Differences in Interprofessional Attitudes of Doctors and Nurses at The Health Center

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Abstract

Interprofessional collaboration between health workers is essential to ensure quality and patient-centered healthcare delivery, especially in public health care or in Indonesian called as *pusat kesehatan Masyarakat* or Puskesmas. Understanding the differences in interprofessional attitudes between doctors and nurses is crucial, as these attitudes directly affect teamwork and the quality of patient care. Objective: To examine the variances of interprofessional attitudes between doctors and nurses within Puskesmas settings. This study used quantitative design and cross-sectional approach. This study was attended by 71 respondents with details of 26 doctors and 45 nurses from five different *psukesmas*. Data were collected using the Interprofessional Attitude Scale (IPAS) questionnaire distributed via google form media. The data were then analyzed using SPSS software with the Mann-Whitney test. The mean score for all domains was categorized as excellent (>85.06) with the highest score belonging to the "diversity and ethics" domain. While the lowest mean score was owned by the "interprofessional bias" domain with a total of (85.06), but still classified as good. Significant results were found in differences in attitudes based on profession ($p = 0.000$), but not on gender ($p = 0.422$) or work experience ($p = 0.322$). Interprofessional attitudes between doctors and nurses at Puskesmas are generally well-established. Significant differences in attitudes were seen based on professional roles but not based on gender or length of work experience. Efforts to strengthen the understanding of interprofessional collaboration are recommended to further improve collaboration.

Keywords: Doctor, interprofessional attitudes, interprofessional collaboration, nurses, Puskesmas.

Introduction

The modern health system is increasingly challenged by the imbalance in the distribution of health workers, insufficient workforce numbers, and fragmented services(Insani & Purwito, 2020). These problems result in unmet demands for public health. In addition, the need for health professionals capable of working effectively in teams to meet healthcare demands has been increasing(Khalili, Thistlethwaite, & El-Awaisi, 2019).

The high incidence of medication errors has become a critical issue requiring close attention. Previous studies indicated that errors generally occur during prescription processing (30.46%), prescription reading (11.50%), drug preparation (25.00%), and drug administration (1.28%)(Fatimah, Nuur Rochmah, & Pertiwi, 2021). In intensive care units (ICUs), errors most frequently occur during drug administration (42.6%), followed by prescription processing (37.4%) and drug preparation (20%) (Hartati, Lolok, & Fudholi, 2014). This problem can be significantly reduced through effective interprofessional collaboration (Manias, 2018).

Although collaborative practice has been recognized as a crucial value, differences in attitudes and understanding among healthcare professionals remain a barrier. Many health workers still have divergent perspectives regarding the coordination of roles and shared responsibilities due to limited exposure to interprofessional practice and a lack of socialization (Kusuma, Herawati, Setiasih, & Yulia, 2021). The lack of role clarity and the persistence of hierarchical structures further hinder optimal collaboration (Fatalina, Sunartini, Widyandana, & Soedyowinarso, 2015; Reeves, Pelone, Harrison, Goldman, & Zwarenstein, 2017; Yusra, Findyartini, & Soemantri, 2019).

Perceptions often differ depending on academic background and professional roles. Nurses tend to demonstrate more favorable attitudes toward teamwork, knowledge sharing, and patient-centered care, whereas pharmacists may feel dominated by other professions in clinical decision-making processes (Bilbee, Rulli, Vanduine, Kuzma, & Cullen, 2022; Mahboube, Talebi, Porouhan, Orak, & Farahani, 2019; Viani, Yulia, & Herawati, 2021). Additionally, the level of collaboration between doctors and nurses is generally low caused by doctors tend to become the only decision maker which is different from the nurse who want to work collaboratively. However, they agree to the importance of shared education and teamwork, indicating that interprofessional collaboration is crucial for improving patient care (Gregoriou, Charalambous, Rousou, Papastavrou, & Merkouris, 2025). Factors such as organizational hierarchy, communication patterns, and interprofessional education opportunities significantly influence healthcare professionals' attitudes toward collaboration, which in turn affect key indicators of healthcare quality in Puskesmas, including patient satisfaction, service effectiveness, and continuity of care

Findings on the influence of demographic factors on interprofessional attitudes remain inconsistent. Dinius reported no significant differences (Dinius et al., 2020), while other studies indicated that healthcare professionals with greater work experience tend to face fewer barriers due to their increased exposure to collaborative practices (Yusra et al., 2019). The first study found that younger health workers tend o have barriers in communicating while the other study had not reported it.

