

The Impact of Perceived Health Competencies on the Academic Performance of Nursing Students

Salma Khan ¹, Javed Iqbal ², Syed Abdullah ³, Najeebullah ⁴,
Cornelius Anwar ⁵, Dr. Asfand Yar Khalid ⁶ and Amir Sultan ^{7*}

¹ Nursing Instructor, GCON HMC Peshawar. Email: salmakhan9430@gmail.com

² Nursing Department, Communicable Diseases Center, Hamad Medical Cooperation, Doha Qatar. Email: javedbhatti62@gmail.com

³ Infection Control Officer at Dr. Ziauddin Hospital North Nazimabad Campus Karachi. Email: syedabdullah612@gmail.com

⁴ Tutor Nurse, Nursing College Khuzdar Balochistan. Email: najeebullahbaloch125@gmail.com

⁵ Registered Nurse (National Institute of Cardiovascular Diseases Karachi) Email: corneliusanwar@gmail.com

⁶ Medication Education Department, Hamad Medical Cooperation, Doha, Qatar. Email: Akhalid1@hamad.qa

⁷ Assistant Professor / Principal – Tasleem College of Nursing and Health Sciences Swat, KPK.

*Corresponding Author

Abstract

Background: Perceived health competencies (PHC) means “the competency of a person that he/she feels that he will successfully handle their health behaviors and outcomes, which is important in the learning process of nursing students throughout academics and in clinical skills. Therefore the study was conducted with the aim to determine the perceived health competencies (PHC) of nursing students and its association with academic performance. **Methodology:** The study design was a correlational descriptive study conducted in the nursing institutes of Khyber Pakhtunkhwa from April to June 2023. The sample size of the study was 341 using convenient sampling technique. The instrument for data collection was the Smith 8 items perceived health competencies Scale, with a reliability of 0.82, while the academic performance was analyzed through the GPA (grade point average). Descriptive and inferential statistics were calculated using SPSS 20.0. **Results:** In the current study, the total number of participants was 341, with the majority of male participants (62.2%) compared to female participants (37.8%). The maximum number of students PHC score was high (72.7%), then average competencies (20.5%) and (6.7%) competencies was low, while the overall means score was (3.9 ± 0.86) . The maximum academic performance of the students was best (58.7%), followed by average academic performance (35.5%) and remaining (6%) performance was poor. **Conclusion:** The study concluded that nursing student’s academic performance and PHC was high. The study also determines that PHC are significantly associated with gender, age, college status, and academic performance of the students. If changes occur in the perceived health competencies of students it will affect the performance of students. **Practical implications:** Students with good health tend to perform better in school than those with poor health. Problems that emanate from poor health include limited resources available on medical education and research in Pakistan: lack of access to medical and health resources to the patients about disease; limited knowledge and trainings, and awareness about disease.

Keywords: Nursing Students, Medical Education, Professional Competencies, Personal Health

INTRODUCTION

Nursing students in the 21st century face a number of challenges, one of which is entering a nursing program, moving from an academic setting into a clinical one, dealing with patients, and using practical skills.¹ Therefore students should require making the skills of professionalism in their clinical duties during their study period.² The Pakistan Nursing Council is the only body in Pakistan that oversees and regulates nursing education in all the provinces. The nursing institutes required registration from the regular body to announce admission in nursing programs.³

Perceived health competencies (PHC) means “the competency of a person that he/she feels that he will successfully handle their health behaviors and outcomes”, because both are the important components [4]. According to the knowledge, attitude and practices model, to make modification in behavior, knowledge and attitude play vital role.⁵ Not only the perceived health competencies apply to an individual's behavior, but they also raise the level of self-confidence of health care providers and social support.⁶ In addition, the capability to carry out a specific task in a way that leads to desired results and is based on particular knowledge, attitude, and skills are referred to as competencies.⁷ Concerns about skill-based occupations, particularly students' abilities and knowledge, are widespread. In the advanced time, the construction of the medical care climate is dynamic that necessary prosperity, and master and talented wellbeing experts to manage this evolving climate. The healthcare industry faces difficulties due to a lack of qualified health professionals; As a result, they hire novice graduates to fill the nursing shortage.⁸

