



EFFECTIVENESS OF WHATSAPP BASED INFORMATION VERSUS MANUAL MODE OF INFORMATION ON KNOWLEDGE REGARDING LIFESTYLE MODIFICATIONS AMONG HYPERTENSIVE ADULTS IN SELECTED AREAS: A STUDY PROTOCOL

Yogita Ther

PG student, Dept. of Medical Surgical (CVTN) Nursing, College of Nursing, Government Medical College, Nagpur, Maharashtra, India

Dr. Nutan Makasare*

Assistant professor and HOD, Dept of, Medical Surgical Nursing, College of Nursing, Government Medical College, Nagpur, Maharashtra, India
*Corresponding Author

ABSTRACT

Background: Hypertension is an elevated blood pressure, it is a serious medical condition that significantly increases the risk of heart, brain, kidney and other disease. 33% urban and 25% rural Indians are hypertensive. Only about 12% people with hypertension in India have their blood pressure under control. Uncontrolled blood pressure is one of the main risk factors for cardiovascular diseases (CVDs) and are responsible for one-third of total deaths in India, by WHO report 2017. Social media has been boomed as a biggest source for information sending and receiving; it provides a good platform for commerce among people belongs to any cultural settings. WhatsApp is an instant messaging app, constructed and launched in 2009 by Brian Acton and Jan Koum. It's available free at no financial cost. **Objective:** To assess the knowledge regarding lifestyle modification among hypertensive adults in selected areas. To assess the effectiveness of WhatsApp based information versus manual mode of information on knowledge regarding lifestyle modifications among hypertensive adults. **Study Design & Methodology:** Quasi experimental non-randomized control group design. Knowledge of one group will be assessed by giving information by WhatsApp based mode and second group by giving information by manual mode. 100 samples will be selected by non-probability purposive sampling technique. Content and construct validity and reliability of the tool will be assessed through experts in the field, proper statistical measures and pilot study. Their knowledge will be assessed through pre-test with the help of self-structured knowledge questionnaire. Posttest will be conducted after seven days of intervention program. Using descriptive and inferential statistics, collected data will be analyzed. **Expected Results:** There will be significant improvement in knowledge score in one group as compare to other, after administration of an intervention program. **Limitation:** Study will be conducted in selected urban areas of Nagpur district only. **Conclusion:** This study findings will contribute to the existing body of knowledge regarding lifestyle modification in Hypertension and explain about the effectiveness of the mode of information i.e WhatsApp based information and manual mode information.

KEYWORDS : Lifestyle Modifications, Hypertension, Whatsapp Based And Manual Mode Information

INTRODUCTION:

"Healthy Habits are your heart's desire." Life is precious, Heart beat represents life and lack of it pronounces death. The heart pumps blood throughout the body from conception till death. A healthy heart is essential to sustain life. But various cardiovascular diseases disrupt this essentiality.

Only about 12% people with hypertension in India have their blood pressure under control. Uncontrolled blood pressure is one of the main risk factors for cardiovascular diseases (CVDs) similar as heart attacks and stroke, and are responsible for one-third of total deaths in India. Hypertension that is above-normal blood pressure. The incidence is increasing in most countries and lifestyle factors are considered to play a decisive role in this development. According to the World Health Organization 2017 report it was observed that few behavioral risk factors were responsible for 80% of coronary heart disease which includes tobacco use, physical inactivity and an unhealthy diet pattern. Nearly 63% of total deaths in India are due to non-communicable diseases, of which 27% are attributed to cardiovascular disease which affects 45% people in 40-69 age group. Raised blood pressure is the most important threat factor for CVDs, also it remains inadequately controlled due to low mindfulness about hypertension, lack of appropriate care through primary care and poor follow up.¹

33% urban and 25% rural Indians are hypertensive². By April 2022, more than 2.5 million patients with hypertension have been enrolled in over 15 000 health facilities in India, the prevalence of hypertension is found 25.1% in Maharashtra.³

Hypertension is the important cause of mortality in India and worldwide today, and this global case load is expected to increase fivefold by the year 2030 by ICMR 2021 survey⁴.

Cardiologist Dr Hrushikesh Umalkar said the prevalence is increasing in youngsters, though medication is not always necessary. "At present, cases of hypertension in the age group of 25 to 40 years has increased by 30%. Stress in daily life, changed lifestyle and habits like smoking are responsible. It can be easily remedied by making appropriate lifestyle changes and medicines are not always necessary,"⁵

Recent studies show that blood pressure decreases by following the Dietary Approaches to Stop Hypertension (DASH) diet plan and by eating less amount of salt, also called sodium. While each step alone lowers blood pressure, the combination of the eating plan and a reduced sodium intake gives the biggest benefit and may help prevent the development of high blood pressure⁶

