

Assessing Perception of People Towards Meditative Practices in our Society.

REPORT BY:

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Student's Declaration

We, hereby declare that, the project work entitled “**Assessing the Perception of People towards Meditative Practices in our Society**” is a record of an original work done by us under the guidance of Dr. Sudeep Mallick and this project work is submitted in the partial fulfilment of the requirements for the paper Programming for Data Science of BDA1.

We have collected the data from primary sources as per the requirements of our dissertation, which are appropriately referred to in the report. All the computations involved in this dissertation are the result of our own calculations on the data that we collected.

The formulae that are used in the dissertation are acknowledged providing appropriate reference of the source from which they are obtained. No part of the dissertation has been submitted to any other institution for the purpose of any degree/diploma.

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Acknowledgement

The completion of this project could not have been possible without the participation and assistance of a lot of individuals contributing to this project. However, we would like to express our most sincere gratitude to our guide Dr. Sudeep Mallick for his immense support, kindness and guidance throughout the project.

We wish to thank our peers for their kind support and valuable guidance which helped us along the course of this project.

Last but not the least, we would like to thank everyone who is involved in the project directly or indirectly.

Abstract

Meditation offers a complex study and over the past few decades several research studies have demonstrated the effect of various meditative practices with respect to physiological as well as psychological changes. Through this study we would be analysing the effects of meditative practices in one's life at a more fundamental level with respect to various well-being factors and would try to validate our findings to throw light on the beneficial effects of meditation. We would then suggest the limitations of this study and also present the future scope of work to be conducted to explore this subjective topic in a more optimal way.

Objective

Assessing the Perception of People towards Meditative Practices in our Society.

Description

Mediation and its benefits are one of the widely discussed topics all over the globe and there are different kinds of practices that are followed by different strata of society. Our study aims at finding out the perception of people towards such meditative practices and their impact on people's lives; and to validate how mediation can be beneficial in one's life.

Questionnaire Design

The questionnaire for our analysis was designed by the group members. After a few iterations, the rough questions were put in a google form which was eventually rolled out after a successful test response.

For reference, the google form can be accessed using the below link:

<https://lnkd.in/dkaCcAkk>

Data Collection Methodology

Data that has been used in our analysis is Primary Data. It means that this is the fresh data that has been collected by rolling out the forms and reaching out to people for filling the forms.

The approach which was taken to collect the data can be understood from the following bullet points: -

- Rolling out the final questionnaire via google forms.
- The forms were then rolled to contacts via WhatsApp.
- To get a good mix of respondents the forms were also rolled via social media platforms viz. Meta (formerly known as Facebook, LinkedIn and Instagram).

Questions to be answered via Data Analysis and Visualization based on the responses:

Observing the basic questions based on the preliminary analysis we would be able to answer the gender and age distribution of respondents and whether they meditate or not. Apart from that our objective through this analysis is to generate meaningful insights and try to address the following questions: -

Q1) What kind of practices are more often observed among the respondents?

Q2) Which is the primary reason for not doing meditation or being unable to bring consistency in meditative practices in one's life?

Q3) Is there any trend or relation between the age of people and doing meditation?

Q4) What are the effects of meditation pertaining to the well-being factors in one's life?

Q5) Among all the well-being factors, for which two factors the perception of people who do not meditate have been observed as the worst. Compare the perception for these two factors with the people who meditate with those who don't.

Exploratory Data Analysis and Visualization

1. Percentage of people based on Response (Yes/No) for meditation.

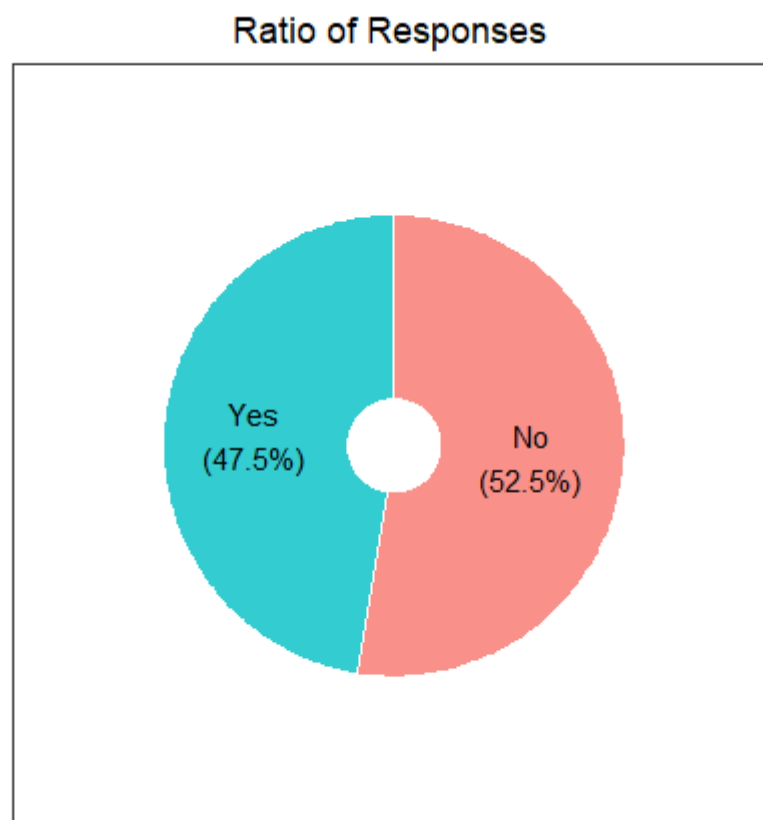


Fig.1

On the basis of the above responses, we can conclude that 52.5% of the respondents have reported that they don't practice meditation and 47.5% have reported that they practice meditation.

2. Percentage of Responses based on Age of people.

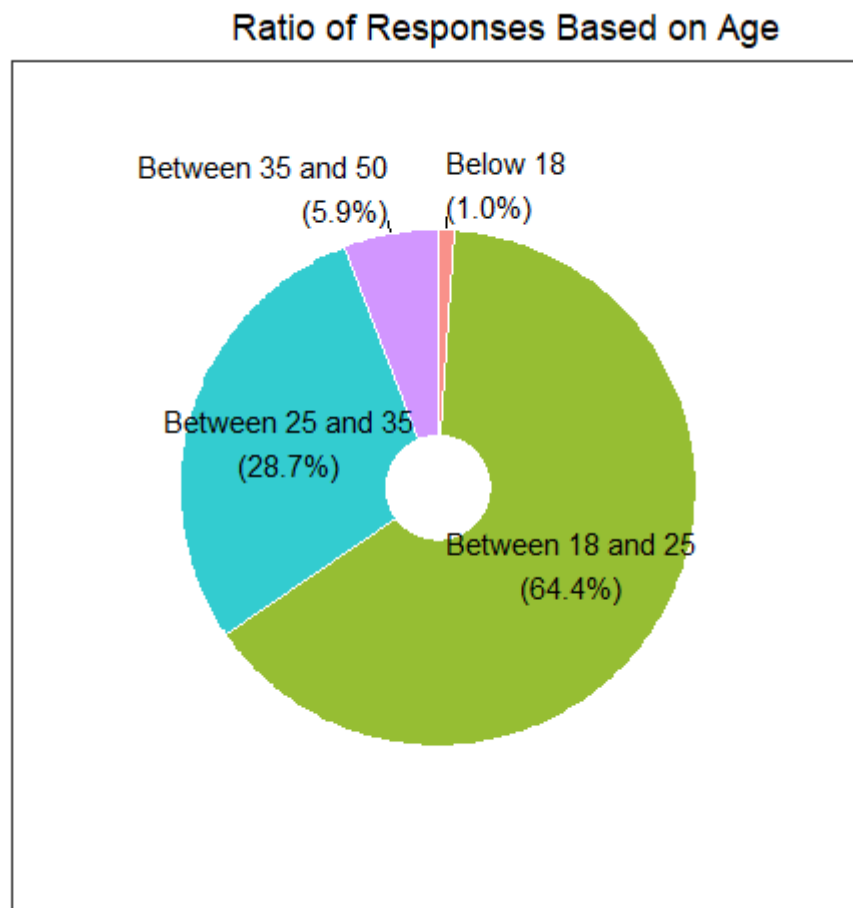


Fig.2

The above pie chart depicts the distribution of age of the respondents for the data collection:

Based on the data of the target audience, 1% of the people lie below the age group of 18, 64% lie between the ages of 18 to 25, 29% lie between 25 and 35 while 6% lie in the interval of 35 - 50. It is evident that a major contribution of responses is from the people between the age 18 and 25 as social media is quite popular among them so we could have expected more participation in online surveys from them.

