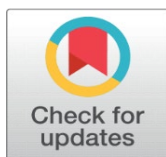
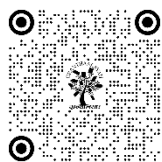


IMPACT ANALYSIS OF GARBHA MOBILE APPLICATION AMONG PREGNANT WOMEN IN CHENNAI

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ABSTRACT

Information is created and communications are exchanged through media. There have been diverse forms of communication in the propagation of information, emerging as a universal phenomenon. Digital media enable people to connect and enrich their relationships with family and friends. As times become more difficult in the modern age, digital media reduces the stress of many users. Through the development of advanced technology, the study created a new platform for developing mobile apps for pregnant women to gather information related to maternity and childcare. To understand the importance of the health communication through mobile application, experimental research design was adopted among pregnant women to find the effective result. Participatory communication adopted for the study. Respondents were exposed to the newly developed mobile app and allowed to experience its usability and record their observations. The study concludes that technology bridged the gap between people in gaining their knowledge and power in accessing digital media.

Keywords: Health Communication, Pregnant Women, Parenting Mother, Infant, Mobile Application, Information

1. INTRODUCTION

Now a day's our communication systems are becoming more digital. In the modern world, digital technology is becoming increasingly significant. The internet and other electronic media allow people to communicate over long distances more frequently. We are now surrounded by communication technology that once intimidated many of us. Think of the introduction of the mobile phone into everyday

life, which we carry with us daily. And mobile phones are digitally communicating with us today with more influencing technical factors. Digital communications are not only changing our lives but also raising economic issues.

Mobile phone usage became unlimited, and people started to update every news and other events in a single tap before it reached television or the radio. This new media called the internet, made people get an update with technology. People are increasingly using mobile devices to complete most of their activities, and healthcare couldn't be left out of the revolution. Mobile devices have made it easier for people to access information, learn new things, interact, and even transact with their mobile devices.

Digitalization of the health sector has been going on for a long time. Different technologies have been adopted successfully in the sector. Portable apps are one of the main reasons users and providers have embraced the technology. A huge amount of mobile applications have been introduced in the past few years, and some people are wondering why there are so many mobile applications in medicine. Mobile devices such as smartphones, tablets, and laptops have become widespread.

Women face distinctively many health problems like menopause, menstrual cycle, pregnancy care, birth control and it's the starting stage in their life period. Men and Women come across several health issues, but the symptoms may vary from one to one. For its cure, they require a diverse treatment for specific concerns. We need to improve the health of women by addressing issues such as reproductive health, maternal deaths, malnutrition, and non-communicable diseases; through quality, affordable and accessible health services. For women to have better health, women need a holistic, life-course approach that extends beyond reproductive health. Pregnancy is just the beginning and needs to be maintained throughout the new born, childhood, adolescent and aging period. We need to empower women so that they can take care of their own health.

2. REVIEW OF LITERATURE

According to the research, there are no standards for providing evidence-based information to parents. It is common for parents to access health information for their children through apps. The healthy development and growth of infants can be supported by apps that promote appropriate feeding and play. Information on infant feeding and activity was incomplete or partially complete and covered few topics, as indicated by the low quality of the information [Cheng et al. \(2019\)](#).

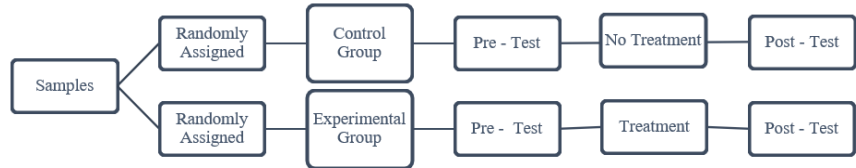
Quality and access to evidence-based resources and information were key to women and their partners. [Hay et al. \(2022\)](#) noted that a variety of information sources are available, but their usefulness to partners is underappreciated during pregnancy and the early parenting period. For its convenience, accessibility and timely access to information, the internet is frequently chosen by women and their partners. It was important that women and their partners directly communicated with health care professionals in order to receive adequate information related to pregnancy and parenting.

