



ORIGINAL ARTICLE

An assessment of nurses' participation in Health Promotion: a knowledge, perception, and practice perspective

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Key words

Nurses • Health promotion • Practice

Summary

Background. Health promotion (HP) at the population level serves to improve health inequalities, enhance the quality of life, and ensures the provision of healthcare and related services. Nurses at all levels are charged with the task of ensuring that patients receive HP services. However, their competence in addressing this challenge needs further exploration. This study assessed the influence of HP knowledge and perceptions in nurses' HP practice.

Methods. The study was conducted using a self-administered questionnaire among 184 nurses randomly sampled from a tertiary hospital. Questions bordered on respondents' demographics, knowledge, perception, and practice of HP. Responses were retrieved and analysed using IBM SPSS Statistics, Version 26.0. Armonk, NY: IBM Corp, 2019.

Results. Analysis showed a statistically significant relationship between participants demographics and possessing adequate

knowledge to provide HP services. Statistically significant relationships were found amongst the following variables: 'A holistic knowledge of disease pathology and processes are vital for effective care of patients' and 'education of patients on medication' $p = 0.001$, 'awareness of importance of educating patients about their condition' and 'patients encouraged to engage in healthy lifestyle' $p < 0.001$.

Conclusion. Data showed that nurses' knowledge regarding HP had a strong influence on their perception of HP. Their perception of HP in turn strongly influenced their practice of the same. Therefore, rigorous efforts must be made by governmental agencies, and organizations involved in healthcare worker training and nursing accreditation, to ensure the HP curriculum is well incorporated in nursing undergraduate training and sustained in service.

Introduction

Health Promotion involves a variety of approaches aimed at preserving the wellbeing and quality of life of people by addressing the fundamental causes of certain diseases as opposed to purely focusing on biomedical care [1]. Previously, health was seen as the very opposite of illness and diseases. With the Ottawa charter for HP in 1986, the World Health Organization effected a major change to the global view of health, not as a goal but a means to a full life [2]. As a result, HP emerged as a prime and essential activity for contemporary society with diverse initiatives and interventions designed by the World Health Organization aimed at translating the numerous concepts of HP towards practical reality [3]. Amongst the initiatives are the health-promoting hospitals (HPH) [4], health-promoting schools [5], health promotion in the sustainable development goals (SDGs) [6] and workplace-related HP [7]. These programmes have thrived due to the beneficial health outcomes emanating from them.

Today more than ever, nurses play a crucial role in HP. In addition to routine consultations and clinical duties,

nurses are also involved in check-up care, patients education as well as disease prevention (DP) services [8]. In addition, nurses meaningfully contribute to several beneficial health outcomes such as educating patients on how prescribed medication works, therapeutic compliance [9], quality of life [8], and overall patient support and empowerment. To further uncover the importance of the nursing role in health promotion, Whitehead explored the current position of nursing concerning its practice, associated concept, and policy [10]. The questions raised included how much nurses know about HP and their views towards the subject of HP. Literature confirms that nurses utilize a range of expertise in delivering HP which may be generalized, patient-centered, or project management-related HP [8]. Despite the vital role nurses play in promoting population health, the prevalence of several preventable diseases continue to pose a major public health concern. In 2017, about 60% of patients presenting at all hospital emergency departments in the United States presented with preventable chronic conditions amounting to \$8.3 billion in costs [11]. Relating to hospitalization, patients with chronic preventable diseases feature more

frequently and stayed longer in hospital [12]. Similarly, in 2017 in India, more than 9.5 million deaths and nearly half a billion disability-adjusted life-years (DALY) were recorded [13]. Of the recorded deaths, more than 33% were considered to be preventable [13]. Within the low- and middle-income countries (LMIC), the adverse impact of the global burden of non-communicable disease (NCD) remains dire [14]. Despite widespread access to information regarding adjustable lifestyle behaviours, such knowledge does not necessarily translate to lifestyle changes [15].

