

Growing significance of Health Apps as a Digital Communication Tool for Indian Women: A Feedback Analysis of Jaipur based Women

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Abstract- Health has always been a major concern for people whether men or women or children. Good health is always considered as one of the biggest asset one can have in his/her life. In the present times where we find women not lagging behind men in any aspect of life, health matters and issues and their simultaneous problems are equally important for women alike their men counterpart.

In this context how far has the smart phone technology and its multiple usages, specially the various Health Apps, been successful in making the Indian women more health conscious and awakened, leading to their knowledge enhancement and thus contributing to their social change and development as it cannot be denied that health of Indian women is very much linked to their status in society as well. The question is- Has the health apps been successful in making the lives of Indian women more easier and safer?

Indian women suffer from certain typical health problems like overweight and obesity, pregnancy and nutrition related problems which at times become very fatal and leads to untimely death amongst women as they are either illiterate and thus can't access the various sources which would educate them about how to handle their pregnancy or fertility or malnutrition related problems or they are ignorant and indifferent about it. Women of India have also been suffering from health disorders like osteoporosis at old age, alarming rate of increase in the number of breast cancer patients which has somewhere made it an epidemic, problems like anaemia because of negligence or lack of health care and knowledge as well as depression on account of too much of workload, responsibilities and expectations of the men folk from them.

Victoria A. Velkoff & Arjun Adlakha (1998) had said that Indian women face certain problems because of the typical cultural ethos and the prevailing norms and rituals of the society as well as varying geographical socio-economic status. As quoted by them that over one lakh Indian women die each year from pregnancy related causes and very few of the pregnant women receive prenatal care. Malnutrition, illiteracy, HIV/AIDS, fertility related problems continue to be the dominant health problems affecting women. In such times health apps have proved out to be a boon in the area of

preventive health care services by disseminating knowledge about the various commonly encountered health problems among women, their causes as well as their preventive measures.

The objective of the paper is to explore how health apps have been instrumental in improving the lifestyle of Indian women by serving as knowledge sources regarding the various health problems and diseases and how to encounter them or the preventive measures to be adopted. The paper also tries to study in detail some of the commonly used health apps by the Indian women and to substantiate the study, it tries to find out the perception of Indian women regarding the utility of health apps in their lives.

As a part of the Research Methodology, the paper makes a detail analysis of few widely used health apps by women and also employs Survey Method to gain an insight on the opinion of Jaipur based women about the advantages of this new technological development. The findings of the study would disclose some important facts about why and how health apps are emerging as a revolutionary tool in the field of Health Communication.

Keywords- Health Apps, Problems, Preventive, Awareness

I. INTRODUCTION

India is one of the developing countries where health still remains a major disturbing area which needs great concern and serious attention and planning. Indian women in comparison to men suffers from a great number of health problems which has been the reason behind their high mortality rates. Malnutrition continues to be a major deficiency in a good number of women specially rural women. Majority of the women also suffer from pregnancy related problems and anaemia which again gives rise to the birth of children who suffer from malnutrition and a high risk of mortality.

One cannot deny the fact that health and nutrition status of women are intimately linked and poor health not only impacts the cognitive level of women but it also affects their

quality of performance and skills at various places resulting in poor productivity both at home as well as in the external fronts which can adversely affect socio-economic condition of our country.

Thus to overcome the grave situation, it is very essential that there should be women empowerment from all aspects whether its education, employment, good health as well as equal access to technology as a means towards women enlightenment.

As said by Peter Yellowlees and Steven Chan, “India has one major advantage when it comes to delivering health services through the use of appropriate technology. Much of the Indian population is young techno savy as well as having access to wireless smartphone technology. Such a kind of developed health communication strategy leaves no room for doubt regarding its tremendous usage by women sections too in the area of national preventive health care services. The author further pointing out towards the advantages of mobile application has commented that the portable nature of smart phone with its no geographical or transportation limitation as patients from any geographical area can access it has helped in establishing an immediate relation between the users and the health care service provider.

There are innumerable ways in which mobile phone technology has benefitted mankind, whether its making them informed about the various highly useful mobile apps and their usages or whether making the women aware through their health apps about the various commonly encountered health problems their causes and the preventive measures to be adopted to tackle them. Besides this another major advantage of smart phone technology which has emerged as one of its most important advantage specially for women are different types of mental health apps available nowadays which greatly help women to overcome their stress and depression, thus fighting with their mental illness in a stronger and more confident manner.