3. Gender-wise Percentage of Respondents (M/F %)

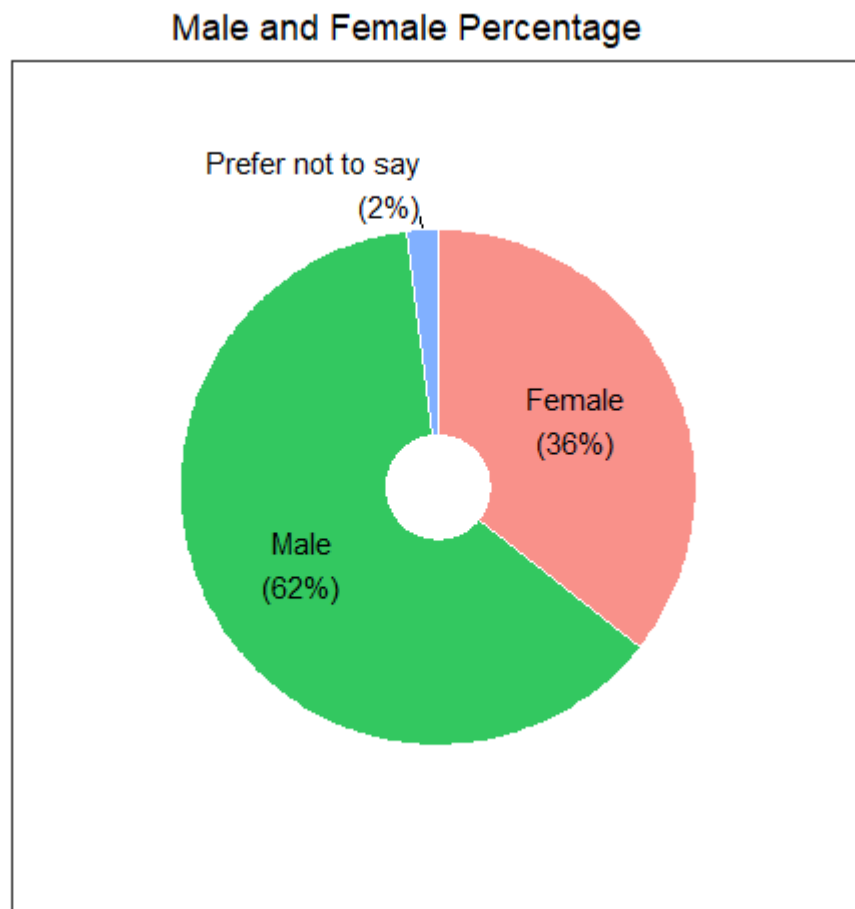


Fig.3

The above pie chart shows the gender distribution of the target audience:

Major contributions in the responses are from Male which is roughly three-fifths of the total responses. 36% of respondents are female while two percent of the people preferred not to reveal their gender.

4. Gender-wise Distribution of People who Meditate or not.

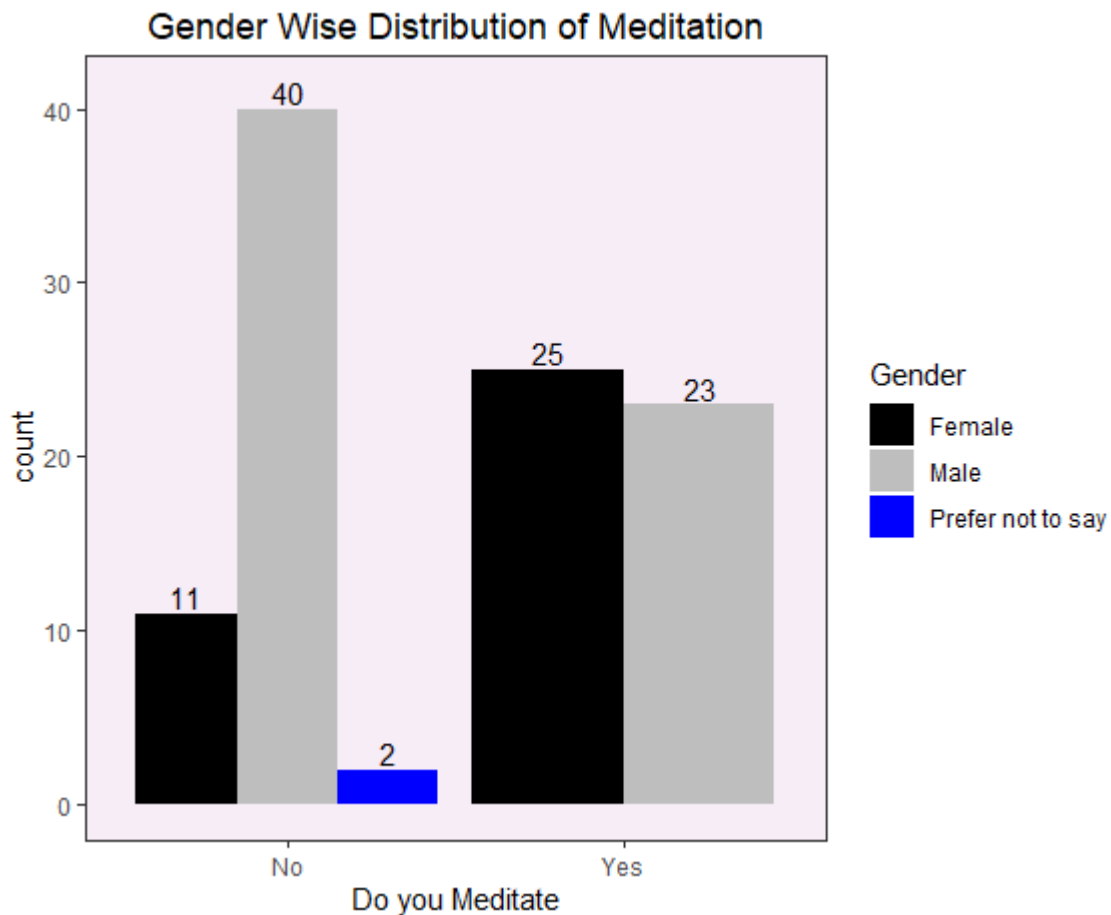


Fig.4

The above plot gives us an insight that although female respondents are lesser as compared to their male counterparts; however, as per the responses we can conclude that overall, females are more actively practicing meditation as compared to males and those who have preferred not to reveal their gender.

5. Age-Wise Distribution of people doing meditation or not.

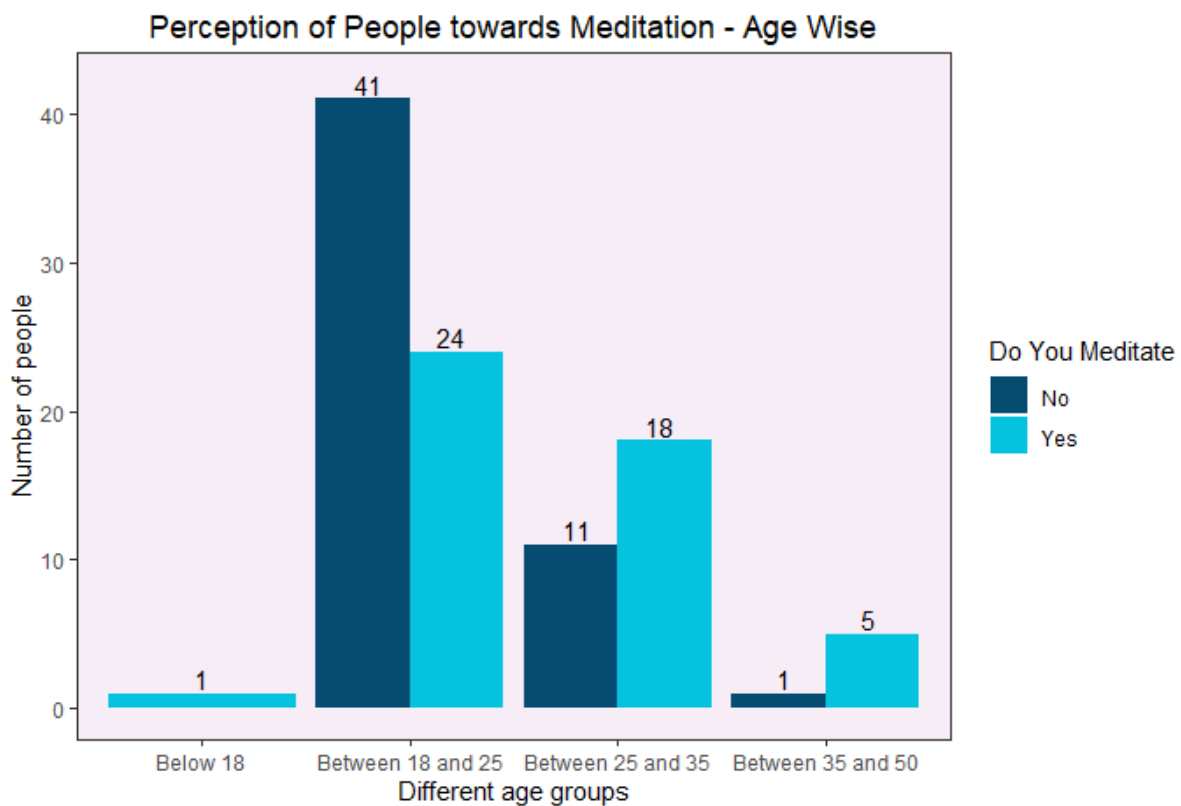


Fig.5

Based on the results from the above graph, we can have the following insights:

-

- There is only one respondent below the age of 18.
- In the Age Group of 18 to 25, out of total respondents in that age group, 37% of people practice meditation, and the majority of the people falling in that group do not practice meditation.
- However, we can also observe that as the age of people is increasing; more and more people in that age group have started practicing meditation which is 60% and 80% in the age group of 25-35 and 35-50 respectively. This shows us that as the age increases the proportion of meditation practitioners also increases.