South Africa is faced with a quadruple burden of disease comprising a mélange of four colliding epidemics [16]. These include communicable diseases such as HIV/AIDS and TB; maternal and child mortality; NCDs such as hypertension and cardiovascular diseases, diabetes, cancer, mental illnesses, and chronic lung diseases like asthma (mainly related to preventable lifestyle behaviour); as well as trauma and injury [16]. The quadruple burden of disease has led to the country's adoption, in February 2013, of the 17-year visionary health plan for 2030 referred to as the national development plan (NDP) [16].

Nurses working at the various levels of healthcare delivery have a significant responsibility in HP, DP, and wellness. Due to the nursing profession's ability to navigate the entire healthcare system worldwide, plus their role as patients' advocates, nurses are in a position to achieve the comprehensive goal of universal health coverage (UHC) through HP. However, some reports have questioned nurses effectiveness in the discipline and practice of HP. In this study, we assessed the health promotion knowledge, perceptions, and practice of nurses in a South African tertiary hospital.

Methods

DESIGN, SAMPLE, AND RESPONDENTS

A descriptive cross-sectional design was used for this study. The population comprised of registered nurses working in a tertiary hospital in the Eastern Cape province of South Africa. The respondents were randomly selected from the overall population. Student nurses, and nurses on exchange training programs from different countries and auxiliary nurses were excluded from the study.

DATA COLLECTION

Data were collected using a self-administered structured questionnaire. Retrieved information was anonymised and only the principal researcher had access to the data. The questionnaire was adapted from a previous study [17] which had similar objectives. The questionnaire was administered over a three-month time frame between February and April 2017. Using a 95% confidence interval and a 5% error margin, a sample size of 184 was calculated. Data collection was stopped when the target sample size was achieved. Data collection was carried out by the principal investigator and a trained fieldworker.

SURVEY INSTRUMENT

The questionnaire (supplementary file 1) comprised of 22 closed-ended questions divided into four sections. Section A comprised of seven questions focused on demographics including sex, age group, registration status as a nurse, and duration of registration as a nurse. Section B (questions 8-9) elicited information on knowledge; Section C (questions 10-15) concentrated on nurses' perceptions towards health promotion, while section D (questions 16-22) centered on nurses' practice of health promotion.

DATA ANALYSIS

Data was analyzed using IBM SPSS Statistics for Windows, Version 26.0. Armonk, NY: IBM Corp, 2019. Simple descriptive analysis was conducted on all four sections (demographics, knowledge, perception, and practice) for which data were retrieved. Bivariate analysis was conducted to establish the relationship between demographics and knowledge, perception, and practice. A similar analysis was conducted to assess the relationship between perception and practice, knowledge, and practice, as well as knowledge and perceptions.

ETHICS

The study protocol received ethics approval from both the University of Roehampton, London, and the Research Ethics Committee (Human) (REC-H) of the Nelson Mandela University (NMU), Ref: H16-HEA-NUR-EXT-003. Every respondent signed an informed, written consent form prior to participation. The study comprised of a survey of non-vulnerable adults, and there was no potential for coercion of respondents, distress, loss of work time, or damage to professional reputation.

Results

BASELINE CHARACTERISTICS

A total of 184 nurses responded to the questionnaire. Female nurses comprised 82.6% (n = 152), while males comprised 7.6% (n = 14) of the respondents. Genders for 9.8% (n = 18) were not specified. Most nurses, 72% (n = 133) were 40 years or above. Of the respondents, 35.9% (n = 66) have been registered for 10 years or less as nurses. Analysis on each variable is relative to the total responses received on that variable. A descriptive summary of the variables has been presented in Tables I-IV.

KNOWLEDGE, PERCEPTION AND PRACTICE OF HEALTH PROMOTION

Of the participating 184 nurses, 56.0% (n = 103) agreed to having adequate knowledge regarding the conditions patients present within their units and their ability to provide health promotion services. A total of 63.6% (n = 117) respondents strongly held the perception that health education and counselling from nurses could

Tab. I. Knowledge, perception and practice of health promotion.

