



Monitor the effectiveness of digital nursing among nursing professionals for expansion of nursing health services

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Abstract

Background: With the advent of technology and increased pace of life the health need of the people has considerably reached its pinnacle to attain the best quality of health care support. Use of technology in health sector has been a boon for the health team members. For instance- exchange of patient data, medical images, video conferences, home care has been initiated .Although; technology has stepped in health sector the cost effectiveness scale continues to be questioned as every individual experiencing ,have their own perception and feedback, with an outlook that everyone in the community to be benefited.

Aim of the study: Monitor The Effectiveness of Digital Nursing Among Nursing Professionals For Expansion of Nursing Health Services.

Method: Consecutive Sampling technique that allowed easy accessibility of subjects where, nursing professionals handling patients on digital scenario expressed their view to the Likert scale provided.

Results: The study reveals that digital nursing is leveraging and reveals a significant association with the demographic variables, to exhibit more through the Likert scale the analysis showed that nursing practise has proved to be beneficial for remote and distant areas and avoids duplication of work that initiates expansion of digital nursing on a wider network. The data also reveals that storage of data is safe only on registered and authenticated health apps. Most have expressed that during the process beneficiary and family members are ought to be supportive for better and effective health outcome. The significance of the result was evident through the mean test and t value that was found to be greater that helped to analyse that standard deviation through z test application is feasible as t test provided a strong hold of the value provided.

Conclusions and Implication: The conclusion and implication arrived, is digital nursing has immensely projected its progress and stimulated for better nursing practise on the platform of nursing health.

Keywords: monitor, effectiveness, digital nursing, nursing professionals, demographic data, standard error, analysis, data interpretation

Introduction

This study will elaborate the essentiality of digital nursing and the effectiveness that resonates to enhance the health services using technology in the form of telenursing. Technology has lead to the connectivity of patients and nursing professionals at distant places at the same time, reveals the cons of digital nursing too. Perhaps, the advantages of digital nursing outweighs the disadvantages and on an extreme linear scale the onset of the digital nursing has started mushrooming and the essence has started reaching the remote places, although the pace is to be accelerated, evidences through newspaper articles reveals a vast difference in opinion, suggestions and attitude towards digital nursing among developed, developing and underdeveloped countries. However, all the replies and suggestions are directed directly that digital nursing has been a boon and dichotomously manifest the liberation and progress of digital nursing in health services.

Aim of the study

Monitor The Effectiveness Of Digital Nursing Among Nursing Professionals For Expansion Of Nursing Health Services.

Objectives

- To analyze the effective use of digital nursing among Nursing professionals
- To monitor the experience pertaining to digital nursing among Nursing professionals

Hypothesis

H₀: Digital Nursing is effective among nursing professionals

Method

Methodology applied for data collection involves a stratified technique. The population was provided 4 point Likert scale, to draw conclusion; prior to filling the questionnaires the demographic details will extract details regarding the maximum usage of digital sources exhibited among the nursing professionals.

On the other hand, will also help to analyse the work area involved where digital nursing has made its impact for better purpose irrespective of the limitations that could be resolved with specification in the implication section.

Design: Descriptive

Approach: Quantitative

Setting: All areas of Nursing

Population: Nursing professionals

Sample size: 80

Sampling technique: Consecutive Sampling technique

Consecutive Sampling technique that allowed easy accessibility of subjects where, nursing professionals handling patients on digital scenario expressed their view to the Likert scale provided.

Inclusive criteria

Nursing professionals using digital mode to reach patients

Willing to participate

Nursing professionals reachable

Exclusive criteria

Other than Nursing professionals Nursing personnel haven't communicated with patients using digital mode

Variables

Intraneous: digital mode services in the form of mobile, landline, authenticated app, video and email

Extraneous: good connectivity while using the appliances

Analysis and data interpretation

Table 1: Demographic Data N=80

Demographic data	f	%
▪ Area of work		
Hospital	17	21.25
Community	22	27.5
Education	21	26.25
Pharmaceutical	6	7.5
Research	4	5
Project	8	10
Retired	2	2.5
▪ Nursing Education		
ANM	7	8.75
GNM	13	16.25
BSc	23	28.75
MSc	35	43.75
PhD	2	2.5
▪ Area		
Urban	42	52.5
Rural	38	47.5
▪ Digital Form		
Mobile	20	25
Landline	10	12.5
Authenticated	20	25
Video	14	17.5
Email	16	20