6. Perception of People towards the well-being factors based on whether they do meditation or not.

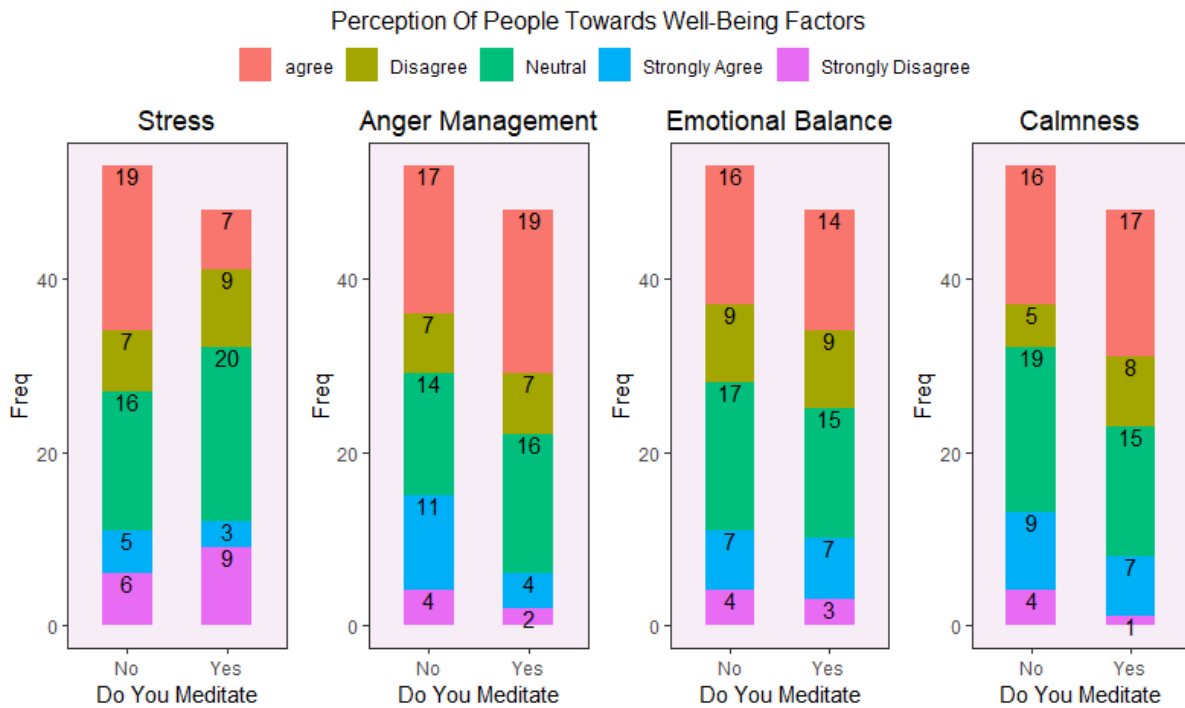


Fig.6.1

Based on the results from the above graph, we can have the following inferences regarding perception for the below mentioned well-being factors: -

- **Stress** - People who practice meditation have reported to be less stressed in life as compared to those who don't meditate. As per the statistics from the data, out of the total responses, only 21% of the people who meditate have reported stress in life while for those who don't meditate the proportion is comparatively higher which is a whopping 45%.
- **Anger Management** - For Anger Management, there is no significant effect observed in the perception as the proportion of people who meditate and don't meditate are almost the same in controlling their anger.

- **Emotional Balance** - For emotional balance, there is no significant difference between the people who meditate and those who don't meditate
- **Calmness** - According to the data, there is no significant difference in being calm between the people who meditate and those who don't meditate.

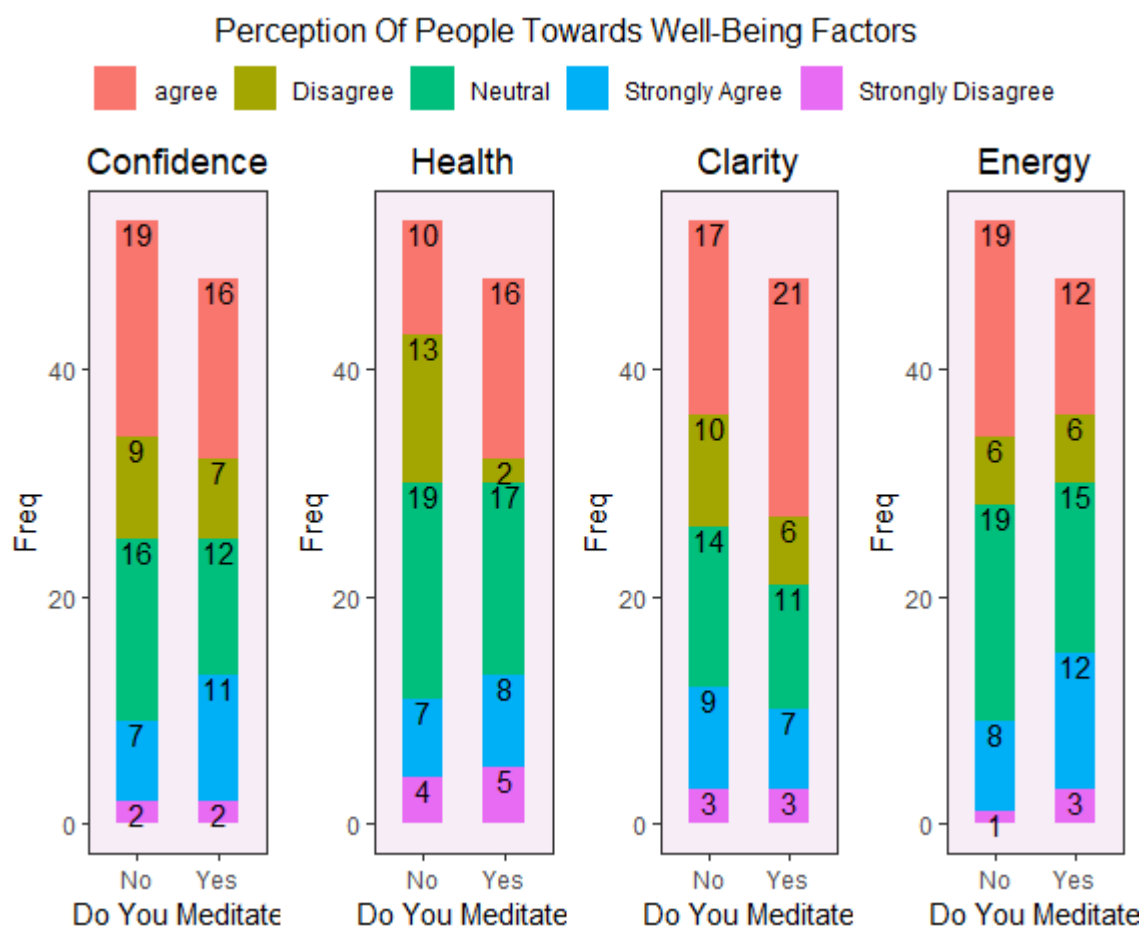


Fig.6.2

Based on the above graph, we can produce the inference for the following factors:

Confidence: The above bar graph depicts the inference that the proportion of people who meditate and are confident is higher than their counterparts (those who are not practicing meditating).

Health: People who meditate have reported to be much healthier than their counterparts. Approximately 50% of the people who meditate have reported to have a healthy lifestyle, while only 32% of the people who do not meditate have reported to lead a healthy life.

Clarity: Meditation has improved the clarity of life in people. People who meditate (58%) have reported to have better clarity in life compared to their counterparts (49%) which is quite high.

Energy: There is no significant difference observed in the responses for energy levels between those who meditate and those who don't meditate.