Variables	Responses				
	Strongly Disagree n. (%)	Disagree n. (%)	Neutral n. (%)	Agree n. (%)	Strongly Agree n. (%)
Knowledge Variables					
I have adequate knowledge necessary for HP provision	3 (1.6)	7 (3.8)	12 (6.5)	103 (56.0)	55 (29.9)
I am aware of the importance of providing HE to patients	0	0	2 (1.1)	57 (31)	121 (65.8)
Perception Variables					
A holistic knowledge of disease processes is a pre-requisite for patient care	0	0	2 (1.1)	70 (38)	112 (60.9)
Hospital is an ideal place for HP	1 (0.5)	15 (8.2)	11 (6.0)	70 (38.0)	83 (45.1)
Health promotion is a waste of time	129 (70.1)	41 (22.3)	5 (2.2)	2 (1.1)	2 (1.1)
Patients who engage in an unhealthy lifestyle will not benefit from HP	60 (32.6)	45 (24.5)	13 (7.1)	29 (15.8)	31 (16.8)
Health education and counseling from nurses could enhance patients' health	1 (0.5)	3 (1.6)	1 (0.5)	59 (32.1)	117 (63.6)
Patients do not want health education from nurses	71 (38.6)	78 (42.4)	17 (9.2)	7 (3.8)	6 (3.3)
Practice Variables					
I educate my patients on medication and how it works	0	2 (1.1)	6 (3.3)	74 (40.2)	98 (53.3)
I educate my patients about their disease conditions	0	2 (1.1)	14 (7.6)	84 (45.7)	80 (43.5)
I provide my patients with necessary guidance about diet and lifestyle	2 (1.1)	2 (1.1)	15 (8.2)	76 (41.3)	86 (46.7)
I educate my patients on the need for a routine checkup	1 (0.5)	4 (2.2)	13 (7.1)	73 (39.2)	89 (48.4)
I use my smart phone/devices to search for key information for my patients	10 (5.4)	16 (8.7)	36 (19.6)	74 (40.2)	43 (23.4)
I encourage my patients to engage in the healthiest lifestyle they can attain	0	1 (0.5)	12 (6.5)	94 (51.1)	74 (40.2)
I encourage my patients to observe fitness assessments and health screening	0	3 (1.6)	26 (14.1)	95 (51.6)	57 (31.0)

enhance patients' health, while 51.6% (n = 95) encourage their patients to observe fitness assessments and health screening. A descriptive summary of the respondents has been presented (Tab. I).

BIVARIATE ANALYSIS OF RELATIONSHIPS AMONG OUTCOMES

Results show that at a 5% significance level, there is a significant association between the professional registration duration of a nurse and them having adequate knowledge to provide HP services regarding the conditions patients present with in their unit (p = 0.015). Similarly, the demographic variable 'age range' has a statistically significant relationship with the perception that the hospital is an ideal place for HP to occur (p = 0.006). No statistical association was identified between nurses' demography and practice.

In a comparative assessment of nurses' perceptions and their HP practices as outcome variables, 21 variables were statistically significant (Tab. II). Of the 21 emerging factors, four emerged between the perception that a holistic knowledge of disease processes is a pre-requisite for patient care when compared with HP practice; four from the perception that a hospital is an

ideal place for HP when compared with practices; four factors were observed from the perception that patients who engage in an unhealthy lifestyle will not benefit from HP when compared with HP practice; two from the perception that health education and counselling from nurses could enhance patients' health when compared with HP practice; and seven factors from the perception that patients do not want health education from nurses when compared with HP practice. No statistically significant factor emerged from the perception that health promotion is a waste of time when compared with HP practice.

