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Nurses' Perception of Using Social Media to Enhance Health Education at Governmental Primary Health Care Centers, Gaza Strip, Palestine

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Abstract:

This study aimed to assess the nurses' perceptions of using social media (SM) to enhance nurses' role in health education at governmental primary health care centers in Gaza governorates. A quantitative, cross-sectional study using a valid and reliable self-administered questionnaire was conducted between June and November 2019 following a census sampling method. A total of 139 nurses from nine centers classified as the fourth level of primary health care (PHC) centers in the Gaza strip participated in this study. A five-point Likert scale was used to collect information on nurses' perceptions according to SM's role in health education. The study results showed that 71.2% of participants have email or an account on SM; about 51% of participants use SM and the internet for work-related matters. 57.5% of participants stressed that the nature of work in a primary health care center requires using internet. 89% of nurses mentioned that they share and follow health care centers' SM pages and platforms. The contribution of SM in increasing health education among health care workers was high, about 76.4%. 83.2% of nurses stated that SM could be better utilized in health education through formal and reliable channels. 82.8% said that SM platforms provide health information quickly. 71.4% reported that they use their page to publish health-related topics. Using SM is very beneficial and supportive in health education and communication. Therefore, employing SM to improve nursing roles according to the current possibilities and develop them later according to the available options is valuable. This was the first study in the Palestinian context on nurses' perception of using social media to enhance health education at governmental primary health care centers using a comprehensive and reliable assessment tool.

Keywords:

Social Media, Nurses, Primary Health Care, Health Education, Palestine

1. Introduction

Changes in communication technology have driven innovations to how care is provided, enhanced, improved, and consumed. So the evolution of communication media which social media is part of this technology, so this development is shaping the expansion system in services of primary health care (PHC) to create opportunities for inefficiencies and consumer health benefits by supporting shared decision-making between patients and providers, providing personalized consumer self-management tools and resources, building social support networks for providers and consumers, and delivering accessible health information that is targeted or tailored to consumers any place and any time [6,8].

Therefore, SM is no longer limited to its traditional role, and it has become a fertile environment for the circulation of health information. They have contributed to the transfer of the nurse's role from closed rooms to cyberspace, which plays a significant role in spreading health awareness if properly invested by health care provided.

All that's mentioned led to growth and increased use of SM day by day all worldwide. So, until January 2019, more than 4.4 billion people were using the internet globally, representing 57.36% of the world's population, and 3.5 billion were SM users [2,20].

In Palestine, 56% were SM users in 2018 [12]. Therefore, SM's increased use led to high interaction between technology and health well-being, especially in PHC.

Nursing has an exact role in achieving the primary goals of PHC, as it represents the largest proportion of PHC providers [16].

These goals focus on promoting healthy culture and high-quality health education, providing the highest standards of integrated health care services, based on the fact that the institution is the first point of contact with the public, and the continuous development and renewal of all PHC services to ensure that the needs of people, families, and communities are met, and support new systems to ensure that the problems and obstacles that may be faced by reviewers to the health center.

This makes nursing always seeks to achieve its desired goals by using all available means and adapting to society's technological development and culture in recent years. The use of social media "SM" has been a new method used by the community to communicate, interact and gain knowledge. Internet networking and SM platforms give excellent facilities for good interaction and collaboration to fulfill the nursing profession's all-growing need. With the rising ability of technologies to deliver on-demand and in real-time videos, sound, graphics, text, and files, nurses, and health professionals' potential to interact, learn, and collaborate is enormous. The sooner and the more we begin to know use these applications, the preferable we will do in nursing education and nursing care practice, special in PHC [13].

Therefore, the purpose of this study is to assess the nurses' perception of using SM to enhance nurses' role in health education at governmental PHC centers in the Gaza Strip, Palestine.

2. Materials and Methods

2.1. Study Design and Setting

A quantitative, cross-sectional study using a self-administered questionnaire was carried out to assess the nurses' perception of using SM to enhance nurses' role in health education at governmental PHC centers in the Gaza Strip, Palestine. The study was conducted in the nine fourth levels of PHC centers, distributed over the five governorates in the Gaza strip [17].