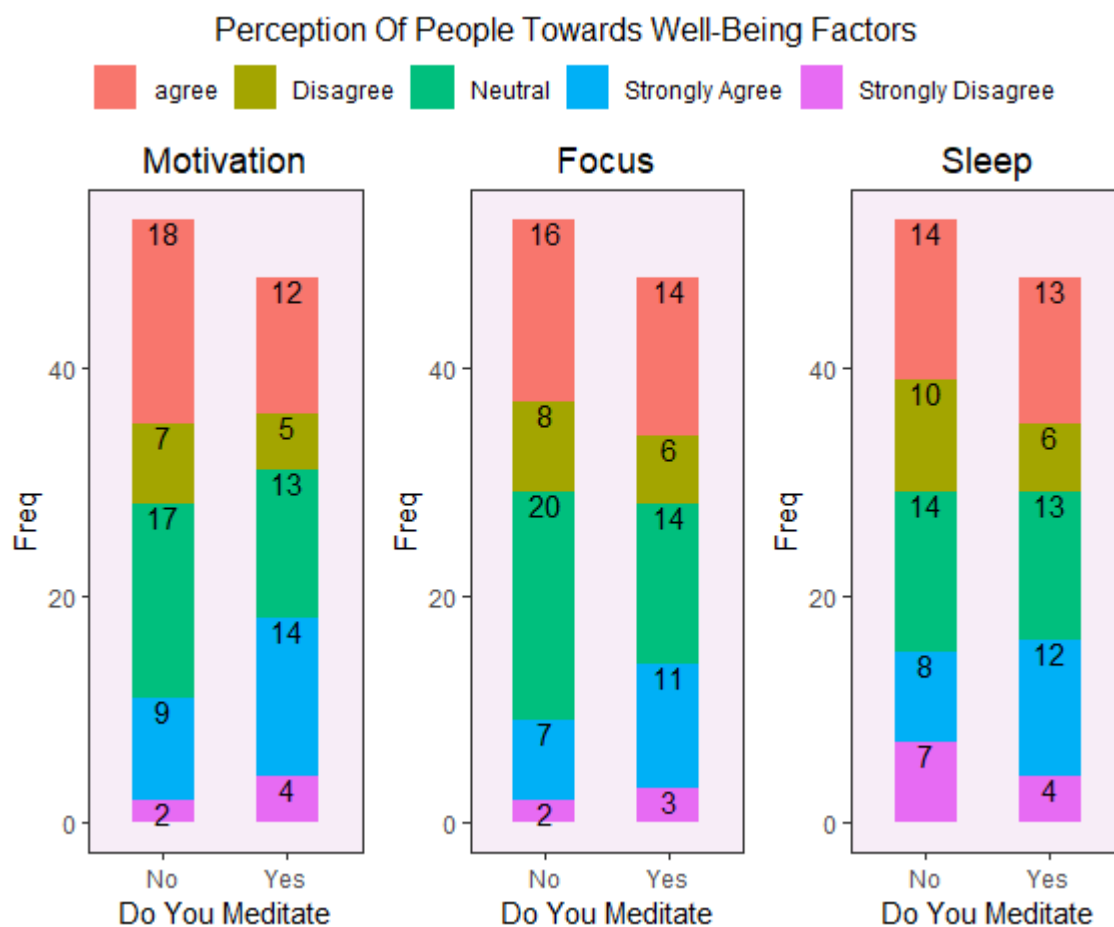


Fig.6.3

Motivation: There is no significant difference observed in the perception for motivation between those who meditate and those who don't.

Focus: The difference observed in the perception of people towards focus levels between those who meditate and those who don't is not very significant. However, our findings suggest that meditation practitioners have shown a 10 percent point increase towards focus as compared to those who don't.

Sleep: For sleep, the findings suggest that 52% of the people who meditate have reported better sleep quality as compared to those who don't which is around 40%.

Key Insights:

- Meditation has helped people curb stress levels.
- Meditation has helped people lead a healthy life.
- Meditation has helped people build a clarity of thought in their personal lives.
- Meditation has helped people enjoy the benefits of sound sleep to help them work efficiently the next day.

7. Most Practiced form of meditation among the respondents.

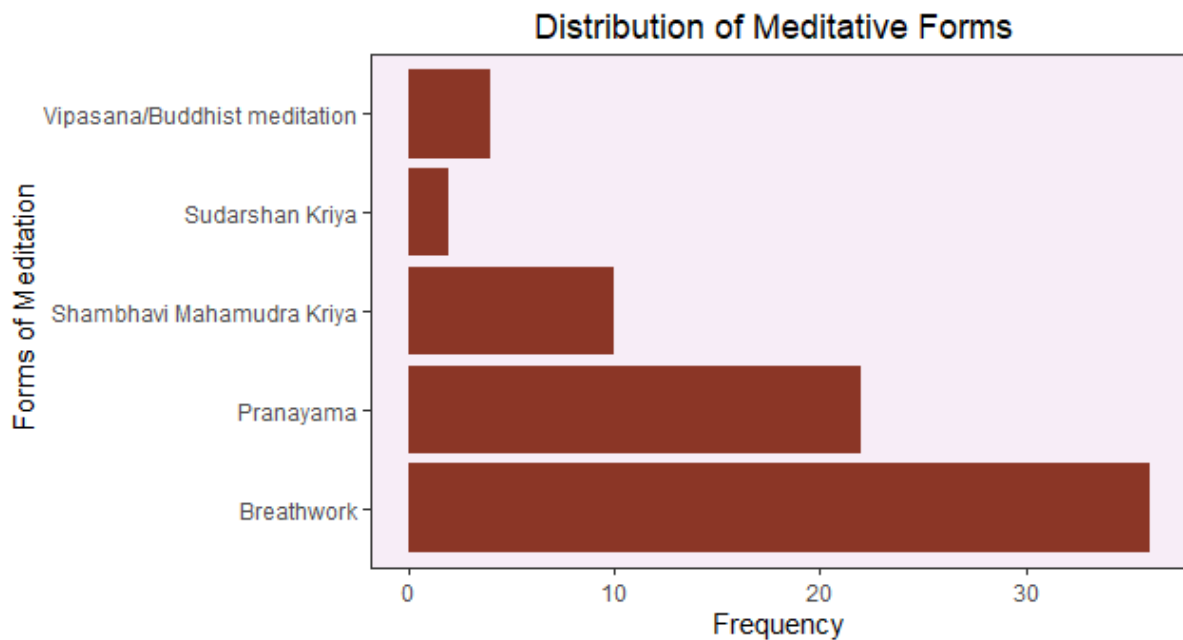


Fig.7

From the above bar graph, it is evident that the most practiced meditative forms are Breathwork and Pranayama while Sudarshan Kriya has come out to be the least practiced meditative practice among our respondents.