In the study, pregnant women prefer to collect health information in online forums. In these domains, unmet informational needs are present in topics such as labour and miscarriage. Increasing public health concerns make us to give more attention to peer-to-peer exchanges. [Wexler et al. \(2020\)](#) in their study said the types of information pregnancies seek from their peers during pregnancy are not well understood, despite the fact that pregnant women rely on digital sources for their maternal healthcare.

3. RESEARCH METHODOLOGY

The goal of the study is to determine a cause-effect relationship, hence the research adopts experimental design. The field research was carried out using statistical methods.

The study adopts quasi-experimental designs. In Quasi-experiment, some subjects are managed by one or more treatments that are also called treatment groups. However, other subjects are not given such a stimulus called the control group. Treatment may be considered successful if the subjects in the treatment group are more constructively engaged in the outcome than the control group.



4. THEORETICAL STUDY

The research study applies Participatory communication research method. Participatory communication is “the theory and practices of communication used to involve people in the decision-making of the development process” [Mody \(1991\)](#).

According to the author [Tufte & Mefalopulos \(2009\)](#), the participatory communication is divided into four basic phases:

Phase One – Diagnosis: Diagnosis involves the initiation of dialogue between developers and communities.

Phase Two – Planning: Planning focuses on creating a practical plan that incorporates these actions by specifying methods, resources and timelines that will be used to accomplish the project.

Phase Three – Intervention or experimentation: A planned action for meeting the needs of a community is called intervention/experimentation

Phase Four – Assessment: As part of the participatory discourse, the assessment process is the most effective way for participants to build knowledge and pride themselves on their contributions.

Figure 1

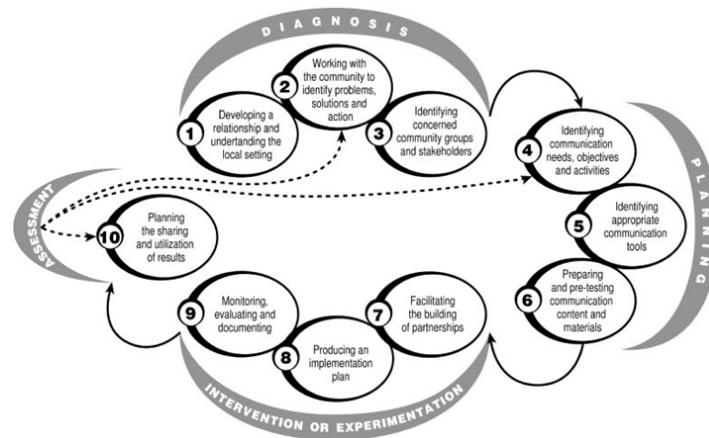


Figure 1 Participatory Communication Theory

4.1. THEORETICAL FRAMEWORK OF THE STUDY

The theory adopted for the research is a simple process of participatory communication in five stages.

1) Identifying the problem

At this stage, the research is brainstormed to identify the relevant issues or problems. So, the problems are grouped together and finalized with a single caption.

2) Planning the communication tool

Additionally, to setting up the brainstorming process, the research determined the most effective tools for the task. During this stage, the introduction; the body content; and the conclusion were planned for further support.

3) Proceeding with test

During the third stage, the resource identity will be established so that a pre-test and a post-test can be conducted to test the reliability of the resource. Evaluating the resources based on evidence collected through the survey.

4) Monitoring and evaluating

This stage of the research focused on the analysis of the collected data; observation of the participants; and the scoring of the samples based on the usage of the Garbha mobile application.

5) Sharing and utilizing

Finally, in the concluding stage of research, the title is acknowledged in a documented format; thoughts and ideas are shared in a way that enhances their attraction and presented in an appropriate manner for its appreciation.

5. HYPOTHESES OF THE STUDY

H₀₁: Age of the respondents do not influence accessing the mobile application on maternity among pregnant women.

H₀₂: The age of the respondents do not influence the various media in communicating information to pregnant women through a mobile application.

H₀₃: Age of the respondents do not influence the frequency of using mobile apps.

H₀₄: The age of the respondents do not influence the overall effectiveness of mobile applications and their communication among pregnant women.