2.2. Study Population

The study population has consisted of nurses working at the level fourth governmental PHC in Gaza strip in 2019, nearly (153) nurses.

2.3. Sampling and Sample Size

To recruit the study participants, a census sampling method was adopted. The total number of the target population was 153 nurses. One hundred thirty-nine of them are positively responded with an average of 91%. This response rate is considered satisfactory.

2.4. Data Collection Tool

After reviewing the available literature and previous studies, the researcher has used a self-administrative questionnaire to collect the data. The questionnaire consists of questions concerning the nurses' perception of using SM to enhance health education. A five-point Likert scale was used to collect information on nurses' perception according to SM's role in health education. The multi experts have assessed the multi experts in health research, managers, and statistics for face and judged content validity in health research. Many useful and essential modifications and comments were made and taken into consideration for the questionnaire.

The Cronbach's coefficient alpha (C α) was calculated for each field of the questionnaire using SPSS software to check the questionnaire reliability. The general reliability for all items equals 0.921, indicating the reliability of the delivered questions. A pilot study was conducted among 20 nurses; some minor changes and modifications were performed without affecting the main domains. The questionnaire's internal consistency was measured by the scouting sample (the sample of the pilot study), which consisted of 20 questionnaires. It was done by measuring the correlation coefficients (Pearson test) between each item in one field and the whole lot [10].

Structure validity is the second statistical test used to test the validity of the entire questionnaire. It measures the correlation coefficient between one field and all of the other questionnaire fields that have the same level of the rating scale (Five-point Likert scale) [18]. The significance values are less than 0.05. Thus, it can be said that the fields are valid to be measured what it was set for to achieve the main aim of the study.

2.5. Data Analysis

The collected data were entered, cleaned, and analyzed using the Statistical Package for Social Sciences software version 22 (IBM SPSS, Inc., Chicago, IL). Descriptive analysis such as Mean, Standard deviation (SD), and percentage mean was done for describing the dimensions. Pearson's Correlation Coefficient to test the validity and

internal consistency between each paragraph of the measure and the full measure and to study the relationship between variables.

2.6. Ethical Considerations

The study protocol was approved by the Helsinki Ethical Committee in the Gaza Strip (Code: PHRC/HC/606/19). Also, permission was obtained from the General Directorate of Human Resources Development at the Palestinian Ministry of Health to conduct the study. The nurses who agreed to participate in the study were asked to sign a written informed consent attached to the questionnaire.

3. Results and Discussion

3.1. Socio-demographic Features of the Study Participants

More than the sample of the study participants was females (62.6%). The age 47.5% of the participants were between 31-40 years old. 87.8% of the participants were married. 48.9% of the participants were holding 2 and 3 years diploma. In comparison, 44.6% had a bachelor's degree.

The majority of the participants are general nursing, nearly 76.3%. The participants have graduated from Palestine College of Nursing 40.3%; Islamic University 35.3%; Egyptian universities 12.9%; Al Azhar University 6.5%; and University College of Applied Sciences 5% (Table 1).

Table 1. *Socio-demographic characteristics of study participants.*

No.	Variable	Categories	Frequency (n)	Percentage (%)
1.	**Gender**	Male	52	37.4
		Female	87	62.6
2.	**Age**	20-30	17	12.2
		31-40	66	47.5
		More than 40	56	40.3
		Mean= 40.7 SD= 9.03		
3.	**Marital status**	Not married	17	12.2
		Married	122	87.8
4.	**Place of residency**	North of Gaza	28	20.1
		Gaza	44	31.7
		Mid-zone	34	24.5
		Khan-Younis	11	7.9
		Rafah	22	15.8
5.	**Academic qualification**	Nursing Diploma (2 and 3 Yeas)	68	48.9
		Bachelor	62	44.6
		Postgraduate	9	6.5
6.	**Nurse specialty**	General Nursing	106	76.3
		Midwife	20	14.4
		Dental Nursing	13	9.4
7.	**Place of graduation**	Islamic University	49	35.3
		Al Azhar university	9	6.5
		Palestine College of Nursing	56	40.3
		University College of Applied Sciences	7	5.0