Self-efficacy and PHC are linked to healthy behavior. Nonetheless, self-efficacy applies to for specific ways of behaving, while saw wellbeing ability applies all the more by and large to ways of behaving that people connect with their own wellbeing. Self-efficacy and perceived health competence are related concepts. PHC is an individual's belief in their capacity to effectively manage their health outcomes.^{9, 10} Self-control, on the other hand, is the pursuit of both desirable and undesirable objectives¹². Self-control has been linked to various health behaviors, which suggests that it may also be linked to a person's perception of their health competence.^{11, 12, 13}

Expanding apparent wellbeing skill is significant for a long period of healthy living and requires a comprehension of the elements that influence PHC. The health capabilities of students is consider one of the important factor in their learning process, while no study is conducted to examine the association of PHC with academic performance of the students. Therefore the study was conducted with the aim to determine the level of PHC among the nursing students and its association with academic performance.

METHODOLOGY

The current study used a correlational descriptive approach and was carried out in Khyber Pukhtankhwa Nursing Institutes in Pakistan from April to June 2023. Nursing students enrolled in any nursing programme at a recognized nursing college in Khyber Pukhtankhwa comprised the study population. The study's sample size was calculated using an online sample size calculator, and it was 350 with 95% confidence levels, a 5% margin of error, and an 80% prevalence rate. Because 9 checklists were discovered to be incomplete, 341 were finalized as the study's sample size, and a practical sampling strategy was applied for data collection.

The inclusion criteria for the study were students enrolled in any nursing programme, present during data collection, and willing to participate in the study willingly. students enrolled in any nursing programme, present during data collection, and willing to be a part of the study voluntarily were the study's inclusion criteria, while students performing clinical duties, absent during data collection, and unwilling to be a part of the study were excluded.

The data collection procedure is divided into three stages: Part A contains the demographic data of the participants (Age, gender, college status, and programme), while Part B contains Smith's questionnaire of perceived health competencies (PHC), that contains 8 items questionnaire divided into behavioral and outcome domain which contains equal 4 items in both domains having a 6 point Likert scale. The questionnaire's Chronbach alpha was 0.82.¹⁴

The data collection method began after obtaining permission from each institute; the goal of the study was presented to all students in the presence of academic staff; and after signing informed consent, the students were given the checklist.

SPSS 20.0 was used to analyses the data as descriptive and inferential statistics. Descriptive statistics were generated for categorical variables in the form of frequency and percentages, while means and standard deviation were calculated for continuous variables. As inferential statistics, a chi-square test was used to determine the relationship between perceived health competence and academic success.

The study was approved by institutional review board, while informed consent was taken from each the participants. The objectives of the study was explained to each participant, and they were assured that their data would be kept confidential and only used for data analysis. It was also explained that their participation was voluntary, and they would receive no direct benefit from the study, and finally, each respondent was informed that they had the right to leave the study at any time.

RESULTS

In the current study the total number of participants was 341, with a higher number of male participants (62.2%) compare to female students (37.8%). Majority of the participants age group (56.5%) was 18-22 years, then aged 23-27 years (34%), and aged 28 years and above (9.7%). The maximum number of students belong to private colleges (85.9%), compare to government colleges (14.1%). Students belong to 4 years BSN (Bachelor of Science in nursing) was in majority, followed by 2 Years Post-RN BSN students (11.1%), and MSN (Master of Science in nursing) (5.3%) (See table 1).