The critical roles of physicians and nurses in primary healthcare centers (puskesmas) have drawn researchers' interest in exploring and comparing their interprofessional attitudes. This study examines how differences in interprofessional attitudes between doctors and nurses in Puskesmas settings reflect underlying professional roles and collaboration patterns, which may influence the overall effectiveness and quality of healthcare delivery.

Method

This study employed a quantitative observational analytic design with a cross-sectional approach. Ethical approval was obtained from the Research Ethics Committee of the Faculty of Medicine and Health Sciences, Universitas Muhammadiyah Yogyakarta (FKIK UMY), under approval number 036/EC-KEPK FKIK UMY/I/2025.

The study population consisted of all doctors and nurses working in inpatient community health centers (puskesmas) affiliated with the professional education program of FKIK UMY. A total sampling method was applied, while considering inclusion and exclusion criteria. Inclusion criteria included willingness to participate as respondents and having at least six months of work experience for all educational level. Exclusion criteria included physicians and nurses on leave, those pursuing further academic studies, or those who completed the questionnaire incompletely.

The study was conducted between January and March 2025 in five puskesmas. The Interprofessional Attitude Scale (IPAS) was used as the instrument, with Cronbach's alpha values ranging from 0.62 to 0.92(14). This questionnaire consists of five domains: (1) teamwork, roles, and responsibilities; (2) patient-centered care; (3) interprofessional biases; (4) diversity and ethics; and (5) community-centeredness.

The questionnaire was distributed by researcher via Google Form through designated contact persons. Data were analyzed using univariate and bivariate methods with SPSS software. Interprofessional attitude scores were categorized according to the total score intervals as follows: 0 - 33.75 is poor, 33.76 – 67.5 is fair, 67.51 – 101.25 is good and 101.26 – 135 is very good.

Results

A total of 71 respondents participated in this study, consisting of 26 doctors (36.6%) and 45 nurses (63.4%). The majority of respondents were female (80.3%), and more than half (57.7%) had more than 10 years of work experience. More detailed demographic information is presented in Table 2.

Table 1. Respondent Characteristics

Characteristic	Total (%)
Profession	
Doctors	37%
Nurses	63%
Gender	
Male	20%
Female	80%
Work Experience	
< 1 year	7%
1–5 years	21%
6–10 years	14%
> 10 years	58%

The mean scores for each domain indicated overall positive interprofessional attitudes. The "diversity and ethics" domain demonstrated the highest mean score (126.16), whereas the "interprofessional bias" domain showed the lowest mean score (85.06), although it was still categorized as good. Mean scores by profession are presented in Table 3.

Tabel 2. Mean Scores by Profession

Domain	Doctors	Nurses	Category
Teamwork, Roles, and Responsibilities	130.85	121.53	Very good
Patient-Centered Care	132.09	118.68	Very good
Interprofessional Bias	86.54	84.20	Good
Diversity and Ethics	130.33	123.75	Very good
Community-Centeredness	126.17	117.50	Very good
Overall Mean	**121.20**	**113.13**	**Very good**

The Mann–Whitney U test revealed statistically significant differences in interprofessional attitudes based on professional roles, with physicians demonstrating more positive attitudes than nurses (p = 0.000). A summary of the Mann–Whitney U test by profession is presented in Table 4.

Tabel 3. Mann-whitney test by profession

Profession	N	Mean Rank	Sum of Ranks	Mann–Whitney U	Z	p-value
Doctors	26	52.60	1367.50	103.500	-5.751	0.000*
Nurses	45	25.78	1160.50			

On the other hand, no statistically significant differences were found in interprofessional attitudes based on gender (p = 0.422) or years of work experience (p = 0.322). The results are presented in Tables 5 and 6.