Health has always been a major concern for people whether man or woman or children. Good health is always considered as one of the biggest asset one can have in his/her life. In the present times where we find women not lagging behind men in any aspects of life, health matters and issues are equally important for them like their men counter parts. In this context how far has the smart phone technology and its multiple usages, specially the various health apps been successful in making the women more health conscious and awakened? Has the health apps been successful in making the lives of Indian women more easier and safer? Indian women suffer from some certain typical diseases like alarmingly

increasing rate of diabetes, overweight, and obesity, pregnancy and nutrition related problems, osteoporosis, breast cancer, anaemia etc. In such critical situation health apps have acted like a boon for women in the area of preventive health care services and have played a crucial role in enhancing their knowledge about the various health care problems and their preventive care.

According to Emma Derbyshire (2014) in their paper, “According to one American Survey which studied over two thousand people(n=2020) found that women tend to seek technology that keeps up with their busy lifestyles with 51% owning some form of apple device and 93% women keeping their smartphone within arm’s length.

The paper tries to explore how the various informative health apps have been instrumental in raising the awareness and knowledge level of women about some of the commonly encountered health problems and diseases amongst them. The paper besides this would also try to make a detail analysis of some of the health apps which are commonly used by women and are very popular amongst them. To substantiate the findings, the study would also include a survey conducted amongst women who use smartphone to find out their perception regarding the real life utility of health apps and how far do they feel that they have been useful in enhancing their level of health education thus serving as important tools in the area of preventive health care.

II. LITERATURE REVIEW

There has been several studies done in the area of exploring how the entry of various health apps in the present technologically advanced times have drastically changed the lives of women, specially the upper middle class women.

Women’s Health Diary by Baskaran Aruna Salam Medical, is a comprehensive suit of application designed for most women. The applications take care of the most important aspect of a person’s life, i.e his or her health and describes about the various apps which are very useful in monitoring a person’s health condition. The diary talks about three new apps which are very effective in this direction. They are:

- a. A Calorie Requirement Calculator App
- b. A Daily Calorie intake and Expenditure Tracker App
- c. A Medication Diary App

Patricia Garcia (2014), talks about the tremendous revolutionary change brought about in women’s lives after the introduction of the various highly advanced and useful apps in

the contemporary times. The writer mentions that these health apps have helped women understand and tune in their bodies better than ever before. The writer critically discusses a major fact that after the widespread usage of health apps, no longer are the health records only confined into the doctor's files and now on the contrary all the information is available on the finger tips in the palm of one's hand and that also 24/7. She describes about some of the most favorite women's health apps with different functions to be downloaded. These are Period Tracker, Clue, Glow, Ovia Fertility, Glow Nurture, ibreast check.

Another informative article written by Heather Jensen in the article titled, "7 Awesome Apps for women's Health that you must have", talks about the extremely important role of health apps in the lives of women in today's times, no matter of which ever age. The article discusses about the availability of tons of apps nowadays which are suitable for women of all ages. Some of the very prominent and favorite ones described about are:

- a. The Pill
- b. Yoga Stretch
- c. My Fitness Pal
- d. WEBMD Symptom Checker
- e. Women's Health Workouts
- f. IBODY
- g. Period Tracker

According to the site, "Top 7 Android Women's Health Apps", its very important that everyone should try for leading a healthy lifestyle, but it also discusses about the fact that each individual has different needs, specially women have different health goals as the age and dietary needs play a major role in their lives. The site discusses about certain highly useful health Android applications which are acting as great resources in the hands of every modern women and whose application can help improve their health to a great extent. These apps are:

- a. My Days
- b. Women's Health Workouts
- c. Women's Health Workouts LITE
- d. Pocket Yoga
- e. Mom 2 Be
- f. Web MD for Android
- g. Calorie Counter by fact Secret

A major study done in this direction was conducted by Emma Derbyshire & Darren Dancay in their study titled, "Smartphone Medical Applications for Women's Health: What is the evidence Base and Feedback?". The study

emphasized on the usage of various smartphone applications and their significance in improving women's health with their roles being very broad, ranging from improving health behaviors to undertaking personalized tests. The paper discusses about a major fact that women appear to be taking the forefront when it's the issue of using smartphone technology as surveys indicate that 56% of women own a smartphone compared to 51% men. Besides this the usage varies according to different phases of the life cycle, as the study quotes that according to one survey of 203 pregnant women, it was found that 94% reported that smartphone technology has changed their life for better, with 65% reporting that they had downloaded pregnancy apps with an average of three being downloaded during the gestation period. The study pointed out towards some of the major chronic diseases like obesity, unhealthy diets, tobacco use, physical inactivity which seems to be nowadays greatly affecting women and smartphone technology has proven to be one of the most useful approach in terms of educating and making women aware of the side effects of such diseases and guiding them about the various ways to stay healthy and thus helping in the prevention of diseases.