No.	Variable	Categories	Frequency (n)	Percentage (%)
		Egyptian universities	18	12.9
8.	**Nursing Experience**	Less than 10 Years	41	29.5
		From 11 to 20	63	45.3
		More than 20	35	25.2
		Mean= 15.8 SD=8.53		
9.	**Experience in PHC**	Less than 10 Years	75	54.0
		From 11 to 20	41	29.5
		More than 20	23	16.5
		Mean= 11.6 SD= 8.52		
10.	**Job description**	Yes	89	64.0
		No	50	36.0
11.	**Workplace in center**	Child Health	39	28.1
		NCD	32	23.0
		Oral and dental health	15	10.8
		Family Planning	14	10.1
		Natal Care	17	12.2
		Infectious diseases	8	5.8
		Head nurse and Emergency	14	10.0

3.2. The Reality of Nurses Using SM and Internet During Working in PHCC

71.2% of the study participant reported that they have an email or an account on SM. About 51% of participants use SM and the internet for work-related matters (Table 2). The use of SM is increasing worldwide, especially in Europe, to keep connections between patients and health providers. A study found that Europeans are more likely to trust SM with their health. SM is used by PHC, hospitals, consumers, and physicians to provide high-quality healthcare.

Table 2. *The reality of nurses using SM and internet during work in PHCC.*

No.	Variable	Categories	Frequency (n)	Percentage (%)
1.	Do you have an email or an account on SM?	Yes	99	71.2
		No	40	28.8
2.	Do you use SM and the internet for work-related matters?	Yes	72	51.8
		No	67	48.2
3.	How often do you use SM and the internet at your work?	All-time	14	10.0
		Some time	51	37.0
		Little	24	17.0
		None	50	36.0
4.	Which of the following devices are available or used at your work?	PC	54	39.0
		Mobile	32	23.0
		PC and Mobile	14	10.0
		None	39	28.0
5.	Does the nature of your work require using the internet?	Yes	80	57.5
		No	59	42.5
6.	Does the center have a page on SM platforms?	Yes	124	89.0
		No	15	11.0

3.3. Nurses' Perception of Using SM to Enhance Nurses' Role at Governmental PHC Centers

Table 3 shows the relative weight and rankings of the nurses' perception of using SM to enhance nurses' role dimensions from the participant's point of view. SM's role in the health education dimension ranked first with a relative weight of (76.46%), and the risks of using SM in PHC centers (49.74%) ranked last.

In general, we conclude a moderate degree of Nurses' perception of using SM to enhance nurses'role at governmental PHC centers (66.2%). Therefore, we believe that this percentage is good and acceptable. This means that 66% of the study sample believe that using SM to improve nursing is a positive step and a good start for developing nursing services in primary health care. This is in line with many previous studies like the study by [5]. Lim, 2016 suggested that communication between nurses and management through SM increases confidence among them and allows them to raise many discussion topics through these applications and programs [14].

Table 3. *Nurses' perception of using SM to enhance nurses' role at governmental PHC centers.*

No.	Dimensions	Items	Mean	SD	Percentage (%)	Rank
1.	Support the administration to use SM in nursing services.	**7**	2.984	0.60	59.68	6
2.	The role of SM in developing the professional performance of nursing.	13	3.527	0.48	70.54	3
3.	The role of SM in health education.	12	3.823	0.48	76.46	1
4.	The role of SM in communication between nurses and ma nagement.	9	3.241	0.64	64.82	5
5.	The role of SM in communication between nurses and colleagues.	10	3.645	0.51	72.9	2
6.	The importance of SM for patients and reviewers.	11	3.398	0.72	67.96	4
7.	The risks of using SM in PHC centers	8	2.487	0.60	49.74	7
Total			**3.301**	**0.35**	**66.2**	

3.4. The Role of SM in Increasing Health Education for Colleagues, Patients, and Reviewers in PHC Centers

Table 4 showed that 83.2% of nurses stated that SM could be better utilized in health education through formal and reliable channels. 82.8% of the participants mentioned that SM platforms are providing health information efficiently. 71.4% indicated that using their pages to publish health-related topics may increase k knowledge and experience among their colloquies. Also, 71.8% of the participants stated that the center's management uses SM to develop nurses and improve their scientific and practical level. The results showed that SM contributes to increasing health education among workers in PHC centers. In other words, SM's contribution to increasing health education among health care workers was high, with a mean score of 3.82 and a weighted percentage of 76.46%.