Comparison of the relationship between Knowledge and Practice yielded 11 statistically significant relationships (Tab. III). A breakdown of the 11 factors shows that nurses having adequate knowledge necessary for HP provision and practice had six significant factors, while the relationship between nurses being aware of the importance of providing health education (HE) to patients with HP practice produced five statistically significant relationships. The results showed that there were significant associations between 'having adequate knowledge regarding the conditions patients present with in this unit to provide HP services' and educating

Tab. II. Relationship between responses on health promotion perception and practices by nurses

Perception	Practice	SDA	DA	N	A	SA	p-value
A holistic knowledge of disease pathology and processes are vital for effective care of patients	I educate my patients on medication	0	0	2	69	109	0.001
	I educate my patients on need for checkup	0	0	2	69	109	0.008
	patients encouraged to engage in healthy lifestyle	0	0	2	68	111	0.004
	I encourage my patients to observe fitness assessments and health screening	0	0	2	68	111	0.049
Hospital is an ideal place for HP	I educate my patients on medication	1	5	10	67	83	0.010
	I educate my patients on need for checkup	1	15	10	67	83	0.044
	I use my smart phone/ devices for supportive information on HP	1	14	10	68	82	0.004
Patients who deliberately engage in an unhealthy lifestyle will not benefit from health promotion	I educate my patients about their disease condition	60	45	13	28	31	< 0.001
	I provide necessary guidance about diet and lifestyle	60	45	13	29	31	0.007
	patients encouraged to engage in healthy lifestyle	60	44	12	29	31	0.026
	I encourage my patients to observe fitness assessments and health screening	60	44	13	29	30	0.031
	patients encouraged to engage in healthy lifestyle	1	15	10	69	82	< 0.001
Health education, advise and counseling from nurses could positively enhance patients' health	I educate my patients on medication	1	3	1	58	117	0.007
	I educate my patients about their disease condition	1	3	1	59	116	0.048
Patients do not want health education from nurses	I educate my patients on medication	71	77	17	7	6	0.049
	I educate my patients about their disease condition	70	78	17	7	6	0.016
	I provide necessary guidance about diet and lifestyle	71	78	17	7	6	0.012
	I educate my patients on need for checkup	70	78	17	7	6	0.011
	I use my smart phone/devices for supportive information on HP	70	77	17	7	6	0.037
	patients encouraged to engage in healthy lifestyle	71	76	17	7	6	< 0.001
	I encourage my patients to observe fitness assessments and health screening	70	77	17	7	6	0.001

SA: Strongly Agree; A: Agree; N: Neutral; DA: Disagree; SDA: Strongly disagree.

patients about their disease condition', $p < 0.001$; 'awareness of the importance of educating patients about their condition' and 'patients encouraged to engage in healthy lifestyle' $p < 0.001$.

Table IV shows the relationship between nurses' knowledge and perception towards HP. The analysis showed nine significant associations emerging including: 'having adequate knowledge regarding the conditions patients present with in this unit to provide HP services' and 'HE, advise and counseling from nurses could positively enhance patients health', $p < 0.001$; 'awareness of the important of educating patients about their condition' and 'patients do not want HE from nurses', $p < 0.001$.

Discussion

This study provides an assessment of nurses' views regarding their knowledge, perception, and practice towards health promotion in a South African tertiary hospital. The data analysis revealed that nurses agreed to having adequate knowledge regarding their patients' disease condition to provide adequate health promotion; that hospital is an ideal place to provide health promotion; and that they do encourage their patients to engage in the healthiest lifestyle they can attain. They therefore deserve a strong support system to enable them to sustain and improve their role in HP.

Findings from this study show that the duration of

Tab. III. Relationship between Knowledge and Practice

Knowledge variables	Practice variables	SDA	DA	N	A	SA	p-value
I have adequate knowledge regarding the conditions patients present with in this unit to provide health promotion services	I educate my patients on medication	3	7	12	102	55	0.014
	I educate my patients about their disease condition	3	7	12	103	54	< 0.001
	I provide necessary guidance about diet and lifestyle	3	7	12	103	55	< 0.001
	I educate my patients on need for checkup	3	7	12	103	54	< 0.001
	I use my smart phone/devices for supportive information on HP	3	7	12	103	53	0.149
	patients encouraged to engage in healthy lifestyle	3	7	11	103	54	< 0.001
	I encourage my patients to observe fitness assessments and health screening	3	7	12	101	55	< 0.001
I am aware of how important it is to educate my patients about their condition	I educate my patients on medication	0	0	2	57	120	0.005
	I educate my patients about their disease condition	0	0	2	57	120	< 0.001
	I provide necessary guidance about diet and lifestyle	0	0	2	57	121	< 0.001
	I educate my patients on need for checkup	0	0	2	57	120	< 0.001
	I use my smart phone/ devices for supportive information on HP	0	0	2	57	119	0.146
	patients encouraged to engage in healthy lifestyle	0	0	2	56	120	< 0.001
	I encourage my patients to observe fitness assessments and health screening	0	0	2	56	120	< 0.001