A major observation done in this direction was by Kristen Nicole in the article titled, "These health apps are more than a woman's best friend." The article points out that various studies have been done in the direction of finding out the differences between male and female bodies and this has been the driving factor behind raising greater concerns in the area of women health. The study describes about the various iPhone apps which have become great tools towards the betterment of women's health conditions. The study not only enumerates the various apps but it also describes its usages and advantages in detail.

The study done by Jayasechan, R., Pichandy, C. & Rushandramani, D. emphasized on the role of different medical apps on smartphones and how their usage has specially helped women in their maternal life. The author describes in their paper that women take the lead when it comes to the question of using smartphones and the various health apps. The study reveals that women's participation in using mobile phone apps appear to be the most in the area of family planning, birth, child care and survival. The paper discusses the significance of smartphone apps for pregnant women and young mothers.

According to the greatest.com/fitness/best.health.fitness.apps (2015), in today's times there is a medical app for almost every aspect of a person's life. The site discusses about a major fact that it is not the question of availability of apps but rather its most important to determine which app to use

and which is worth of occupying storage space in the phone. The site points out towards forty nine health apps which appeared to be the best and on top of the list in the previous year.

III. OBJECTIVES OF THE STUDY

Following are the objectives of the study:

1. To study and analyze the reasons behind the widespread use of mobile health apps by women.
2. To develop an in depth understanding about some of the health apps which are commonly used by women in the area of health care and prevention.
3. To validate the secondary data, the objective of the paper is also to find out the perception of Jaipur based women regarding the significance of mobile health apps in their lives.

Theoretical Framework

Structured Questionnaire was employed to analyze the significance of mobile health apps in women’s lives and to find out the perception of women users in this regard. The survey was done using Purposive Sampling Method selecting women who had smartphone and who were regular users of mobile health apps.

The Survey Questionnaire was constructed based on survey items developed by Jayaseelam, R., Pichandy, C. & Rushandramani, D. and the paper written by Derbyshire, E. & Dancy, D. in “Smartphone Medical Applications for Women’s Health: What is the Evidence-Base and Feedback? Questionnaire was also developed on the basis of the site: journals.plos.org/plosone/article/file?type=supplementary&id=info:doi/10..

IV. RESEARCH METHODOLOGY

Data Collection

Taking into consideration the technicality of the type of research work, a thorough review of existing studies was done in order to develop an idea about the different types of health apps available in the market and their specific usages and whether they have been useful in providing health care information to women. To further analyze the topic in a critical manner and to find out whether the actual users of the health apps, ie women also feel that these apps have transformed their lives by making them more healthy and smarter and presentable, a Primary Research was done by

employing Questionnaire method as a part of Quantitative Survey Method.

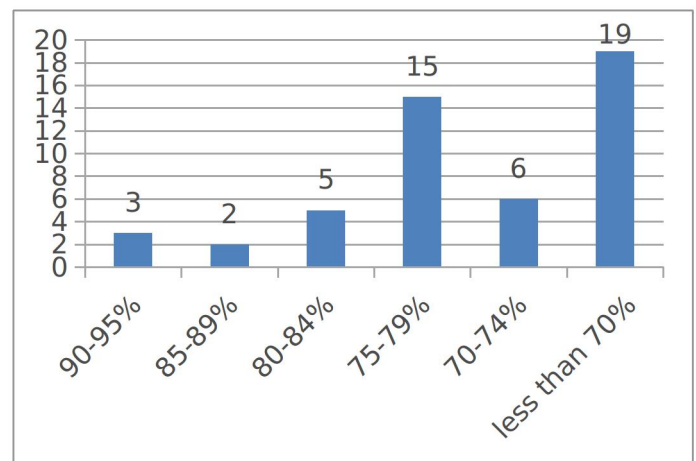
Sample Design

As a part of Purposive Sampling Method, questionnaires were administered to 50 women selected with a purpose in mind that they should be regular users of smartphone and should be familiar with as well as regular users of the various mobile health apps. The respondents selected were mostly women falling in the age group of 20-40 years, who chiefly make use of mobile health apps and hence their opinion could prove out to be very fruitful in the direction of arriving at a conclusion regarding the widespread usage of health apps amongst Indian women.