Table 1: Demographic data of the participants

Category		Frequency 341	Percentage
Gender	Male	212	62.2%
	Female	129	37.8%
Age	18-22 years	192	56.3%
	23 -27 years	116	34%
	28 and above years	33	9.7%
College status	Private	293	85.9%
	Government	48	14.1%
Programs	4 years BSN	285	83.6%
	2 Years Post-RN	38	11.1%
	MSN	18	5.3%

Level of Perceived health competencies among the participants

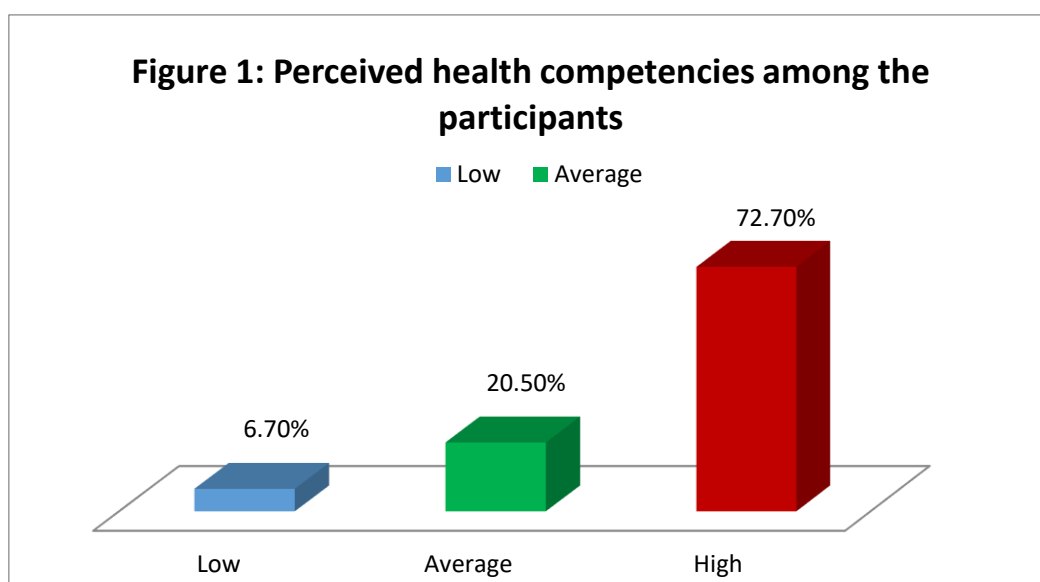
The questionnaire contain 8 items that were divided equally of 4 item each in behavior domain and outcome domain. The behavior are represent as B, while outcome domain through O. The overall means score of the participant was (3.9 ± 0.86), while the mean score of behavior domain was (4.4 ± 1.1) and outcome domain was (3.5 ± 0.89). (See Table 2).

Table 2: Perceived health competencies score among the students

Domains	Items	Mean score	Overall Mean score
Behavior	B1	4.2 ± 1.4	4.4 ± 1.1
	B2	4.5 ± 1.4	
	B3	4.4 ± 1.2	
	B4	4.3 ± 1.2	
Outcome	O1	3.5 ± 1.2	3.5 ± 0.89
	O2	3.8 ± 1.2	
	O3	3.19 ± 1.0	
	O4	3.6 ± 1.1	
Overall score			3.9 ± 0.86

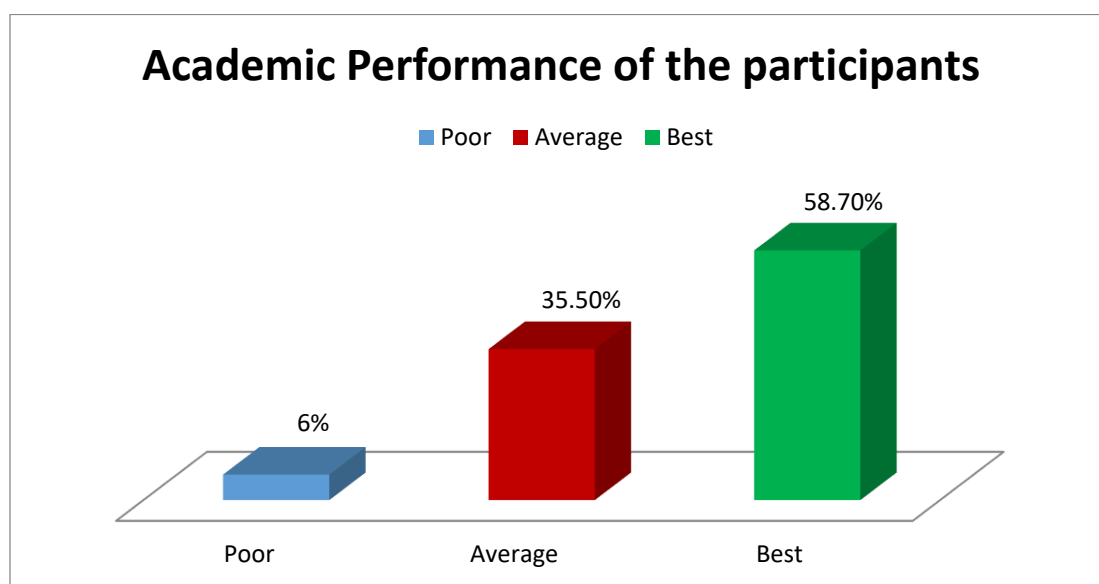
Overall perceived Health competency Level