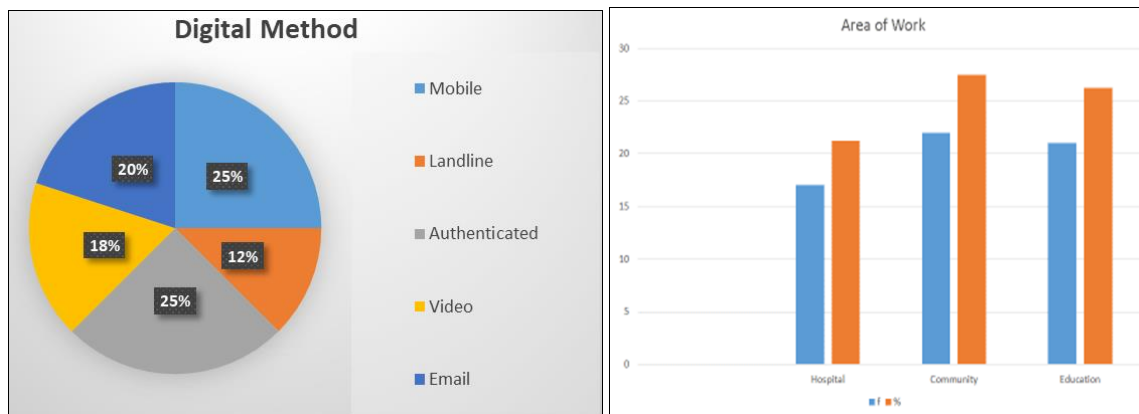


Fig 1: Area of work and Digital method

Major findings of demographic data indicates that, majority of the population were from the community section that figured to 27.5 % followed by this were in education, hospital, project, research and retired respectively. To elaborate further, one third of the population size were from education that accounted to 21.25% and 26.25% .Whereas a small proportion exhibited from pharmaceutical , research, project and retired were 7.5%, 5%, 10% and 2.5% respectively. Similarly , the maximum number of nursing personnel had obtained their Masters in Nursing that configured to 43.75% among the selected population, the findings also resembles that those with PhD accounted for 2 population size, whereas ANM, GNM, and B.Sc. figure was 7,13 and 23 in the frequency table . However, on understanding the nature of work from the area of residence many of the selected samples belonged to urban section that accounted to 52.5 % comparatively to those from the rural section were 47.5%.The study reveals an interesting fact that majority of the nursing personnel who used digital method was mobile and authenticated app that showed the highest marking to 25 % to other sources like landline, video and email.

Table 2: Calculated Z value at .5 level

Mean	SD	Tabulated Z value	Calculated Z value
62.35	6.27	0.27	0.7

The analysis and interpretation of data illustrates that the value of z test is greater than the tabulated value, therefore, null hypothesis rejected and concludes that using digital nursing among nursing professional to approach patients is effective. The total sample size composition was 80 and after calculating the Likert scale scoring the mean resulted to be 62.35 .Since, the sample size was more Z test application strategically, was found to be 0.7 than the tabulated value. The standard error notified that the Z value at the significant level of 0.05 was detrimental as seen in the above calculated table.

Table 3: Chi square association

			Total	
1	232	187	419	λ 1.124 ^{NS}
2	408	391	799	
3	772	709	1481	
4	1129	1051	2180	
5	45	64	109	
Total	2586	2402	4988	

The chi-square has total of 80 observations that was calculated by adding the sample size in the desired categories depending on the education that was perceived by them and the area of residence. The sum score that was calculated from the Likert scale derived, resulted to determine the expected number of each cell via chi-square method.

The table indicates serial of numerical values that specifies the value generated after calculating the likert scale score and directly propotinate to the values of columns and rows and their sum total. The table manifests that there are 5 columns and 2 rows, that was relatively useful to calculate the df that was subjectively found to be 4(df=4).

Calculating, further the sum total was found to be 4988 that synchronises with the columns and rows total. Solving and Maximizing the accuracy the outcome for chi-square (λ) was found to be 1.12, indicating the calculated value was less than the tabulated value .Therefore, null hypothesis and inferential statistics value emphasis that the hypothesis is accepted.

Implication

- Majority of the nursing professionals mentioned that the mobile cannot be relied for safe data storage, therefore authenticated apps were used to secure patients details. In areas where authenticated apps were not available they used data system with passwords. This made their work easier.
- The study also found that the use of digital nursing among the rural section majestically to be enhanced as the economic condition of the patients also matters. Hence, the digital aspects should be affordable on both sides and the connectivity should be uninterrupted.
- Minor cases easily resolved and found to be useful during pandemic period.
- Communicating via mobile to patients at rural has to be made convenient as many don't have mobile so they do miss their appointment schedule. Therefore, messages circulated through neighbors.
- In Hi tech Nursing areas the high security data profile helps in securing the confidential data.
- Some areas of Nursing still demanded for paper work even after the authenticated apps were available , this was because the other person were unaware regarding using the apps provided .This led to duplication of work at times so training was initiated
- Video call is effective through different modes the most important part is even the patient and family should know to use it. After, few meetings they do become aware.

Conclusion

The study reveals that digital nursing is leveraging and reveals a significant association with the demographic variables, to exhibit more through the Likert scale the analysis showed that nursing practise has proved to be beneficial for remote and distant areas and avoids duplication of work that initiates expansion of digital nursing on a wider network. The data also reveals that storage of data is safe only on registered and authenticated health apps. Most have expressed that during the process beneficiary and family members are ought to be supportive for better and effective health outcome.

The conclusion and implication arrived, is digital nursing has immensely projected its progress and stimulated for better nursing practise on the platform of nursing health.

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