V. RESULTS AND FINDINGS

1. How much time do you spend looking at your Smartphone?

Table 1



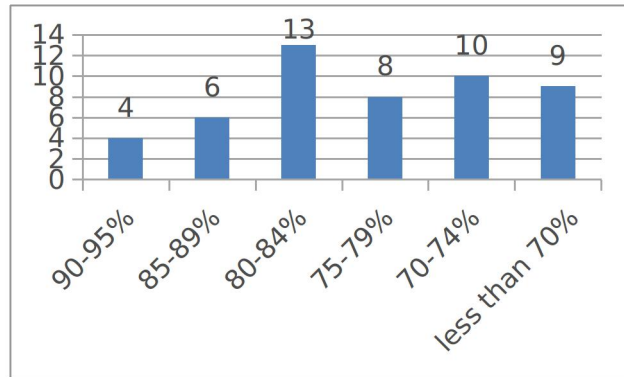
Key Findings

A major aspect of the study was to find out how much time do the women spend with their smartphones in order to assess the significance of this advanced technology in their lives. The results of the study was very significant in the sense that although highest number of women spend less than 70% of their time on smart phones but however the second highest number of women spend 75-79% of their time on smart phones. The data made it very clear that the opinion of the women was quite diverse. Although the highest number of women spend less than 70% of their time on smartphone but however the second highest number of women spend 75-79% of their time on smartphone, which is quite a higher percentage. This signifies that the smartphones are becoming

day by day very useful in the lives of Indian women too due to its various indispensable usages and services.

2. How much of the time you spend on your mobile devices are actually the time spend within apps?

Table 2

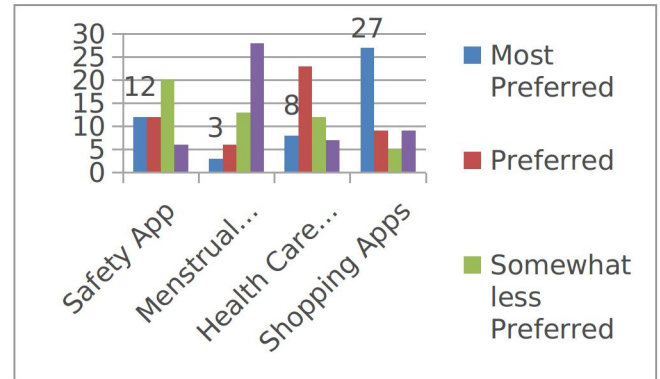


Key Findings

Apart from finding out the significance of smartphone in women’s lives, the objective was also to know as to how much of this time was actually spend on using various apps. Highest number of women remarked that 80-84% of their time spend on smartphone was actually the time spend within apps. The findings were clear indication of the fact that various apps were day by day becoming very significant in the daily lives of women as they found these apps to be a major source of easily getting updated information on the various areas of knowledge as well as a well-made app can provide a far better user experience than even the best websites are capable of right now. The study revealed that a substantial percentage of women considered the apps to be a major part of their lives with their multiple advantages

3. Rank the following mobile apps as per the degree of importance attached by you.(Rank 1 for most preferred and 4 for least preferred)

