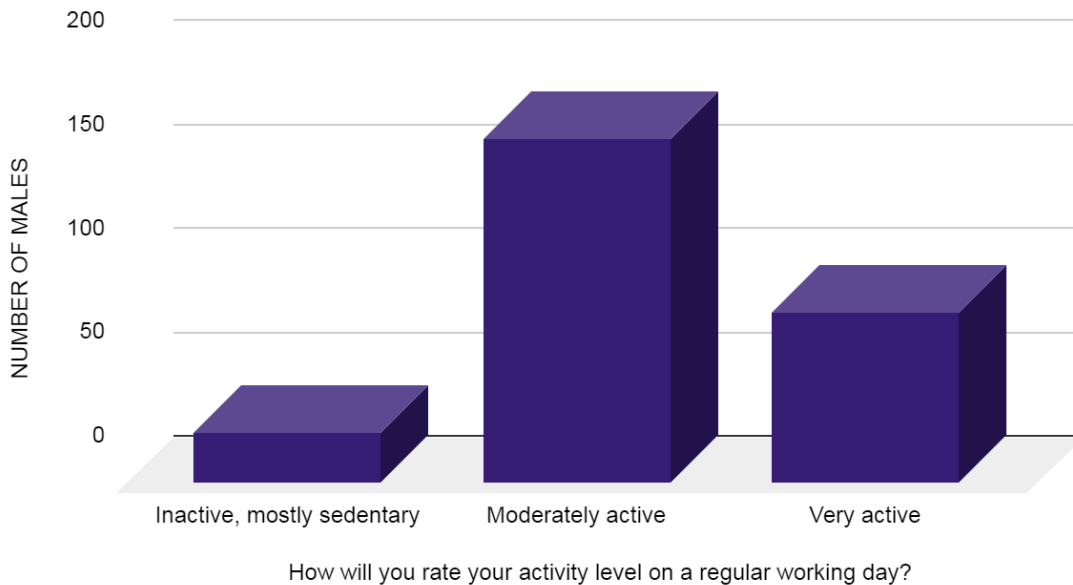
How old were you when you first noticed facial hair growth, deepening of voice, etc.?



How old were you when you first noticed facial hair growth, deepening of voice, etc.?

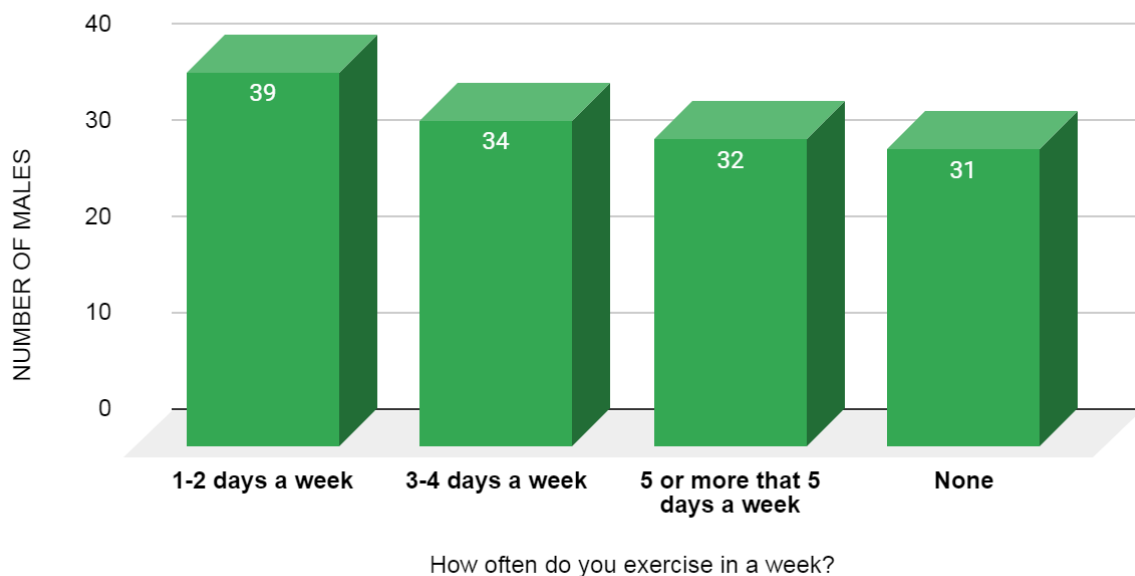
Secondary sexual characteristics are sexually dimorphic characteristics. Most males started growing facial hair, deepening their voice, when they were in the 15-18 age group(162). 10 of the males show development of sexual characteristics in later age 19-22 group.