Figure 1 illustrates that the maximum number of students perceived health competencies was high (72.7%), followed by average level of competencies (20.5%), and only (6.7%) of the participants level of health competencies was low.



Overall Academic performance of the participants

Figure 2 demonstrates that majority of the students' performance was best (58.7%), followed by the average performance (35.5%), while only a small number of students performance was poor (6%). (See figure 2).



Perceived health competencies according to demographic data

Table 3 reveals that the maximum number of male (46%) n=157 and (26.6%) n=91 of female health competencies was high. The higher number of students (40.4%) n=138 who have higher competency level was belonging to aged 18-22 years. In the program category (67.4%) n=230 of 4 years BSN score was high, while (4.3%) n=15 of MSN students competencies score was also high. In the category of GPA, the maximum number of students having high perceived health competencies (41.9%) n=143 was the participant who achieves good GPA (3.31-4.0 GPA).

Table 3 also demonstrates that perceived health competencies are significantly associated with gender (0.005), age (0.002), college status (0.002), and GPA (0.000), while program is not significantly associated (0.061) with perceived health competencies (See table 3).

Table 3: Perceived health competencies according to demographic data

		Low	Average	High	Sig
Gender	Male	20	35	157	0.005
	Female	3	35	91	
Age	18-22 years	20	34	138	0.002
	23 -27 years	3	33	80	
	28 and above years	0	3	30	
Status of the college	Private	23	52	218	0.002
	Government	0	18	30	
Programs	4 years BSN	23	32	230	0.061
	2 years Post-Rn	0	13	3	
	MSN	0	25	15	
GPA	2.7 and below	0	11	9	0.000
	2.71 to 3.3	3	22	96	
	3.31 to 4.0	20	37	143	

Academic performance of the participants according to demographic data

Table 4 shows that the higher number of participants (46.9%) n=160 level of competencies was high that was male students, while (41.3%) n=141 students' academic performance was best belong to aged 18-22 years, students of 4 years BSN was in majority (54.5%) who have best level of academic performance.

Table 4 illustrates that gender (0.000); age (0.000), college status (0.000), and program (0.000) are significantly associated with academic performance. (See table 4).

Table 4: Academic performance according to demographic data

GPA		Poor	Average	Best	Sig
Gender	Male	6	46	160	0.000
	Female	14	75	40	
Age	18-22 years	6	45	141	0.000
	23 -27 years	8	62	46	
	28 and above years	6	14	13	
College status	Private	12	94	187	0.000
	Government	8	27	13	
Program	4 years BSN	6	93	186	0.000
	2 years Post-Rn	14	19	5	
	MSN	0	9	9	