Table 3

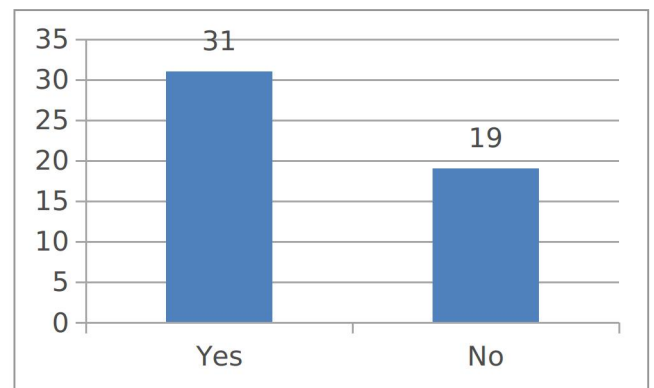


Key Findings

Besides finding out the significance of apps in a woman’s life, it was also very necessary to know which app was the most useful as well as the most used one. An outstanding number of women considered shopping apps to be a useful means towards leading a very satisfactory and happier life style as the highest number of women considered this app to be the most preferred one in their lives followed by safety apps and health apps as the third most preferred one. However in case of preferred app, highest number of women considered health apps to be the most preferred app in their lives along with its vast array of information and updates clearly indicating that as health issues are assuming more and more important place in women’s lives, so simultaneously health apps and their various services are emerging day by day as the most important means to address and resolve the various health issues and problems.

4. Do you feel mobile health apps have significantly changed women’s life style?

Table 4

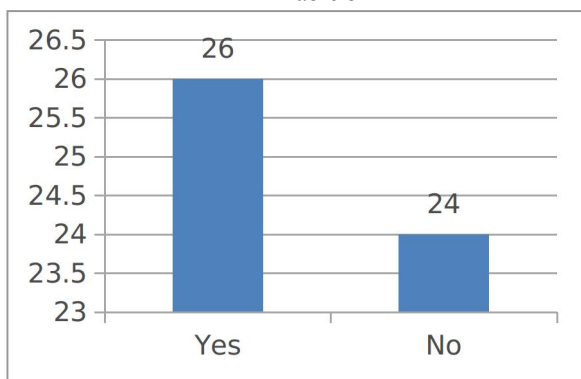


Key Findings

It's a fact that there are various health apps in the market, each with its own set of advantages and utility but it is very important to find out the perception of Indian women regarding the fact as to whether they thought that these health apps have transformed their life styles or not. Majority of women were of the strong opinion that health apps have completely transformed the present Indian women's life style who are regular users of smartphone, whether it be in terms of making them conscious and awakened about various issues or be in terms of being updated about the various health problems and its solutions and remedies or whether in the direction of leading a much more happier life.

5. Do you feel that there is a relation between the women user's demographic profile (occupation and age) and the usage of mobile health apps

Table 5

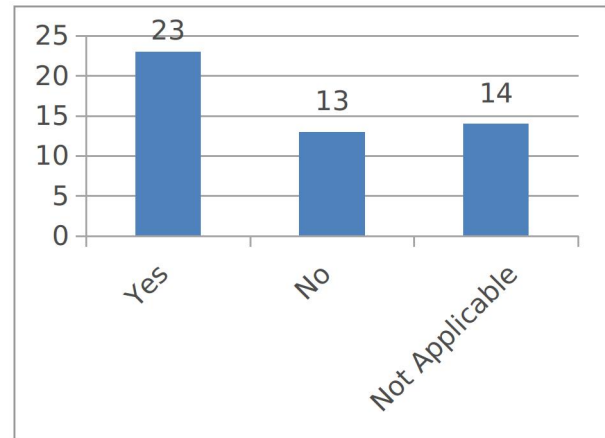


Key Findings

The study besides finding out the relevance of health apps in women's lives, also tried to critically analyze the fact as to whether the demographic profile of women, i.e their occupation and age affected the usage of mobile health apps. The data findings pointed out towards a major fact that occupation and age had an influential role in the usage and selection of health apps as it was majorly expressed that mostly employed women are regular users of health apps as they very much felt the need to keep themselves very healthy and confident as some of them were of the opinion that as women are busy in jobs they are likely to use health apps for their health related queries or to get reminders or to keep a check on their nutritional as well as dietary habits since they run shortage of time to visit gyms or watch videos or read articles or attend some health concerning sessions.

6. Do you use mobile health apps to check information related to food and nutrition during pregnancy?

Table 6

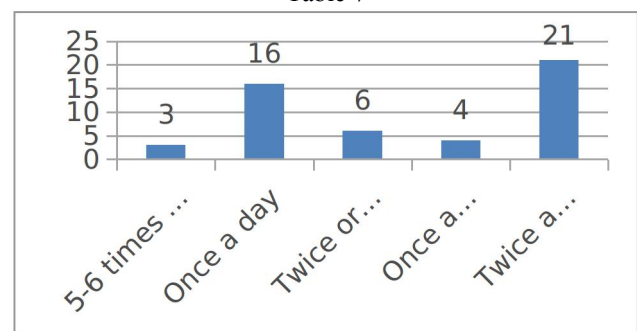


Key Findings

The questionnaire also tried to judge the utility of health apps for pregnant women in terms of checking important information related to food and nutrition. The findings of the study substantially supported the fact that majority of women thought that mobile health apps are highly useful during the days of pregnancy to acquire information related to food intake and nutrition factors. Many of the sample respondents were unmarried, so the question was not applicable to them.