SA: Strongly Agree; A: Agree; N: Neutral; DA: Disagree; SDA: Strongly disagree.

registration as a nurse was associated with adequate knowledge, indicating that experience adds to the nurses know-how and expertise [18]. Lartey et al. reported on the wealth of knowledge and wisdom associated with experienced nurses as being critical in the provision of high quality care to patients and their family [19]. Though this benefit of experience and adequate knowledge resulting from experience could be generalized in some cases, it is mostly discipline-specific. For example, it has been observed that nurses without exposure to health promotion and health literacy, regardless of their nursing experience, lack requisite knowledge in these disciplines [20].

The present study revealed the influence of nurses HP perception on their practice of HP. For example, the nurses who had the perception that holistic knowledge of disease pathology and processes are vital for effective care of patients were more inclined to educate their patients about adherence to medication, the importance of check-ups, and engagement in a healthy lifestyle. In a similar study by Al-Noumani et al., (2019), the authors demonstrated that adherence to medication was greater among those that believed in the importance of medication [21]. In the study of Ojong, Nsemo and Aji, (2020) conducted in Nigeria, it was observed that despite good knowledge and perception towards routine check-ups, there was still a poor practice of check-up care [22], which is an essential component of HP.

The finding of good check-up practice in the current study may be related to the study context, in our case, a public tertiary hospital in South Africa where the public healthcare is solely funded by the state [23, 24], and free transport services to and from hospitals are provided to indigent patients living in the rural areas [25]. A major fact regarding perception is its ability to become reality and guide people's behavior [26]. In this study, the perception of the respondents is that holistic knowledge of disease pathology is a prerequisite for HP provision. This perception was formed based on their formal training and lived experience from practice. Furthermore, this study identified the perception "hospital is an ideal place for HP" as being associated with nurses using their smart devices to access supportive information during practice in order to educate patients about medication and the importance of regular check-ups. Evidence abounds regarding the efficacy of the HP effectiveness of nurses linked to organizational culture [8] as demonstrated in hospital settings [15]. Educating patients within healthcare institutions is a fundamental aspect of healthcare delivery. The educational roles of nurses therefore serve as a determinant in shared decision-making between nurses and patients regarding treatment adherence, improving the patients degree of satisfaction with service provision, and enhanced care. Credible sources have been noted to be key players in the dissemination of public health messages amongst

Tab. IV. Relationship between nurses' knowledge and Perception regarding HP

Knowledge variables	Perception variables	SDA	DA	N	A	SA	p-value
I have adequate knowledge regarding the conditions patients present with in this unit to provide health promotion services	A holistic knowledge of disease pathology and processes are vital for effective care of patients	3	7	12	103	55	< 0.001
	Hospital is an ideal place for promoting patients' health because the patients can be spoken to as a group and /or one on one	3	7	12	101	53	0.001
	Health promotion is a waste of time	3	7	12	103	53	0.531
	Patients who deliberately engage in an unhealthy lifestyle will not benefit from health promotion	3	7	12	100	55	0.050
	Health education, advise and counseling from nurses could positively enhance patients health	3	7	12	103	55	< 0.001
	Patients do not want health education from nurses	3	7	12	103	53	0.469
I am aware of how important it is to educate my patients about their condition	A holistic knowledge of disease pathology and processes are vital for effective care of patients	0	0	2	57	121	< 0.001
	Hospital is an ideal place for promoting patients' health because the patients can be spoken to as a group and /or one on one	0	0	2	56	118	0.350
	Health promotion is a waste of time	0	0	2	57	119	< 0.001
	Patients who deliberately engage in an unhealthy lifestyle will not benefit from health promotion	0	0	2	56	119	0.003
	Health education, advise and counseling from nurses could positively enhance patients' health	0	0	2	57	121	0.002
	Patients do not want health education from nurses	0	0	2	57	119	< 0.001