SM is providing education to health providers. This medium's efficient communication abilities can be used to deliver professional nursing training [5].

Nurses can also use SM to connect their patients and provide them healthcare education. Nowadays, SM can help patients quickly to acquire healthcare information and other useful medical resources. Patients can participate in virtual seminars,

receive healthcare support, and track their physical progress through SM. As the main connector between the patients and the healthcare system, nurses always have the responsibility to provide accurate health information to educate patients or their families to promote their health [11].

Through this platform, nurses can provide efficient communication and evidence-based information to enhance patients' overall health condition; patients also offer an opportunity to join the discussions and share their own experiences with others [5].

The use of Facebook for medical reminders is another example of SM in patient education. Patients can receive alerts and reminders from nurses through private messages via Facebook. Healthcare information can be delivered efficiently to a broad community and eventually increase medicine compliance and reduce hospital re-admissions [20].

Table 4. *Nurses' perception according to the role of SM in health education.*

No.	Items	Very Low Degree	Low Degree	Intermediate Degree	High Degree	Very High Degree	Mean	SD	%	Rank
		n (%)								
1.	SM platforms provide health information efficiently.	1 (0.7)	1(0.7)	11(7.9)	90 (64.7)	36 (25.9)	4.14	0.64	**82.8**	2
2.	Look for health information on SM platforms.	1 (0.7)	6 (4.3)	12 (8.6)	81 (58.3)	39 (28.1)	4.09	0.78	81.8	4
3.	I discuss with my colleagues the health topics through SM platforms.	1 (0.7)	6 (4.3)	25 (18.0)	80 (57.6)	27 (19.4)	3.91	0.78	78.2	8
4.	I develop and update my health information from SM platforms	3 (2.2)	2 (1.4)	19 (13.7)	85 (61.2)	30 (21.6)	3.99	0.78	79.8	7
5.	SM is a common source of health and nursing information.	12 (8.6)	67 (48.2)	29 (20.9)	24 (17.3)	7 (5.0)	2.62	1.03	52.4	12
6.	I use my page to publish many health topics that increase the experience of nurses.	1 (0.7)	27 (19.4)	20 (14.4)	74 (53.2)	17 12.2)	3.57	0.96	71.4	11
7.	I use my page to publish many health topics that increase the culture of patients.	1 (0.7)	23 (16.5)	20 (14.4)	78 (56.1)	17 (12.2)	3.63	0.93	72.6	9
8.	SM is an essential source of health	2 (1.4)	6 (4.3)	9 (6.5)	94 (67.6)	28 (20.1)	4.01	0.76	80.2	6

	education for patients.									
9.	SM is the easiest method of health education, especially in primary care.	1 (0.7)	3 (2.2)	16 (11.5)	84 (60.4)	35 (25.2)	4.07	0.72	81.4	5
10.	SM can be better utilized in health education through formal and reliable channels.	1 (0.7)	3 (2.2)	11 (7.9)	82 (59.0)	42 (30.2)	4.16	0.72	83.2	1
11.	I encourage my colleagues to use SM to improve primary care.	1 (0.7)	2 (1.4)	17 (12.2)	80 (57.6)	39 (28.1)	4.11	0.72	82.2	3
12.	The center's management uses SM to develop nurses and improve their scientific and practical level.	8 (5.8)	23 (16.5)	17 (12.2)	61 (43.9)	30 (21.6)	3.59	1.17	71.8	10
Total							**3.82**	**0.48**	**76.46**	

3.5. Risk of Using SM at PHC Centers in the Gaza strip

Table 5 presented that 54.4% of nurses stated that SM contribute to spreading false news and rumors, 52.4% think that SM sites help disseminated incorrect health information that affects the health of the reviewers, 45.6% of them believe that SM is a tool for exploitation and blackmail by health care providers. Furthermore, 47.8% believe that SM is increasing the gap between nurses and reviewers. In general, there are few risks to using SM in PHC centers, with a mean score of 2.49 and a weighted percentage of 49.74%.