ACTIVITY LEVEL ON A REGULAR WORKING DAY



The above chart represents the daily activity of a male respondent and how often they exercise, it could be concluded that most of the respondents are moderately active(166).

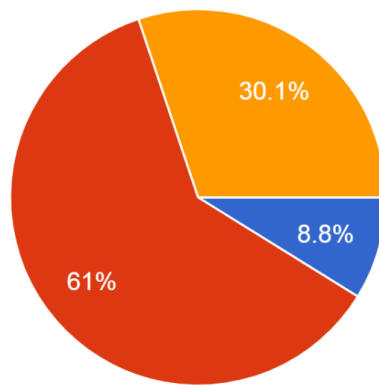
How often do you exercise in a week?(any form of activity like yoga, cycling, running, etc.)



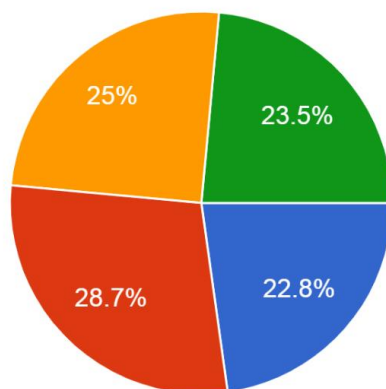
39 of the total males selected that they do exercise for 1-2 days in a week while 34 of males selected that they do exercise for 3-4 days a week. 32 selected that they do exercise for 5 or more than 5 days a week.

31 of the males selected that they do not do any kind of exercise in a whole week.

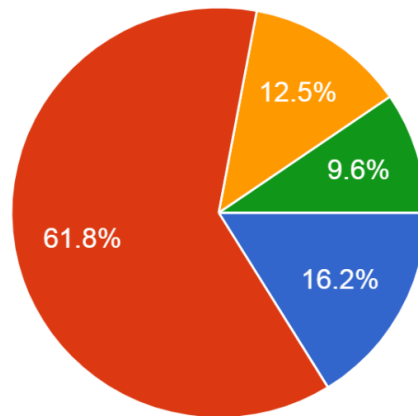
Moderate exercise improves physical as well as reproductive health. There are several positives as well as negatives of exercise depending upon its intensity.



Only 30.1% of males were “active” on a regular working day while 61% of males were moderately active on a regular working day.



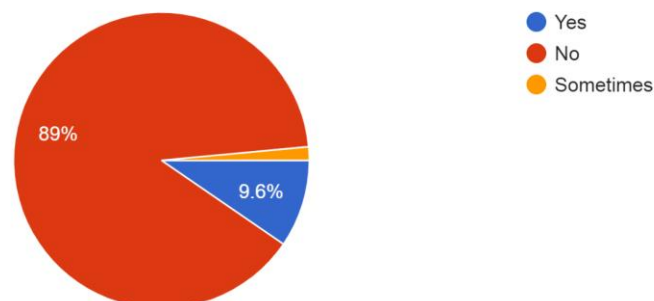
About 23.5% of males felt that they do some form of exercise or activity like yoga, cycling, running for 5 or more than 5 days a week. About 25% of males felt that they do exercise 3 - 4 days a week and about 28.7% felt that they do exercise for 1- 2 days a week. About 22.8% of males felt that they do not do any form of exercise on any day of the week.