8. Experience of people who are meditating based on duration and how frequently they meditate.

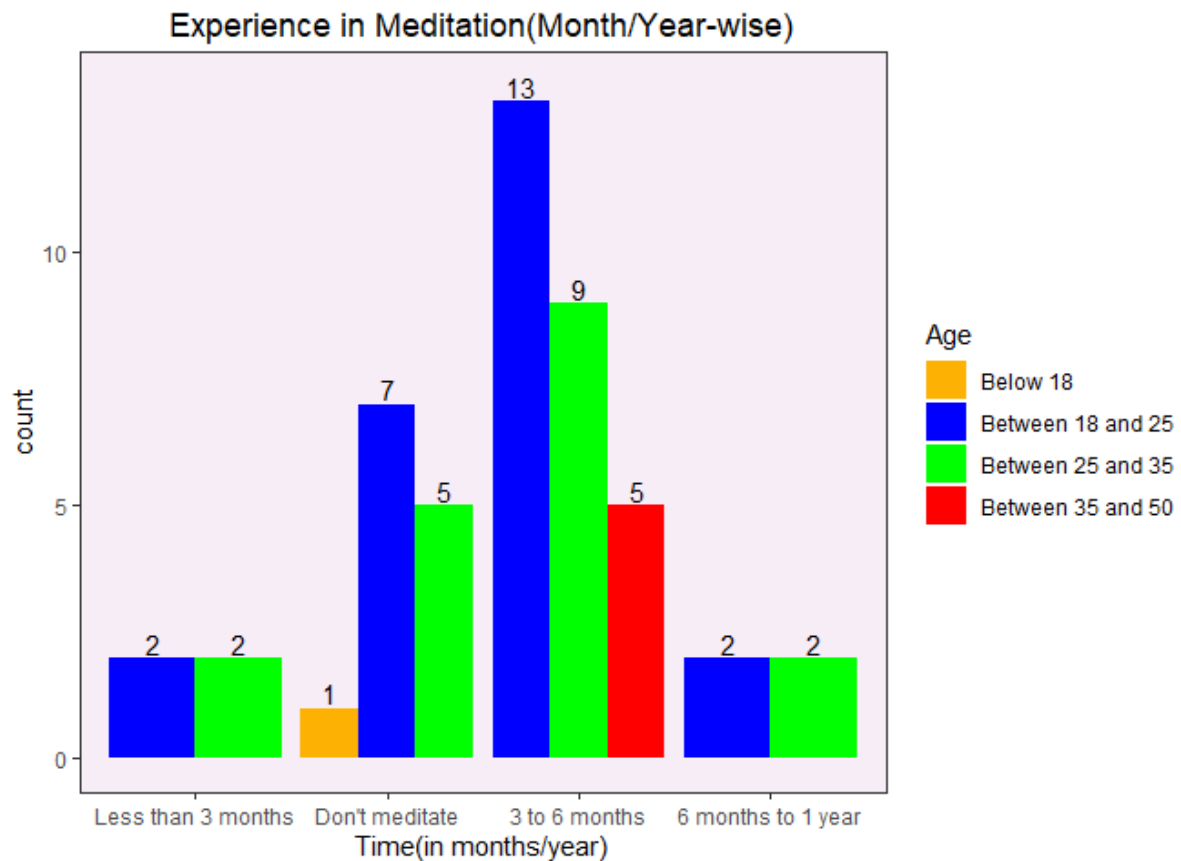


Fig.8.1

The findings from the above graph suggest that most of the respondents who are meditating are in the age group 18 to 25 and they are also the ones who have been meditating for more than a year. We can observe that 56% of the total people who meditate have been meditating for more than a year. The graph also produces the inference that all the people in the age group between 35 to 50 have been doing meditation for more than 1 year.

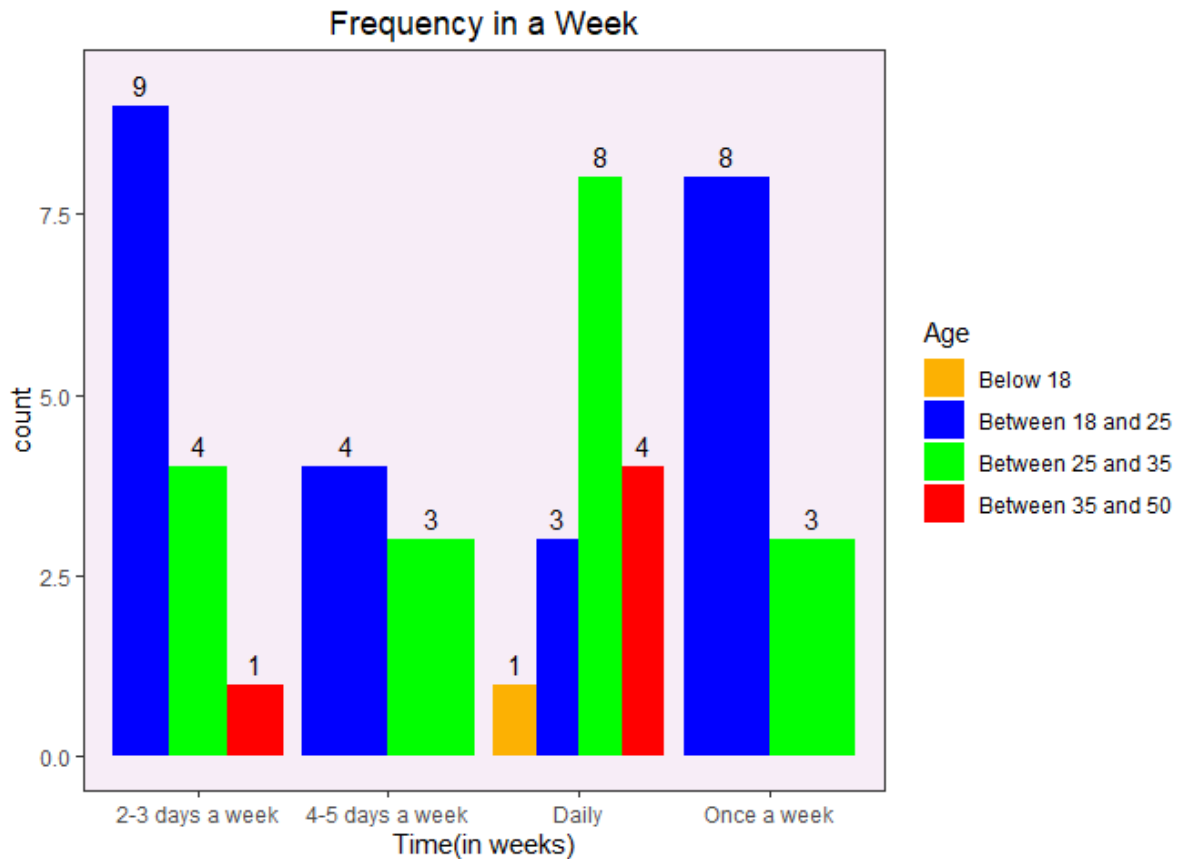


Fig.8.2

80% of the respondents in the age group 35 to 50 practice meditation every day. There is only a person below the age 18 who practices meditation every day. This shows that people in the age group 35 to 50 and below 18 are the most consistent in practicing meditation. Thirty three percent of the respondents in the age group 18 to 25 practice meditation once a week. This is the most by any age group. So, we conclude that people between 18 to 25 are the most inconsistent in practicing meditation.

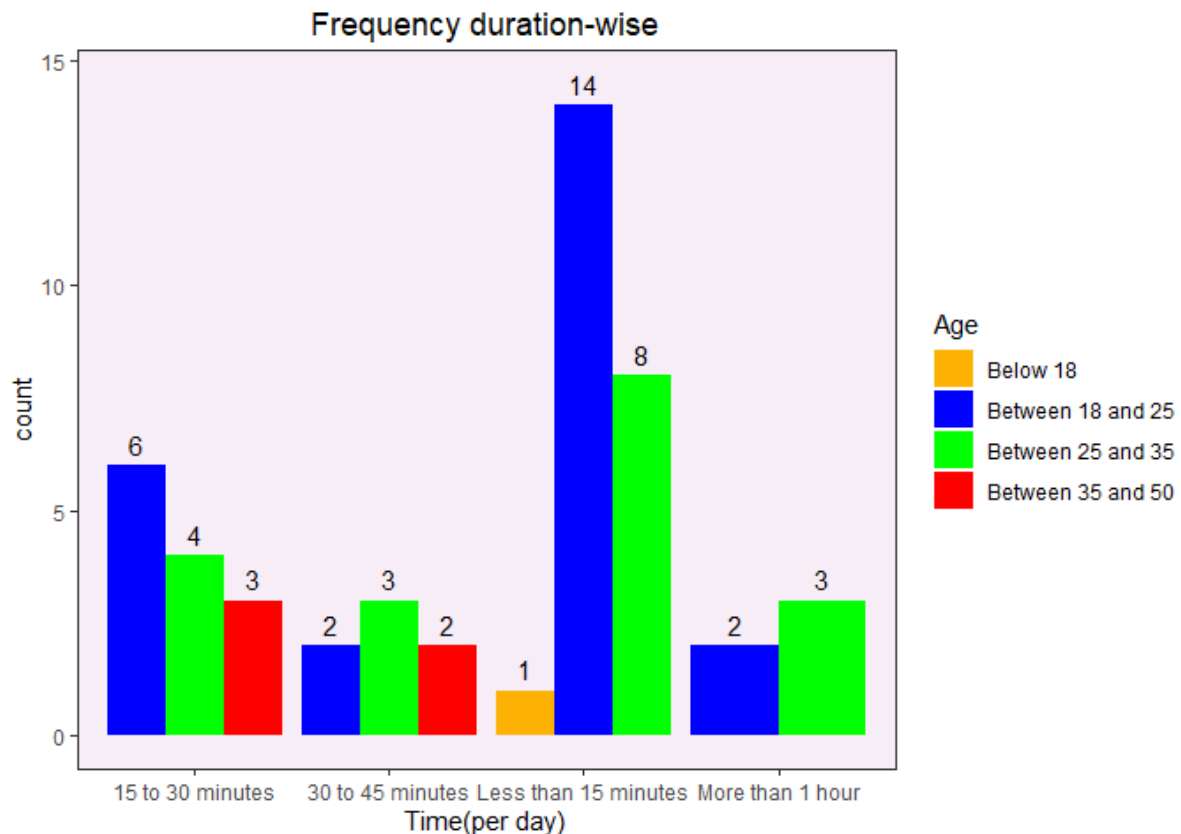


Fig.8.3

More than fifty percent of the people in the age group 18 to 25 spend less than fifteen minutes in meditation. There is only a person below the age of 18 who meditates for less than fifteen minutes. This is most by any age group to spend less amount of time in meditation (below 18 and between 18 to 25). A small percent of people in the age group 25 to 35 spends more than an hour in meditation (~16%). Although no one in the age group between 35 to 50 spends 1 hour on meditation, they still meditate for a significant amount of time. Sixty percent of them spend about 15 to 30 minutes and forty percent of the people in this age group spend between thirty to forty-five minutes.