A study by Ventola [20] found that the most risk that correlates with SM's use is the posting of inaccurate content that can reflect unfavorably on health professionals and institutions [20]. Peck's [19] study shows other Behavior that could be construed as unprofessional contest violations of clients' privacy; the use of profanity or discriminatory language and negative comments about clients, an employer, or a school [19]. Concerns from Chretien and Kind [7] regarding SM's use by nurses frequently center on the potential for negative repercussions resulting from the client's confidentiality breach. Such infractions may expose health providers and health care entities to liability [7].

Butt [4] adds that frivolous comments and chat maybe entertaining at an individual level but perhaps captured and disseminated to the public and tarnishes the nurses or the medical institution's image [4]. In other words, SM activities have the potential to cause unwanted defamation, which can consequently lead to loss of employment, the filing of civil claims, and placing public confidence in the profession at risk [15].

A study by Bode and Vraga [3] think about a growing fear and some controversies concerning extending the use of social networks in health data communication contexts, which have their origin in the threat to privacy and confidentiality and the risk of misinformation, fake news, and the impersonation of professionals as recently

reported in some media stories [3]. The increase in these situations' reports shows that these are risks to be taken into serious consideration [1]. The researcher adds that the risks correlate with storing and transporting images, multimedia files, or text files on these mobile devices that go wherever the user goes and that often connect through decreased reliability of Wi-Fi networks, security risks rise exponentially. Low clarity on the boundaries between personal and professional life, high risk of liability arising from the use of SM for professional purposes, decrease methodological rigor in studies on the use of SM, and low accuracy, quality, and reliability of information are creating severe doubts about extending SM use among health provider.

A study by Erer and Çobaner [9] found that 80% of participants believe that SM has various risks. Of these risks, it was expressed that inaccurate information' posed the most significant threat 62.7%; followed by unprofessional behavior at 58.1%; 'the violation of patient privacy' at 53.8% and on the other hand the organizational risks' at 33.8% [9].

Table 5. *Nurses' perception according to the risks of using SM in PHC centers.*

No.	Items	Very Low Degree	Low Degree	Intermediate Degree	High Degree	Very High Degree	Mean	SD	%	Rank
		n (%)								
1.	I believe that the use of SM is a violation of the privacy of the reviewers.	7 (5.0)	80 (57.6)	32 (23.0)	20 (14.4)	0 (0.0)	2.47	0.80	49.4	4
2.	I think SM sites help spread false health information that affects the health of the reviewers	6 (4.3)	71 (51.1)	36 (25.9)	22 (15.8)	4 (2.9)	2.62	0.90	52.4	2
3.	I see that SM contributes to spreading false news and rumors.	4 (2.9)	60 (43.2)	48 (34.5)	25 (18.0)	2 (1.4)	2.72	0.84	54.4	1
4.	I think SM contributes to reducing trust in health staff.	5 (3.6)	76 (54.7)	35 (25.2)	19 (13.7)	4 (2.9)	2.58	0.88	51.6	3
5.	I think SM is a tool for exploitation and blackmail by health care providers.	13 (9.4)	86 (61.9)	29 (20.9)	10 (7.2)	1 (0.7)	2.28	0.76	45.6	8
6.	I see SM as a tool that preoccupies health care providers about delivering their services best.	9 (6.5	81 (58.3)	29 (20.9)	17 (12.2)	3 (2.2)	2.45	0.87	49.0	5
7.	I think SM is increasing the gap between nurses and reviewers.	12 (8.6)	81 (58.3)	27 (19.4)	18 (12.9)	1 (0.7)	2.39	0.85	47.8	7

8.	SM interrupts direct contact between reviewers and health providers.	15 (10.8)	75 (54.0)	30 (21.6)	17 (12.2)	2 (1.4)	2.40	0.89	48.0	6
Total							**2.49**	**0.60**	**49.74**	

3.6. The Factors that Help to Employ SM Enhancing the Role of Nurses in Health Education and Communication

Table 6 shows that the study sample's response to the open question is consistent with the results of the current reality of readiness of PHC centers from technical equipment for using SM, 70% of nurses agreed that PHC centers need a good internet network to employ SM in nursing roles, and 68.2% said that health centers need enough computers to accomplish their tasks in general. Besides, the need to train nursing staff on the effective use of SM platforms reached 59.7%. The nurses agreed that promoting and encouraging patients, reviewers, and colleagues to use SM platforms requires intensive effort.