Today at this era of technology people cannot think of getting information without a smartphone with the use of internet connectivity, mobile has become the only source of fastest information communication whether for getting inform of close ones or information related to one's profession, Social media has been blasted as a great source for information sharing and receiving; it provides a good platform for interaction among people belongs to any cultural settings. WhatsApp is an instant messaging app, invented in 2009 by Brian Acton and Jan Koum. It is available free at no monetary cost.⁷

Today 800 million Indians are using smartphones, in 2018 18% were having smartphones which increases to more than double in 4 years, 2022 it was 44%. So this is the trend of technology and WhatsApp is a important part of that trending technology, which create a great need to compare the effectiveness of trending technology methods with traditional method in sharing knowledge regarding lifestyle modifications.⁸

A Comparative Study was conducted to assess the Effectiveness of WhatsApp Based Self-care Information with the Manual Mode of Self-care Information among Asthmatic Patients on Quality of Life, by Rokade Sarika Vijay, Singh Seema in the year 2021 in Maharashtra. Which shows that WhatsApp mode of self-care information was more effective than the manual mode of self-care information. Quality of life of asthma patients is improved⁹.

Kumar A, Sivakanesan R., conducted a study in india 2021 on epidemiology and magnitude of coronary artery disease which shows that Rapid urbanization, demanding and stressful jobs, life style modification, lack of physical activity and sedentary work has driven the Indians to the risks of coronary artery disease. In India, hospitalizations due to cardiovascular disease were four folds higher than United States and Japan and six folds higher than China.¹⁰

OBJECTIVES:

To assess the knowledge regarding lifestyle modification among hypertensive adults in selected areas.

- 1) To assess the effectiveness of WhatsApp based information on knowledge regarding lifestyle modification among hypertensive adults in selected areas.
- 2) To assess the effectiveness of manual mode of information on knowledge regarding lifestyle modification among hypertensive adults in selected areas.
- 3) To compare the effectiveness of WhatsApp based information versus manual mode of information on knowledge regarding lifestyle modifications among hypertensive adults in selected areas.
- 4) To find association of study findings with selected demographic variables.

HYPOTHESIS:

H₀ - There is no significant difference between knowledge score of WhatsApp based information and manual mode of information regarding lifestyle modifications among hypertensive adults.

H₁. There is significant difference between knowledge score of WhatsApp based information and manual mode of information regarding lifestyle modifications among hypertensive adults.

MATERIAL AND METHODS:

Study Design: Quasi experimental non-randomized control group design.

Study Setting: Selected urban areas in Nagpur Dist.

Participants: Hypertensive adults of 25-55 age group.

Sample size calculation:

Sample size - 100

Formula Using Mean difference

$$n1 = n2 = 2 \frac{(Z_{\alpha} + Z_{\beta})^2 \sigma^2}{(\delta)^2}$$

$$Z_{\alpha} = 1.64$$

$$\alpha = \text{Type I error at } 5\%$$

$$Z_{\beta} = 0.84 \text{ at equivalent } (1 - \beta)$$

$$= \text{Power at } 80\%$$

$$\sigma = \text{std. dev}$$

Primary Variable (Knowledge score)

(Learning Environments control group Pre) Mean \pm SD. = 3.83 \pm 2.44 (As per reference article)

(Learning Environments control group Post) Mean \pm SD. = 11.57 \pm 3.41 (As per reference article)

$$\text{Difference} = (11.57 - 3.83) = 7.74 = 1.548$$

$$\text{Pooled std. dev.} = (2.44 + 3.41)/2 = 2.925$$

$$(\text{Mean difference}) = 7.74 * 20 = 1.548.$$

As per reference articles.

$$N1 = 2 * [(1.64 + 0.84)^2 (2.925)^2] / (1.548)^2 = 43$$

$$\text{Drop out } 10\% = 4.$$

$$\text{Total samples required} = 47 \text{ (Including drop out)}$$

$$N = 50/\text{group}, \text{Total} = 100$$

Sampling technique:

Non-probability Purposive sampling technique.

Inclusion criteria:

Hypertensive adults those who have given consent to participate in the study.

Hypertensive adults of age group 25-55 who is on antihypertensive treatment.

Hypertensive adults who can read and write any of these three languages i.e. Marathi, Hindi or English.

Hypertensive adults those who are using smartphones.

Exclusion criteria:

Hypertensive adult who are hemodynamically unstable or seriously ill

Data Collection Tool:

Section A:

It includes demographic variables. Age, sex, education, marital status, Occupation, Family History of disease.

Section B:

It includes self-structured questionnaire on knowledge regarding lifestyle modifications.

Knowledge assessment:

Hypertensive adults knowledge will be assessed by pre and post-test using self-structured knowledge questionnaire. Validity and reliability of tool and information booklet will be assessed by experts in the field and appropriate statistical measures. Validity over the questionnaire will be established for build up through both the construct & content manner to seek for the results what has intended purposely for the inferences & conclusion to measure. Knowledge assessment will consider poor if the score is < 33 %, average if it is 33.01 to 66 %, and good if it is > 66.01%.