Key Insights:

- As age increases, the proportion of consistency per week increases.
- As age increases, the time spent on meditation per day increases.

9. Find out the top three factors which are most affected in terms of the perception of people who are not meditating.

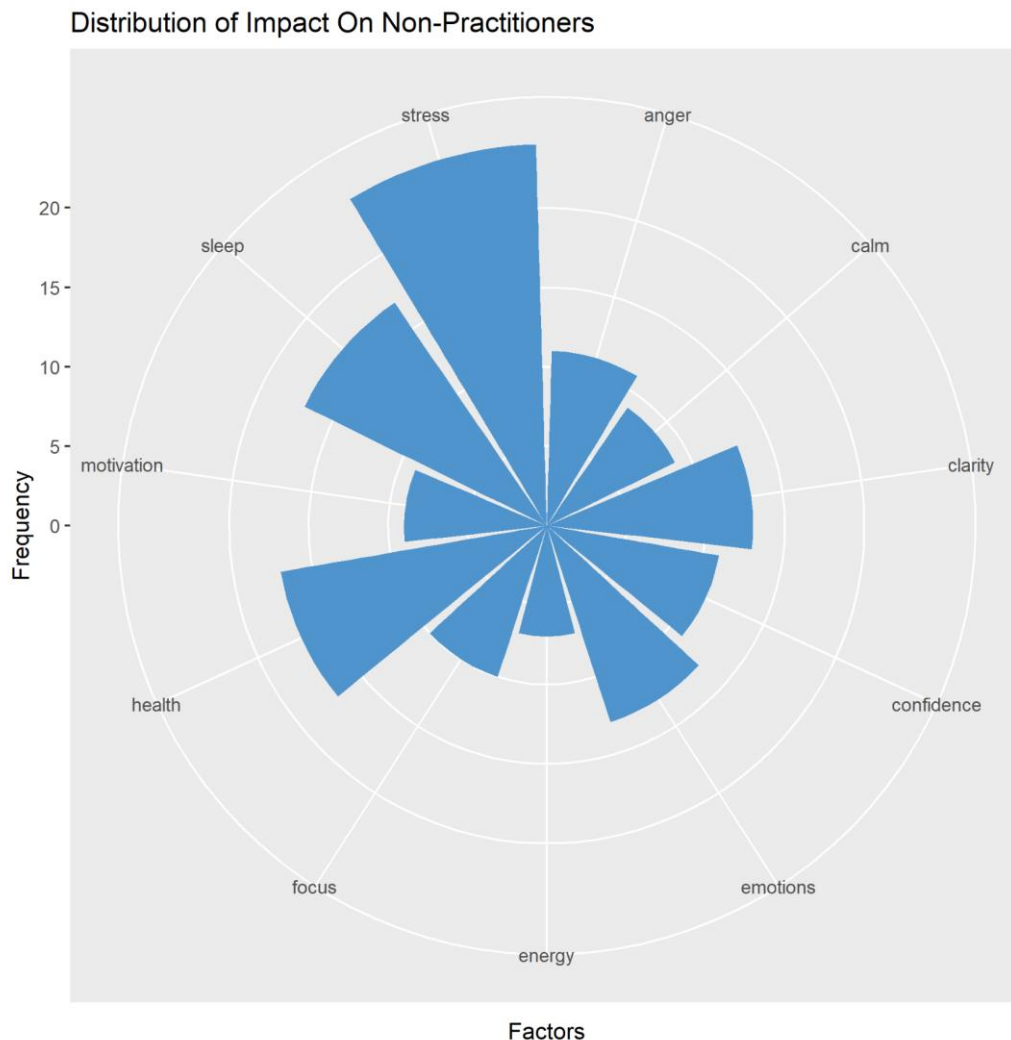


Fig.9

Stress is the most affected factor. Number of people who don't practice meditation have reported being stressed out are much higher than those who practice meditation.

Number of people who don't meditate have reported living an unhealthy lifestyle are higher than their counterparts. This is the second most affected well-being factor.

The number of people who don't meditate and reported to have troubles in sound sleep is much higher than the ones who meditate.

10. Compare the perception of people who meditate with those who don't as per the top three factors which came up as per the analysis done in Q9.

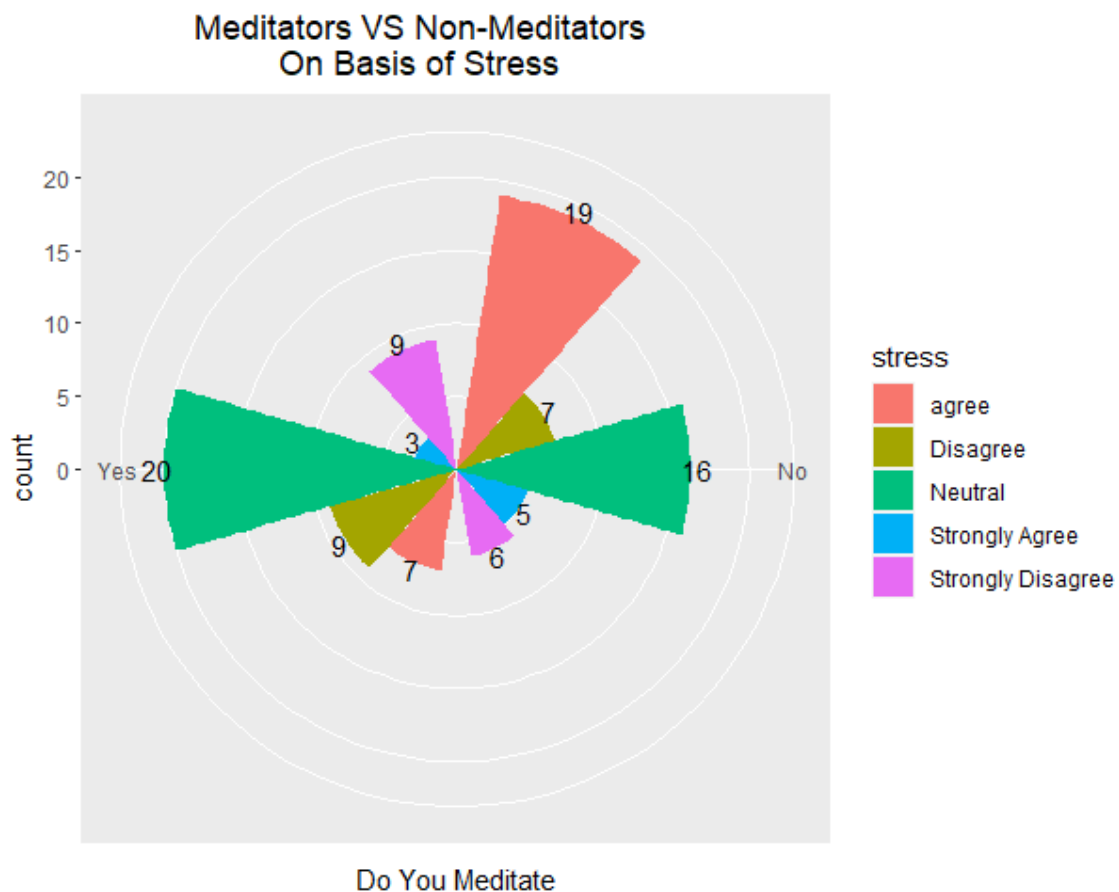


Fig.10.1

Number of people who don't meditate and reported to have stress is much higher than the ones who do meditate. This concludes that meditation helps in controlling stress levels within people. Practice of meditation curbs the stress of workload, other psychological ailments.