Table 6. *Factors that help to employ SM enhancing the role of nurses in health education and communication.*

No.	Items	Frequency (n)	Percentage (%)	Ranking
1.	Providing high quality and internet network in PHC centers through which SM can be employed in nursing roles.	98	70	1
2.	The provision of computers or tablets for communication with others, where these devices are mostly for SM's use in the services of the center.	95	68.4	2
3.	Work to spread the culture of using SM with patients, reviewers, colleagues, and management.	91	65.5	3
4.	Establishing platforms for PHC centers, following them by specialists, and encouraging others to deal with these pages.	85	61.2	4
5.	Conduct training courses for employees on how to use SM to improve nursing services and roles	83	59.7	5
6.	Providing reliable and credible cultural materials that contribute and encourage others to follow the SM center's platforms.	78	56.1	6
7.	Separated the staff's SM platforms from the media of centers and do not name the platforms for the team as the health center.	75	54	7
8.	Encourage reviewers to use SM platforms to communicate with the center's staff. Help them to use these platforms in case it is not necessary to come to the center.	73	52	8
.9	Spreading awareness among patients on the importance of these platforms and the scientific, cultural, and health materials that may prevent them from attending the center	67	48.2	9
10.	Providing high-quality internet to meet all the needs of the center using SM to improve the center's services	65	46.7	10

3.7. Limitation of the Study

Our results should be interpreted in light of certain limitations. First: Limited related published, up-to-date reports and literature from the Palestinian context could support our study findings. Second, the study was covered in the southern part of Palestine (Gaza strip) while the northern part (West Bank) has not covered. Finally, the study was cross-sectional in design, limiting making a causal inference.

4. Conclusions

Our study aimed at assessing the nurses' perceptions of using social media to enhance nurses' role in health education at governmental primary health care centers in Gaza governorates. Study participants mentioned some positive points the employ SM in improving nursing roles. While some points that participants agreed need to improve, like wireless internet in all center area; network speed used to transmit data and information is insufficient to complete the required work, internet is provided to individual employees on their mobile devices to carry out work assigned to them in need of the internet, integrated database of reviewers and a way to communicate and communicate with them. While some points that participants agreed need to improve, like wireless internet in all center area; network speed used to transmit data and information is insufficient to complete the required work, internet is provided to individual employees on their mobile devices to carry out work assigned to them in need of the internet, integrated database of reviewers and a way to communicate and communicate with them.

5. Recommendations

Some recommendations for health policy-makers and future research were formulated to using SM to enhance nurses' role at governmental PHC centers in the Gaza strip as a beneficial and supportive tool in health education and communication.

5.1. Recommendations for Implementation

a. Engaging in a dialogue at the policy-making level to sensitize especially managers and health providers about the concept, importance, and functions of SM is necessary.

b. Work hard to employ SM to improve nursing roles according to current possibilities, and develop them later according to available options.

c. Development of Internet networks in primary care centers, and the provision of computers to meet the quality of services and work pressure.

d. Work on drafting a law regulating SM's use in health care services in general and PHC centers, and finding a body to monitor health publications on these platforms.

e. The nurses must be supported regarding the use of the Internet and SM. In this matter, it is necessary to conduct courses, workshops, and meetings to educate nurses and know them about the correct ways to use the Internet and SM effectively.

f. Develop a legal mechanism for screening the information through SM to verify the authenticity of the published information without interfering with the freedom of expression guaranteed by the law.

g. Providing computer programmers to make unique pages for health care centers that reflect the objectives of the Ministry of Health.

5.2. Recommendations for the Future Research

a. Further studies on client perception of using SM on the health services, nurses' roles, etc., may be necessary.

b. More objective studies of SM in health education and communication among nursing students.

c. Evaluating the SM pages and platforms of PHC centers, knowing its health content, assess its objectives, and the target group of creating these pages

Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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