6. ANALYSIS AND INTERPRETATION

The ANOVA is applied to test the factors with respect to the impact of certain demographic variables on the study variables influencing the usage of Garbha Mobile App.

6.1. ANOVA TEST – AGE VS ACCESSIBILITY

Table 1

Table 1 ANOVA - Age Vs Accessibility					
User_Friendly_To_Access					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	36.480	2	18.240	36.573	.000

Within Groups	23.440	47	.499
Total	59.920	49	

Table 1 explores the accessibility depending on the technical knowledge of the people and their age too. Hence, an attempt was made to check if age has really influenced the ease of access of mobile app.

Since P Value < 0.05, null hypothesis is proved.

Inferences: Age of the respondents influence the ease of usage of mobile applications among pregnant women is analyzed.

6.2. ANOVA TEST - AGE VS TIME SAVING, VALUE ADDITION TO NEXT GEN & NECESSARY INFORMATION

Table 2

Table 2 Age Vs Time Saving, Value Addition to Next Gen & Necessary Information						
		Sum of Squares	df	Mean Square	F	Sig.
Time_Saving	Between Groups	40.042	2	20.021	50.979	.000
	Within Groups	18.458	47	.393		
	Total	58.500	49			
Value_Adding_To_Next_Gen	Between Groups	37.002	2	18.501	29.161	.000
	Within Groups	29.818	47	.634		
	Total	66.820	49			
Necessary_Information	Between Groups	41.465	2	20.733	29.075	.000
	Within Groups	33.515	47	.713		
	Total	74.980	49			

Table 2 reveals that the age in general has influence in time saving, value addition to next gen and in the quest of necessary information. Hence, the present study attempted to identify if age has really influenced time saving, value addition to next gen and in the quest of necessary information

Since P Value < 0.05, null hypothesis is proved.

Inference: Age of the respondents influenced in time saving, adding value to the next generation with necessary information among pregnant women.

6.3. ANOVA TEST - AGE VS FREQUENCY OF USING MOBILE APPS

Table 3

Table 3 Age vs Average_Amount_of_Time_Spent_on_Mobile_App					
	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	21.969	2	10.985	25.146	.000
Within Groups	20.531	47	.437		
Total	42.500	49			

Since P Value < 0.05, null hypothesis is proved.

Inference: Age of the respondents influence the frequency of using mobile apps.

6.4. ANOVA TEST – OVERALL EFFECTIVENESS

Table 4

Table 4 Overall_Effectiveness					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	36.756	2	18.378	52.786	.000
Within Groups	16.364	47	.348		
Total	53.120	49			

The overall effectiveness is a yardstick to measure the reach of Garbha mobile app among the experimental group respondents. Hence, the present study attempted to understand the overall effectiveness of Garbha mobile app with regard to age as shown in the [Table 4](#)

Since P Value < 0.05, null hypothesis is proved.

Inference: Age of the respondents influence the overall effectiveness of mobile applications and their communication among pregnant women.

7. RESULTS AND FINDING

The findings of the study indicated that the age of the respondents influenced the use of the mobile app by pregnant women.

The respondents explored that the age, in general, has persuaded the mobile application to be time-saving, while gathering necessary information.

The study was co-related with the features, available in the Garbha App. The app is easy to access, which saves time and is more unique with significant information which has created a huge impact among the women respondents.

Based on the study of the relationship between the features available in the application, they are more relevant to each another.

8. CONCLUSION

There are a number of mobile applications that feature information related to women's health issues. Pregnant women lack information about their well-being, leading to an undefined pregnancy period. In order to increase the effectiveness and efficiency of health care services for pregnant women, a mobile application was developed, which improved their knowledge, gave more information on health and enhanced their literacy level.

The app provides evidence-based information, which is provided by experts in their respective fields. Every module features high standard of information that is sourced from reliable sources. Smartphones were a breakthrough for the generation. Using their smartphones, pregnant women can make healthy lifestyle more feasible and effective. Modern life has become more connected through digital media.

CONFLICT OF INTERESTS

None.

ACKNOWLEDGMENTS

None.

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