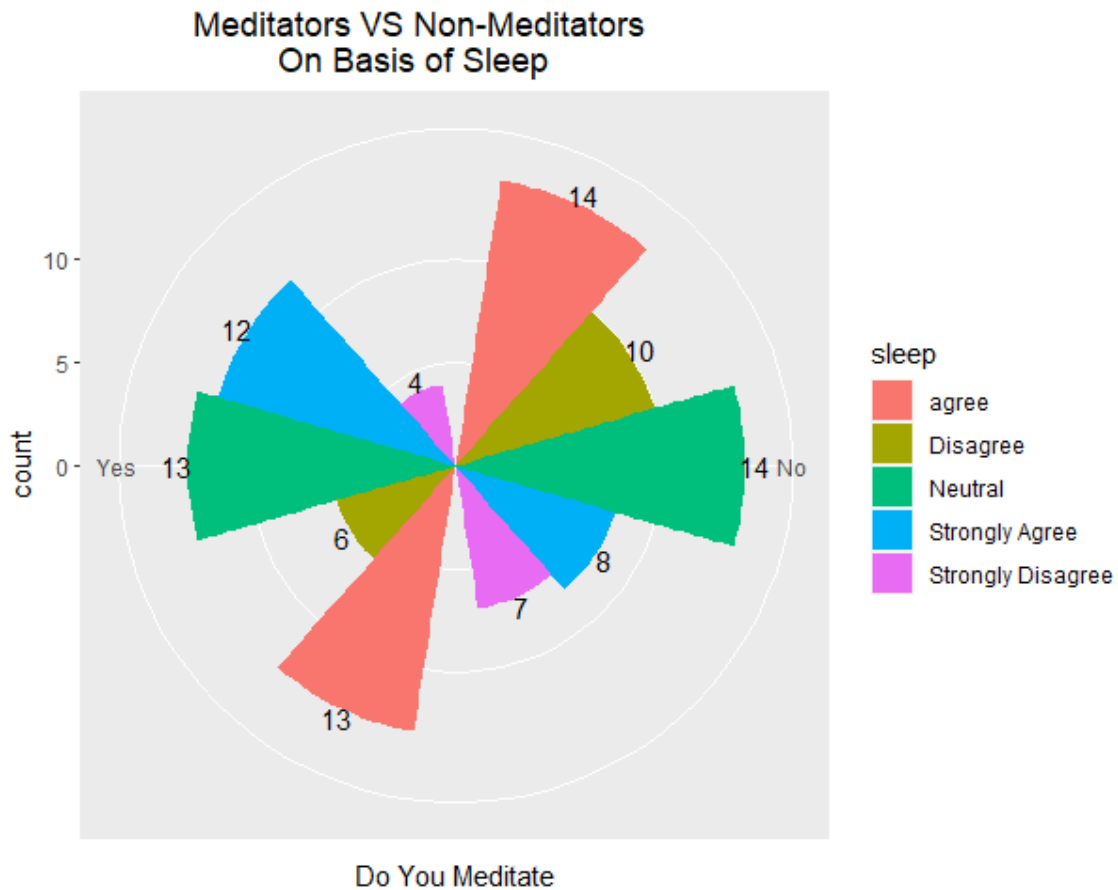


Fig.10.2

A sound sleep is important for a person to perform the tasks in hand for the next day. A good sleep conserves energy and refreshes the person. Number of people who meditate have reported much less trouble in getting sound sleep. This concludes that meditation helps in getting a good quality sleep which is essential for the next day.

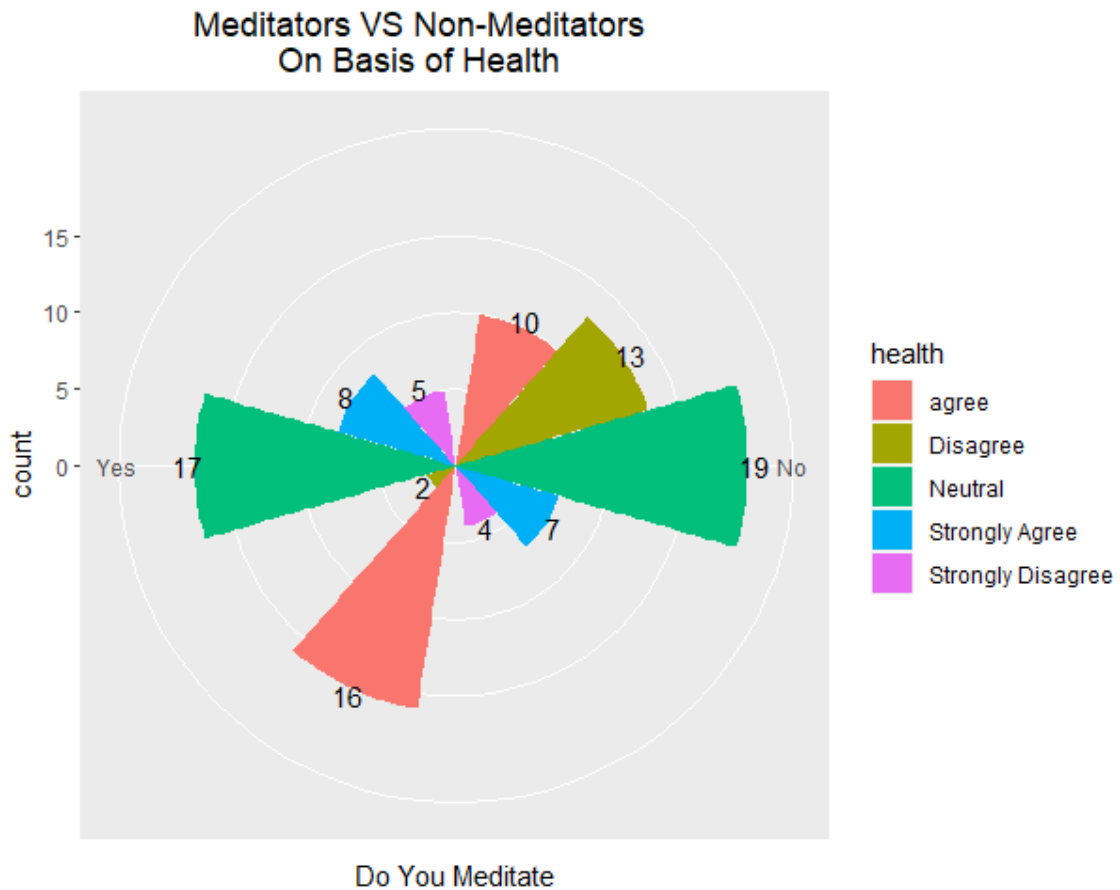


Fig.10.3

Clearly, the above graph depicts the number of people who meditate have reported to be healthier than their counterparts. Living a healthy lifestyle is essential for everyone. Practice of meditation improves the overall health.

11. Distribution of reasons for not being able to build up the habit of meditation.

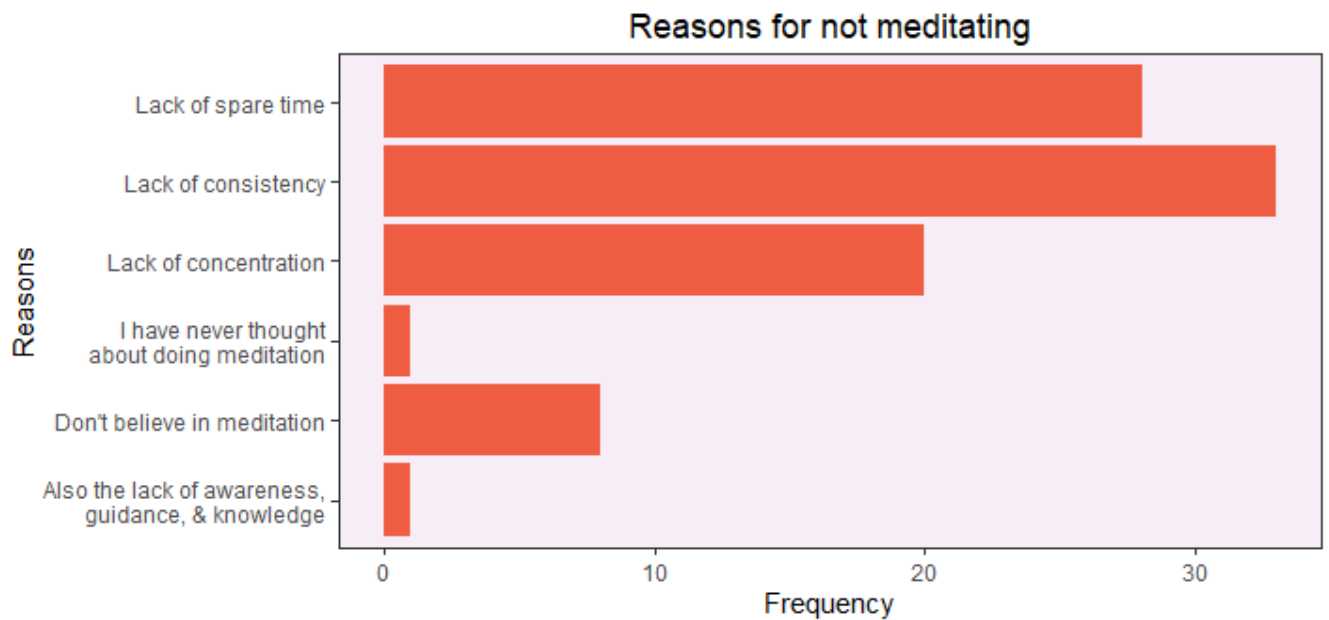


Fig.11

According to the bar plot shown above, the main reasons for not being able to build a habit of meditation is lack of consistency and lack of spare time. This may depend on workload, family responsibilities and various other factors.

12. For the people who are meditating, find out how likely they are willing to recommend it to others and plot it using an appropriate graph.