Description of Intervention:

The Researcher will develop an information module regarding lifestyle modifications in hypertension which will be validated by expert of nursing, medical field and cardiology. Which will be then provided to the participant of one group with the help of WhatsApp mode and to the second group by manual mode and further analysis will be done to assess the effectiveness of information mode. Pre-test post-test will be conducted to assess the effectiveness

Study procedure and data collection:

The study shall be conducted only after the approval of IEC. Investigators will visit the research area and will obtained the necessary permission from the concerned authorities. Hypertensive adults who fulfill inclusion criteria shall be assigned to the study. Researcher will explain the purpose of the study, take informed written consent and pre-test will be administered to participants. WhatsApp based information to one group and manual mode information to the second group will be administer to the hypertensive adults.

Researcher will explain to participant regarding date and time of post-test, as per preplanned date and time, researcher

will again visit study areas and administer post-test on 7th day.

Validity over the questionnaire will be established for build up through both the construct & content manner to seek for the results what has intended purposely for the inferences & conclusion to measure. Reliability of the questionnaire will be calculated by using appropriate statistical test.

Data Analysis:

All results will be calculated using SPSS version 26. Overall results for the outcome variables will be listed in tables and graphs for both descriptive (Mean, mean percentage, Standard deviation), & inferential statistics (Paired t - test will be used to find the significance difference between two groups (before & after), Association results will be analyzed using chi square analysis).

EXPECTED RESULTS:

Expected improvement in the knowledge will be about 20 to 25 % after administration of an intervention. There will be positive or negative correlation between knowledge regarding lifestyle modification in two groups. Hypertensive adults will be able to gain knowledge regarding lifestyle modifications in hypertension, thus helping them to control their blood pressure by making appropriate lifestyle changes, adopting healthy habits and saying no to unhealthy habits. The findings of this study have implications for the further studies in Nursing.

DISCUSSION:

Findings of present study will supported by previous studies where trending technological modes are effective in information transfer and improving knowledge.

CONCLUSION:

The findings of this research will contribute to the existing body of knowledge regarding lifestyle modification in Hypertension. In a view of this fact, present study aims to assess the effectiveness of WhatsApp based information versus manual mode of information on knowledge regarding lifestyle modifications among hypertensive adults.

Consent And Ethical Approval:

The study will be conducted after approval of Institutional Ethics Committee. Written consent will be taken from the participants for participation in the study. Throughout the Study, confidentiality will be maintained. Freedom to withdraw from the study at any point of time will be assured.

The study findings will be disseminated to participants and published in a peer-reviewed journal.

Conflict of interest:

There is no conflict of interest in this study

No any risk factors to the subjects of the study

REFERENCES:

1. Anchala, et al. Hypertension in India: a systematic review and meta-analysis of prevalence, awareness, and control of hypertension. *Journal of Hypertension* 32(6):p 1170-1177, June 2014 DOI: 10.1097/HJH.000000000000146
2. World Health Organization, Hypertension- key facts march 2023. <https://www.who.int/news-room/fact-sheets/detail/hypertension>
3. Prevalence of Hypertension in Maharashtra, 2022 from <https://www.google.com/search?q>
4. Nationwide survey finds 28.5 per cent adults in India hypertensive. *The Indian Express*. (2022, May 10). from <https://indianexpress.com/article/india/nationwide-survey-28-per-cent-adults-india-hypertensive-7909792/>
5. Times of India, Nagpur news. Tension free: Fewer people need BP pills in vidarbha as compared to state, national figures May 17, 2022 from https://www.google.com/amp/s/m.timesofindia.com/city/nagpur/tension-free-fewer-people-need-bp-pills-in-vidarbha-as-compared-to-state-national-figures/amp_articleshow/91604395.cms
6. Your guide to lowering your blood pressure with Dash - nhlbi.nih.gov. (n.d.). Retrieved March 26, 2023, from <https://www.nhlbi.nih.gov/sites/default/files/publications/06-4082.pdf>
7. Purkayastha, nilanjana & chanda, anupam. Whatsapp as a means of sharing

information among lis professionals of north east india: a study. 6.69-82. (2018).

8. Yaagoob E, Hunter S, Chan S. The effectiveness of social media intervention in people with diabetes: An integrative review. *J Clin Nurs*. 2022 May 11. doi: 10.1111/jocn.16354. Epub ahead of print. PMID: 35545822.
9. Vijay Rokde Sarika. A comparative study to assess the effectiveness of WhatsApp based selfcare information with manual mode of self-care information among Asthmatic patient on Quality of Life (2022). <https://www.researchgate.net/publication/358667020>.
10. R,; R. U. S. (n.d.). Epidemiology and the magnitude of coronary artery disease and acute coronary syndrome: A narrative review. *Journal of epidemiology and global health*. Retrieved March 24, 2023, from <https://pubmed.ncbi.nlm.nih.gov/33605111/>