SA: Strongly Agree; A: Agree; N: Neutral; DA: Disagree; SDA: Strongly disagree.

various groups [27]. Nurses occupy such a position among patients and are well suited to provide HP. Our results corroborate with the findings of Timmers et al., (2020) which demonstrated that educating patients at the point of care using prompt medical information accessed via smartphones and similar devices does enhance treatment compliance, satisfaction, and improves the eventual health outcome [28]. Although our study did not show a significant relationship between 'hospital is an ideal place for HP' and 'educating patients about their disease condition', the study of Nikitara et al., (2019) did indicate that nurses who are actively involved in educating patients with diabetes mellitus empower the patients to optimise management of their disease condition [29]. The reason for our finding of non association between hospital is an ideal place for HP and education of patient concerning their health condition could be related to the nurses lack of knowledge about specific disease entities [29].

The influence of knowledge among nurses correlated positively with regards to their HP practice in this study. It was noted that there was a statistically significant relationship between the provision of necessary guidance regarding diet and lifestyle to patients and adequate knowledge regarding the medical condition of

the patients. Sufficient knowledge [30, 31] is required in order for nurses to guide patients about smoking cessation, diet, and physical activity. However, in some hospital settings, nurses argue that it is the responsibility of specialists, such as dieticians, to provide dietary counselling to patients [30]. Despite this contention, enhancing the knowledge of nurses has proven to be a cost-effective strategy towards addressing the ever-increasing cost of healthcare [32]. In addition, optimum training and knowledge empowerment can embolden nurses to fully discharge their HP roles [32], including adequately guiding their patients on matters relating to necessary and health inducing diet and lifestyle changes.

Conclusion

This study was aimed at assessing the influence of HP knowledge and perceptions in the practice of HP amongst nurses working in a tertiary hospital. The data revealed that nurses' HP knowledge played a key role in influencing their perception of, and eventual, HP practices. Health promotion is an important public health discipline necessary, and essential, for the achievement of universal health coverage. Nurses, due to their expertise

and being regularly in touch with patients, especially those with chronic non-communicable diseases, occupy a distinctive place both in leadership and provision of HP services to their patients. A rigorous educational programme is required, in both undergraduate training and in the form of in-service training, to ensure that their knowledge of HP is updated. Future research is encouraged to interrogate the possibility of nurses achieving and sustaining a model that can bring about a realistic reform in HP.

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Conflict of interest statement

The authors declare no conflict of interest.

Authors' contributions

Conceptualization: HM; Methodology: HM, TAO, MW, PM; Software: HM, PM; Validation: HM, TAO, MW, PM; Formal analysis: PM, HM; Investigation: HM; Data Curation: HM, PM; Writing - Original Draft: HM; Writing - Review & Editing: HM, TAO, MW, PM; Visualization: HM, TAO, MW, PM; Supervision: TAO, MW.