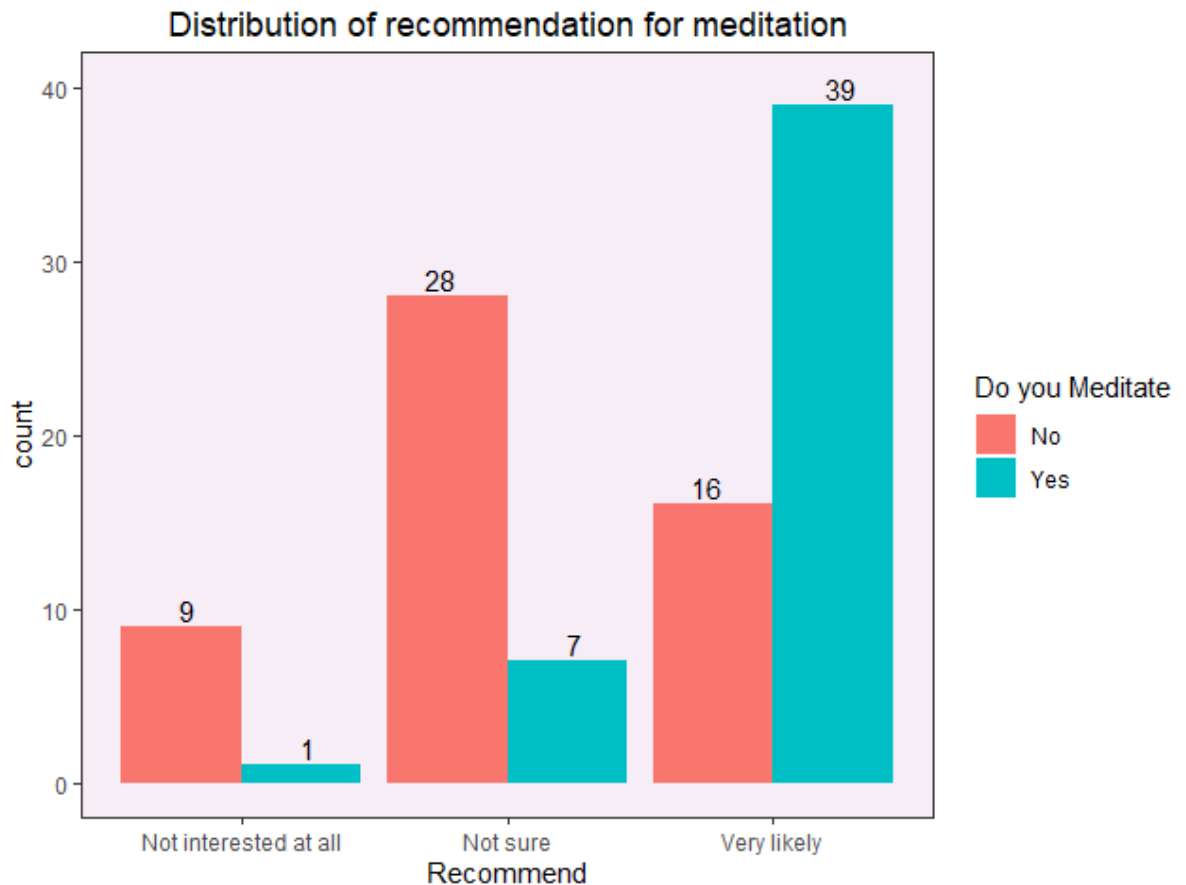


Fig.12

From the above graph, we can see that 83% of the people who meditate are most likely to recommend others to practice meditation and surprisingly 30% of the ones who don't meditate have also recommended others to meditate.

Inferences

- Among the various forms of meditative practices, the most practiced form of meditation among our respondents is Breathwork.
- After analysing the dataset, we have found that the top two factors for not being able to build up the habit of meditation are - Lack of Consistency and Lack of Concentration.
- Among all the well-being factors it has been observed that poor sleep, poor health and high stress are the most frequent factors which have been reported by people who do not meditate.
- For Sleep, Health and Stress, when we compared the perception of people who meditate vs those who don't, our findings suggest that meditation has proven to have a positive effect in one's life to lower down stress and have a quality sleep and healthy life.
- As per the findings, it is evident that recommendation for doing meditation has come not only from the consistent practitioners but also from those who are not doing it regularly.

Limitations in our Study

While analysing the data in R, we came across certain limitations which should have been handled more effectively. They have been mentioned below: -

1. Putting more clarity in questions.

For instance, in Question – “If you don’t meditate, please select the reason?”, we got the results that we did not anticipate. We got to know that people who selected they meditate have also given a reason. After talking to random participants who responded in this fashion, we realized that they responded thinking the reason for not maintaining consistency. We could have clarified the question to get more fair responses to eliminate the degree of confusion.

2. Including continuous data in our questionnaire

In order to maintain the visual flow of respondents, we thought of including categorical questions but while we were analysing the data, we realized that at least a few responses could have been in a continuous fashion as well such as age so that we could have analysed the correlation among variables more effectively.

3. Sample Size of the dataset

Since the sample size of our respondents is small, a few unusual responses could have skewed the results of our analysis. In order to make the analysis scalable backed by a large enough dataset, gathering large data would have given more accurate results. This limitation restricted the analysis from finding a generalised trend among few well-being factors.

4. Various Forms of Meditation

There are many other forms of meditation as well which are widely practised all over the globe. The practices considered for this study doesn’t comprise of an exhaustive list and in order to make the research more robust, other forms of meditation and their associativity with benefits can also be considered.

Future Scope of Work

In order to continue the research and to build a suitably fit model, one can include a much larger dataset having a mix of different classes (students, working professionals, etc.). Along with that, the inclusion of more continuous data will help the study to give more clarity to inferences and will build a firm foundation to conclude the impact of the meditative practices on our lives.

References

- <http://barbra-coco.dyndns.org/yuri/R/R%20for%20Data%20Science-%20Import,%20Tidy,%20Transform,%20Visualize,%20and%20Model%20Data.pdf>
- https://rpubs.com/chrisbrunsdon/UG_ggplot
- <https://stackoverflow.com/questions/tagged/ggplot2>
- <https://r-graphics.org/>

Appendix

1. Variable names

Variable Name	Description	Data Type
"m_whether"	- Question for Do you meditate	- factor
"m_form",	- Question for which form of meditation do you do	- factor
"m_reason",	- Question for reason for not doing meditation	- factor
"m_when" ,	- Question for since when you are meditating	- factor
"m_often",	- Question for how often you meditate	- factor
"m_duration",	- Question for how long do you meditate	- factor
"stress",	- Likert scale for I'm Stressed in Life	- factor
"anger",	- Likert scale for I can control my anger	- factor
"emotions",	- Likert scale for I'm emotionally well balanced	- factor
"calm",	- Likert scale for I'm calm	- factor
"confidence",	- Likert scale for I'm confident	- factor
"health",	- Likert scale for I'm healthy	- factor
"clarity",	- Likert scale for I have Mental Clarity	- factor
"energy",	- Likert scale for I'm Energetic	- factor
"motivation"	- Likert scale for I'm Motivated	- factor
"focus"	- Likert scale for I'm focussed	- factor
"sleep"	- Likert scale for I have proper sleep	- factor
"recommend"	- Question for likeliness of recommending mediatation	- factor
"age"	- Question for asking age	- factor
"gender"	- Question for gender	- factor
"name"	- Question for name	- chr
"comments"	- Textual input from user for their feedback	- chr

2. Figures and their Description

S.no	Fig no.	Description
1.	Fig.1	<i>% Response - Yes / No</i>
2.	Fig.2	<i>% Response - Age-wise</i>
3.	Fig.3	<i>% of Respondents - Gender wise</i>
4.	Fig.4	<i>Gender-wise Distribution of Meditation Practitioners</i>
5.	Fig.5	<i>Age-wise Distribution of Meditation Practitioners</i>
6.	Fig.6.1	<i>Perception of People Towards Well Being Factors</i>
7.	Fig.6.2	<i>Perception of People Towards Well Being Factors</i>
8.	Fig.6.3	<i>Perception of People Towards Well Being Factors</i>
9.	Fig.7	<i>Forms of Meditation</i>
10.	Fig.8.1	<i>Experience in Meditation - Month/Year-wise</i>
11.	Fig.8.2	<i>Experience in Meditation - Week wise</i>
12.	Fig.8.3	<i>Experience in Meditation - Duration Wise</i>
13.	Fig.9	<i>Most Affected Well Being Factors</i>
14.	Fig.10.1	<i>Perception towards Stress</i>
15.	Fig.10.2	<i>Perception towards Sleep</i>
16.	Fig.10.3	<i>Perception towards Health</i>
17.	Fig.11	<i>Reasons for not doing Meditation</i>
18.	Fig.12	<i>Recommendation for Meditation</i>