DISCUSSION

In the present study the total number of participants was 341, with high number of male (62.8%), compare to female students (37.8%). The age group 18-22 years was in majority (56.3%), while students from 4 year BSN was higher (83.6%) compared to other program discipline. A study conducted in Pakistan support our findings where the maximum number of respondents was male (58.1%), compare to female participants (41.9%). The higher number of students aged group was 18-22 years (61.7%), while students from 4 years BSN was also in majority (70.7%) compare to other programs [3]. Another study show different demographic variables from our study which shows that the female participants were in maximum number (71.8%) compare to male participants (28.2%), and the mean age of the study participant was (72.7±7.0).¹⁴ another study reveals that the female was in majority (63.9%), while the median age was 23-30 years.¹⁵

In the current study the mean score of PHC was (3.9 ± 0.86), where the mean score of behavior domain was higher (4.4 ± 1.1) than outcome domain (3.5 ± 0.89). The maximum number of perceived health competencies was high (72.7%), followed by average competencies (20.5%), while the low competencies was (6.7%). Supportive our finding a study the overall mean score of PHC was (3.98±1.3), where the behavior domain mean score was higher (4.4±1.3) then outcome domain (3.53 ± 1.1). So s that larger part of the undergraduates apparent PHC was higher and they were additionally concern with respect to the wellbeing and were include with health promotion and construct a positive image of their selves, so the most extreme degree of seen wellbeing capabilities prompts self-assurance that turned into a part of practice to promote health behaviors.³ Another study also found alike findings with a study where the PHC score among the participants was higher (26.4 ± 4.8), therefore the maximum number of participants were found in health promotion activities.¹⁴ Other study also supports the findings, explaining that health behaviors are associated with self-efficacy and have positive outcomes.¹⁰

Self-efficacy has been shown to be linked to a lot of positive outcomes, especially when it comes to health behavior.^{17, 18} Therefore it is explored that health promotion behaviors are explored through PHC, which support the findings. To improve the self-care and health promotion behaviors of people working in the villages required self-efficacy. Moreover, it play the role of reminder among those peoples who work in rural areas for the promotion of PHC by elevate the level of healthcare practice among the health care providers.¹⁴ The medical students skills to take the history of patient was found the best, while the findings of the study reveals that objectively skills are strongly associated with PHC having soft skills, but weakly associated with clinical skills.¹⁹ The study report

through virtual visits the patient history can be completed, while face to face history taking is not the last option for the medical students. In a previous study, medical students in eastern Saudi Arabia had poor knowledge of standard precautions and infection control. The same study also found that study year correlated with higher level of knowledge.²⁰

In the present study the maximum number of students was (58.7%) was best performer, while (35.5%) students was average performer (35.5%), while (6%) of the performer was poor. Furthermore the study determines that academic performance is significantly associated with perceived health competencies. A study explores that one of the competencies with the lowest scores was performing essential clinical procedures. Additionally, prescription writing skills had the lowest perceived competency; however, prescribing can be done electronically, making it possible to enlist the assistance of students.²¹ A study conducted in Saudi Arabia contradicted our findings that perceived health competencies are not correlated with academic performance while correlated with willingness.²² Another study reveal that clinical skills which is required for every participant was found poor, Moreover the competency of writing a medication prescription scores was found lower compared to other items among medical doctors, but the study suggests that this competency could be performed through computers to save time and engaged with students to help them in their practice. Furthermore, the study demonstrates that PHC skills is not associated with the objectively assessed performance.^{23, 24} In addition, Carr et al. discovered a weak correlation between medical students' GPAs and their performance as junior doctors.²⁵ Medical resources, diagnosis, and treatment must improve in developing countries. There are limited resources available on medical education and research in Pakistan: lack of access to medical and health resources to the patients about disease; limited knowledge and trainings, and awareness about disease. The trainings should be conducted to improve the health literacy and how to access the medical resources for patients in Pakistan.^{26, 27}

CONCLUSION

The study concluded that majority of the undergraduate nursing students PHC are higher, while the behavior domain score of the nursing students remain higher compare to outcome domain. The study concluded that perceived health competencies are significantly associated with academic performance of nursing students, as changes occur in health competencies it will affect the academic performance of nursing students.

The study also concluded that PHC is associated with age, gender and college status, while academic performance is associated with gender, age, institute status and type of nursing program.

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