References

- [1] World Health Organization. What is health promotion? [Internet]. 2016. Available from: [https://www.who.int/news-room/qa-detail/health-promotionHealth promotion](https://www.who.int/news-room/qa-detail/health-promotionHealth%20promotion)
- [2] World Health Organization. The Ottawa Charter for Health Promotion [Internet]. 1986. Available from: <https://www.who.int/healthpromotion/conferences/previous/ottawa/en/>
- [3] Smith BJ, Tang KC, Nutbeam D. WHO Health Promotion Glossary : new terms. *Health Promot Int* 2006;4:340-5. <https://doi.org/10.1093/heapro/dal033>
- [4] Mcfarlane K, Judd J, Devine S, Watt K. Reorientation of health services : enablers and barriers faced by organisations when increasing health promotion capacity. *Healt Promot J Aust* 2016;27:118-33. Available from: <http://dx.doi.org/10.1071/HE15078>
- [5] WHO/UNICEF. Global Standards for Health Promoting Schools and their implementation guidance. 2020. Available from: <https://www.who.int/publications/i/item/9789240011069>
- [6] World Health Organization (WHO). Promoting health in the SDGs. Report on the 9th Global conference for health promotion, Shanghai, China, 21–24 November 2016: all for health, health for all. Geneva: World Health Organization; 2017 (WHO/NMH/PND/17.5). Licence: CC BY-NC-SA 3.0 IGO. 2017 [cited 2020 Sep 13]. Available from: <http://apps.who.int/bookorders>.
- [7] María-ángeles S, Maqueda J, Francisco M, María-Jesús S, María-Dolores S. Evaluation of the Effectiveness of Workplace Health Promotion Programs from 2000 to 2020 : Literature Review. *Open J Prev Med* 2021;113-31. <https://doi.org/10.4236/ojpm.2021.114010>
- [8] Kempainen V, Tossavainen K, Turunen H. Nurses ' roles in health promotion practice : an integrative review. *Health Promot Int* 2012;28:490-501. <https://doi.org/10.1093/heapro/das034>
- [9] Molina-mula J, Gallo-estrada J. Impact of nurse-patient relationship on quality of care and patient autonomy in decision-making. *Int J Environ Res Public Health* 2020;17. <https://doi.org/10.3390/ijerph17030835>
- [10] Whitehead D. Health promotion in nursing : A Derridean discourse analysis. *Health Promot Int* 2011;26:117-27. <https://doi.org/10.1093/heapro/daq073>
- [11] Hayes TON, Gillian S. Chronic Disease in the United States: A Worsening Health and Economic Crisis. *American Action Forum* 2020 [cited 2021 Jun 1].1-12. Available from: <https://www.americanactionforum.org/research/chronic-disease-in-the-united-states-a-worsening-health-and-economic-crisis/>
- [12] Steiner CA, Barrett ML, Weiss AJ, Ph D, Andrews RM, Ph D. Trends and Projections in Hospital Stays for Adults With Multiple Chronic Conditions, 2003–2014. *Healthc cost Util Proj* 2014;183:1-12. PMID: 25558764
- [13] Menon GR, Singh L, Sharma P, Yadav P, Sharma S, Kalaskar S, et al. INSERT ALL AUTHORS Articles National Burden Estimates of healthy life lost in India , 2017 : an analysis using direct mortality data and indirect disability data. *Lancet Glob Heal* 2017;7:e1675-84. [http://dx.doi.org/10.1016/S2214-109X\(19\)30451-6](http://dx.doi.org/10.1016/S2214-109X(19)30451-6)
- [14] Kassa M, Grace J. The Global Burden and Perspectives on Non-Communicable Diseases (NCDs) and the Prevention, Data Availability and Systems Approach of NCDs in Low-resource Countries. *Intech Open* 2019;1-22. <https://doi.org/10.5772/intechopen.89516>
- [15] Stanulewicz N, Knox E, Narayanasamy M, Shivji N, Khunti K, Blake H. Effectiveness of lifestyle health promotion interventions for nurses: A systematic review. *Int J Environ Res Public Health* 2020;17. <https://doi.org/10.3390/ijerph17010017>
- [16] Statistics South Africa. Mortality and causes of death in South Africa : Findings from death notification. 2020. Available from: <http://www.statssa.gov.za/publications/P03093/P030932017.pdf>
- [17] Shoqirat N. The Role of Jordanian Hospital Nurses in Promoting Patients' Health [Internet]. Queen Margaret University; 2009. Available from: <https://eresearch.qmu.ac.uk/bitstream/handle/20.500.12289/7383/137.pdf?sequence=1&isAllowed=y>
- [18] Whyte J, Ward P, Eccles DW. critical care nurses. *YMHL* 2009;38:517-25. <http://dx.doi.org/10.1016/j.hrtlng.2008.12.006>
- [19] Lartey S, Cummings G, Profetto-Mcgrath J. Interventions that promote retention of experienced registered nurses in health care settings: A systematic review. *J Nurs Manag* 2014;22:1027-41. <https://doi.org/10.1111/jonm.12105>
- [20] Nesari M, Olson JK, Nasrabadi AN, Norris C. Registered Nurses' Knowledge of and Experience with Health Literacy. *Heal Lit Res Pract* 2019;3:e268-79. <https://doi.org/10.3928/24748307-20191021-01>
- [21] Al-noumani H, Wu J, Barksdale D, Sherwood G, Alkhasawneh E, Knafl G. Health beliefs and medication adherence in patients with hypertension : A systematic review of quantitative studies. *Patient Educ Couns* 2019;102:1045-56. <https://doi.org/10.1016/j.pec.2019.02.022>
- [22] Ojong IN, Nsemo AD, Aji P. Routine Medical Checkup Knowledge, Attitude and Practice among Health Care Workers in a Tertiary Health Facility in Calabar, Cross River State, Nigeria. *Global Journal of Health Science* 2020;12:27-37. <https://doi.org/10.5539/gjhs.v12n8p27>