When asked about consumption of junk food like pizza, burgers, chips, soft drinks, etc on a weekly basis about 9.6% of males felt that they consume junk foods almost everyday. About 12.5% males felt that they consume junk food for almost 3-5 days a week and about 61.8% males consume junk food 1-2 days a week while 16.2% of males admit that they do not consume junk food on a weekly basis.

Consumption of junk food is highly injurious to health. Junk food induces obesity risk factors and causes overweight deteriorating physical as well as mental health. Obesity can alter sperm function and molecular profile. Reproductive health can further be deteriorated by different lifestyle choices like consumption of alcohol, smoking, etc.

Do you smoke?
136 responses



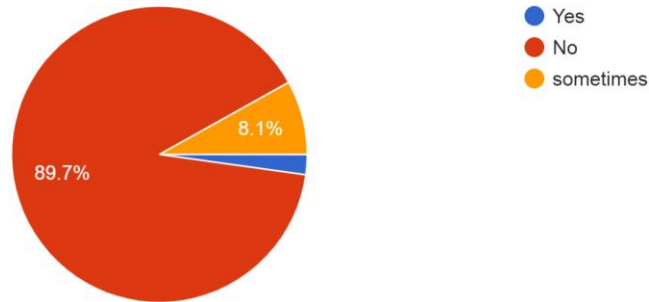
Smoking can lead to DNA damage in sperm. Some evidence shows that men with elevated sperm with DNA damage may have reduced fertility and higher miscarriage rates. In addition, smoking is a risk factor for erectile dysfunction.

89% of the surveyed males were non-smokers. This is a good sign of awareness among males about the cons of smoking.

Approximately 10% of males were regular smokers.

Do you consume alcohol on a regular basis?

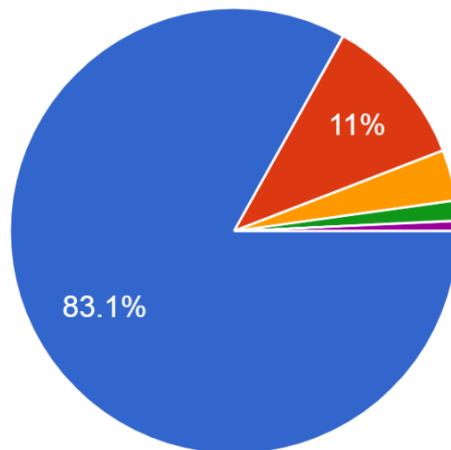
136 responses



Long-term, heavy alcohol use has reported reduced gonadotropin release, testicular atrophy, and decreased testosterone and sperm production.

Among the surveyed males 90% are occasional or non drinkers which is a healthy sign.

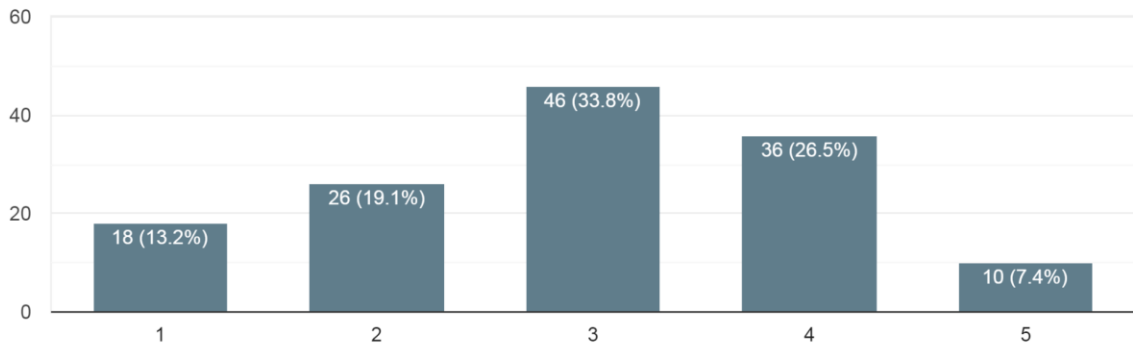
Only 2.2% males are regular basis alcohol consumers.