Table 4. Mann–Whitney U Test by Gender

Gender	N	Mean Rank	Sum of Ranks	Mann–Whitney U	Z	*p*-value
Male	30	37.52	1125.50	**343.500**	-0.803	0.422
Female	41	34.92	1432.50			

Table 5. Chi-Square Test by Work Experience

Work Experience (years)	N	Mean Score	χ^2	df	p-value
< 5 years	18	85.23	3.487	3	0.322
5–10 years	20	84.95			
11–15 years	17	85.42			
>15 years	16	84.87			

Discussion

These findings indicate that both physicians and nurses demonstrated positive interprofessional attitudes, with all domains falling within the “good” or “very good” categories. The highest mean score was observed in the “diversity and ethics” domain, suggesting that both professions share strong values in respecting differences in roles, cultural backgrounds, and ethical standards in collaborative practice.

This result is consistent with the studies by Norris et al*(Norris et al., 2015)* and Sakr *et al*(Sakr et al., 2022), which reported similar conclusions. These findings reinforce the notion that awareness of professional diversity and adherence to ethical standards are fundamental to interprofessional collaboration, particularly when serving patients from diverse social and cultural backgrounds.

Conversely, the “interprofessional bias” domain recorded the lowest mean score, although it was still categorized as “good.” This indicates that while physicians and nurses generally maintain positive attitudes toward minimizing professional stereotypes, there remains room for improvement. Similar results were reported by Zheng *et al*(Zheng, Sim, & Koh, 2016) and Melkamu & Yetwale(Melkamu & Yetwale, 2020) who found that despite the overall positive perception of collaboration, interprofessional bias may persist due to differences in authority, communication styles, and role perceptions(Fitzgerald & Hurst, 2017; Lee et al., 2020; Mahboube et al., 2019).

One of the key findings of this study was the statistically significant difference in interprofessional attitudes based on profession, with physicians scoring higher than nurses. This result

aligns with the findings of Dinius *et al*(Dinius et al., 2020) and Mahboube *et al*(Mahboube et al., 2019) who observed that physicians often display greater confidence and autonomy in team settings, whereas nurses tend to feel less empowered due to hierarchical differences. Such gaps can hinder effective teamwork and potentially compromise patient care outcomes.

Interestingly, no significant differences were found based on gender or years of work experience. These results are supported by previous studies conducted by Kusuma *et al(Kusuma et al., 2021)* and Dinius *et al*(Dinius et al., 2020), which also reported that variables such as age, gender, and length of service do not significantly influence interprofessional collaboration.

Overall, interprofessional collaboration emphasizes communication skills, self-confidence, and professional roles rather than demographic factors. Interaction patterns that develop through frequent engagement enable the exchange of experiences and knowledge, thereby strengthening mutual respect. In clinical practice, structured work systems and defined responsibilities suggest that interprofessional attitudes are determined more by team position and function than by gender(Bell, Michalec, & Arenson, 2014; Durand, Bourgeault, Hebert, & Fleury, 2022; Etherington et al., 2021; Reeves et al., 2017; Yusra et al., 2019).

Conclusions

This study revealed that both of physicians and nurses generally demonstrated positive interprofessional attitudes. The highest score was observed in the “diversity and ethics” domain, reflecting strong mutual respect and adherence to ethical standards, whereas the lowest score was recorded in the “interprofessional bias” domain, indicating persistent challenges related to professional stereotypes.

A statistically significant difference in interprofessional attitudes was found based on profession, with physicians reporting more positive views than nurses. However, no significant differences were observed based on gender or years of work experience. These findings highlight the importance of fostering interprofessional collaboration through clearer role definitions, equal participation, and mutual respect in order to improve patient care outcomes.

Future research is recommended to employ qualitative approaches to provide a more comprehensive exploration of factors that may influence interprofessional bias and the dynamics of working relationships between physicians and nurses.

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