7. What is the frequency of usage of health apps by you?

Table 7

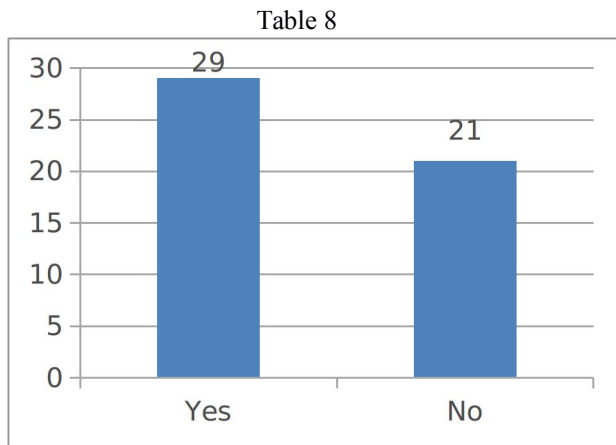


Key Findings

To develop a deeper understanding about the significance of health apps in the lives of Jaipur based Indian women, the questionnaire tried to seek the opinion of women regarding the frequency of usage of mobile health apps. Majority women used these apps twice a month followed by the second highest number of women pointing out towards its usage at least once a day. The results made it very clear that a good number of Indian women used health apps at least once a

day to remain updated about the various health related concerns and issues

8. Do you use mobile health apps for seeking information on treatment?

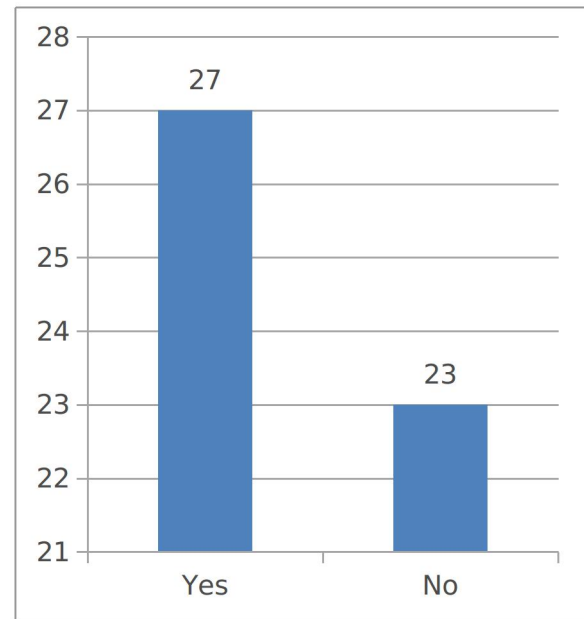


Key Findings

A major objective of the study was to find out the utility of mobile health apps in the lives of women specially in regard to disseminating important information on treatment of various health problems and disorders, acting as sources of important patient communication. The results demonstrated the fact that majority of the respondents almost three-fourths of them strongly supported the statement that health apps have been highly useful in giving out information on health problems and their determinants thus emerging as the hub for sophisticated new diagnostic and treatment technologies. A very less percentage, i.e. just one-fourth of the sample were of the opinion that health apps have not served any purpose of granting information about health problems and their cure. It becomes therefore quite evident that a major section of Indian women who are regular users of smart phones and health apps have highly benefitted from its diverse advantages and have accepted the health apps as a part of their fitness regime.