- [23] Malakoane B, Heunis JC, Chikobvu P, Kigozi NG, Kruger WH. Public health system challenges in the Free State, South Africa : a situation appraisal to inform health system strengthening. *BMC Health Serv Res* 2020;20:58. <https://doi.org/10.1186/s12913-019-4862-y>
- [24] Chiwire P, Evers SM, Mahomed H, Hiligsmann M. Willingness to pay for primary health care at public facilities in the Western Cape Province , Cape Town , South Africa Willingness to pay for primary health care at public facilities in the Western. *J Med Econ* 2021;24:162-72. <https://doi.org/10.1080/13696998.2021.1877147>
- [25] Slabbert JA, Smith WP. Patient transport from rural to tertiary healthcare centres in the Western Cape: Is there room for improvement? *African J Emerg Med* 2011;1:11-6. <http://dx.doi.org/10.1016/j.afjem.2011.04.001>
- [26] Tankard ME, Paluck EL. Norm Perception as a Vehicle for Social Change. *Soc Issues Policy Rev* 2016;10:181-211. <https://spssi.onlinelibrary.wiley.com/doi/abs/10.1111/sipr.12022>
- [27] Bavel JJ Van, Baicker K, Boggio PS, Capraro V, Cichocka A, Cikara M, et al. INSERT ALL AUTHORS Using social and behavioural science to support COVID-19 pandemic response. *Nat Hum Behav* 2020;4:460-71. <http://dx.doi.org/10.1038/s41562-020-0884-z>
- [28] Timmers T, Janssen L, Kool RB, Kremer JA. Educating Patients by Providing Timely Information Using Smartphone and Tablet Apps: Systematic Review. *J Med Internet Res* 2020;22:e17342. <https://doi.org/10.2196/17342>
- [29] Nikitara M, Constantinou CS, Andreou E, Diomidou M. The Role of Nurses and the Facilitators and Barriers in Diabetes Care : A Mixed Methods Systematic Literature Review. *Behav Sci (Basel)* 2019;9:61. <https://doi.org/10.3390/bs9060061>
- [30] Jansink R, Braspenning J, Weijden T Van Der, Elwyn G, Grol R. Primary care nurses struggle with lifestyle counseling in diabetes care : a qualitative analysis. *BMC Fam Pract* 2010;11:41. <https://doi.org/10.1186/1471-2296-11-41>
- [31] Bettinelli ME, Bezze E, Morasca L, Plevani L, Sorrentino G, Morniroli D, et al. INSERT ALL AUTHORS. Knowledge of Health Professionals Regarding Vegetarian Diets from Pregnancy to Adolescence : An Observational Study. *Nutrients* 2019;11:1149. <https://doi.org/10.3390/nu11051149>
- [32] Feringa MM, Swardt HC De, Havenga Y. International Journal of Africa Nursing Sciences Registered nurses' knowledge, attitude, practice and regulation regarding their scope of practice : A literature review. *Int J Africa Nurs Sci [Internet]* 2018;8:87-97. <https://doi.org/10.1016/j.ijans.2018.04.001>

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