When asked how often do you carry your mobile phones in jeans pocket almost 83.1% responded that they carry their mobile phones daily in their jeans pocket. Almost 11% of males responded that they carry their mobile phones sometimes in their jeans pocket.

A recent study found that use of cell phones adversely affects the quality of semen by decreasing the sperm counts, motility, viability and morphology. Radiation and heat emitted from cell phones can cause problems with the process of spermatogenesis.

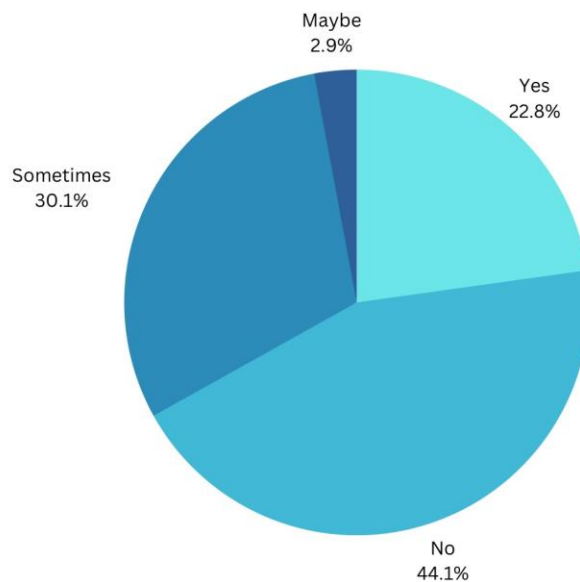
On a scale of 1-5 how would you rate your stress level? 1 being the lowest and 5 being the highest.
136 responses



Out of 136 male respondents 44 males were least stressed, 46 were moderately stressed and 46 were facing high stress levels.

Men who feel stressed are more likely to experience decreased testosterone, lower sperm count, abnormal sperm production, and decreased sperm motility.

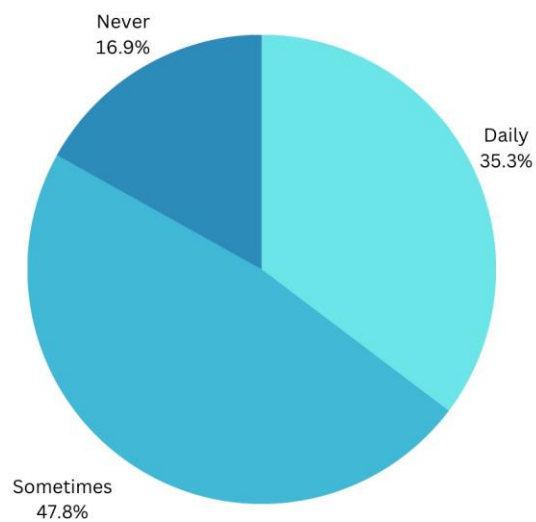
Q43. Are plastic containers used at your household for storing/packaging hot food?



When asked about the use of plastic containers in houses for storage of hot foods 44.1% males replied no. Since high temperatures can lead to leaching of chemicals from plastic into food which can cause hormonal imbalances.

30.1% males occasionally use it whereas 22.8% males regularly use plastic to store hot food. This shows a lack of information among more than half (52.9%) of the people.

Q45. How often do you consume caffeine(tea/coffee)?



Caffeine intake at higher levels can lead to sleep disturbances.

Approximately 6-8 hrs of good sleep is required by the human body for general health and well being. Less sleep can lead to lowered libido and disturbed levels of hormones.

35.3 % of males take caffeine on a regular basis. Since maximum responses are from the age group of 15-30 this higher caffeine intake can be attributed to socio economic demands, daily schedules, studies and routine work.

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