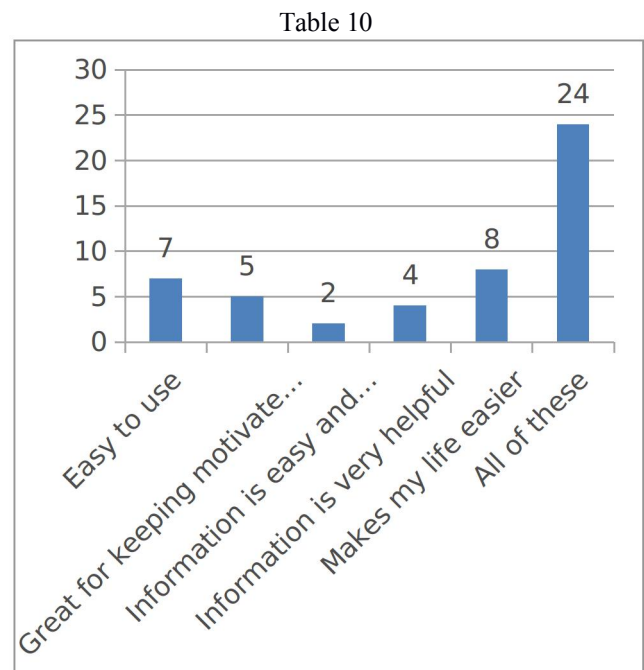
9. Do you share health and nutrition related information with other friends through mobile health apps

Table 9



The findings of the study also established a fact that women not only are at the receiving end of various health related information through health apps but they also are equally active in sharing health and nutrition related information with their friends through mobile health apps. The research reflects the ever increasing significance of health apps in the lives of Indian women thus serving as a revolutionary tool in the field of health communication.

10. According to you, tick the most important advantage of mobile health app for women

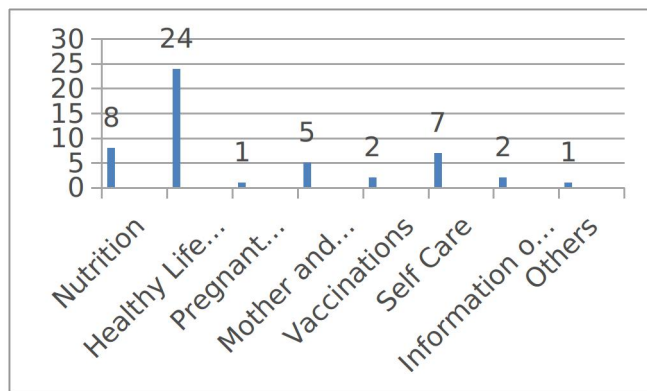


Key Findings

One of the most important objective was to seek the opinion of the Jaipur-based women regarding the various advantages of mobile health apps and what is their perception regarding its specific usages. The respondents were asked to tick the most important advantage of mobile health apps out of a list of eight functions namely, easy to use, great for keeping motivated and focused, information is easy and interesting to digest, information is very helpful, health apps make life easier and finally all of these. Almost half of the respondents expressed that they strongly believed that health apps offered all the above advantages to their users thus playing a major role in making their life much more healthier and happier.

11. What topics would you like receiving information on?

Table 11



Key Findings

The findings of the research made it very clear that women considered the health apps to be very important in their lives as they thought it to be a very important means towards leading a healthy life style as according to them living a healthy life isn't just about diet and exercise, but its about starting and maintaining good habits and health apps are a very effective tool in this direction as they keep the users aware about the various factors of leading a healthy life style, whether its tracking your food, or getting better sleep or the right kind of diet. The second highest number of women considered nutrition to be the second most important topic on which they would like to receive information.

VI. CONCLUSION

The research through its findings have demonstrated that women have become much more conscious about their health problems and issues and as a result they have become very dependent on the various health apps leading towards a healthier and happier life style. The advantages of the health care apps are numerous whether it be counting on daily

calories intake and to keep a track on it or maintaining a meal reminder to help remember to eat or determining which food is good or bad for eating or tracking one's fitness levels or searching for a proper kind of healthcare. There is no doubt that Smartphone Apps for women have made their lives easier and much more safer. The testimonials of the Jaipur based women smartphone users have proved the fact that smartphone technology and the best health apps have brought about a phenomenal transformation in the lives of Jaipur based women.

In the contemporary times where women have to carry out different roles and responsibilities, they often come across shortage of time to address their very essential and elementary health care needs. In such situations, health apps have filled the gap and have proved out to be immensely helpful in serving the needs and expectations of women thus making their life far more easier in the direction of either ensuring safety to women or addressing their health care or educational needs. No doubt that in the coming few years down the lane the health apps would completely transform the lives of Indian women taking into consideration the growing smart phone penetration amongst the masses and the growing need to keep one healthy and fit in today's times where most of the people suffer from depression, anxiety, health problems and too much of mental tension because of the growing need to survive and excel in the present times of fierce cut throat competition.

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