



## INTERPROFESSIONAL COMMUNICATION AND JOB SATISFACTION: A CROSS-SECTIONAL STUDY AMONG HEALTHCARE ASSISTANTS AND TECHNICIANS IN SAUDI ARABIA

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### **Abstract**

Effective interprofessional communication is crucial for the delivery of high-quality healthcare services and the satisfaction of healthcare professionals. This cross-sectional study aimed to investigate the relationship between interprofessional communication and job satisfaction among healthcare assistants and technicians in Saudi Arabia. A sample of 432 healthcare professionals (272 females, 160 males) from various disciplines (pharmacy technicians, nursing technicians, nursing health assistants, and healthy assistants) in three regions of Saudi Arabia (Riyadh, Jeddah, and Dammam) completed a survey questionnaire assessing their perceptions of interprofessional communication and job satisfaction. The data were analyzed using descriptive statistics, independent samples t-tests, one-way ANOVA, and multiple regression analysis. The results showed significant differences in the perceptions of interprofessional communication and job satisfaction across healthcare roles and regions. Interprofessional communication was a significant predictor of job satisfaction, controlling for demographic and work experience variables. The qualitative analysis of open-ended questions revealed themes related to the benefits, barriers, and strategies for improving interprofessional communication and job



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satisfaction. The findings highlight the importance of fostering effective interprofessional communication to promote job satisfaction and quality care among healthcare assistants and technicians in Saudi Arabia.

## **Introduction**

Interprofessional communication is a critical component of effective healthcare delivery, as it enables the exchange of information, coordination of care, and collaboration among healthcare professionals from different disciplines (Schot et al., 2020). Effective interprofessional communication has been associated with improved patient outcomes, reduced medical errors, and increased patient and provider satisfaction (Aldossary et al., 2008; Almalki et al., 2011). However, interprofessional communication can be challenging due to differences in professional cultures, hierarchies, and communication styles (Almutairi, 2015).

Job satisfaction is another important factor influencing the performance and retention of healthcare professionals. Job satisfaction refers to the positive emotional state resulting from the appraisal of one's job experiences (Alshmemri et al., 2017). Healthcare professionals who are satisfied with their jobs are more likely to provide high-quality care, engage in positive work behaviors, and remain in their positions (Almalki et al., 2012). Job satisfaction can be influenced by various factors, including workload, autonomy, support, and communication (Alsulami et al., 2016).

In Saudi Arabia, the healthcare system has undergone significant reforms and expansions in recent years, with an emphasis on improving the quality and accessibility of healthcare services (Almalki et al., 2011). However, the Saudi healthcare system also faces challenges related to the shortage of qualified healthcare professionals, the high turnover rates, and the cultural and linguistic diversity of the healthcare workforce (Aldossary et al., 2008; Almutairi, 2015). These challenges underscore the importance of examining the factors influencing the satisfaction and retention of healthcare professionals in Saudi Arabia.

Healthcare assistants and technicians play a vital role in the delivery of healthcare services in Saudi Arabia, as they support and complement the work of other healthcare professionals, such as physicians and nurses (Al-Hanawi et al., 2019). However, there is limited research on the perceptions and experiences of healthcare assistants and technicians in Saudi Arabia, particularly in relation to interprofessional communication and job satisfaction. This study aimed to address this gap by examining the relationship between interprofessional communication and job satisfaction among healthcare assistants and technicians in three regions of Saudi Arabia.

## **Literature Review**

### **Interprofessional Communication in Healthcare**

Interprofessional communication refers to the process of exchanging information, ideas, and opinions among healthcare professionals from different disciplines to enable effective collaboration and coordination of care (Bridges et al., 2011). Effective interprofessional communication is essential for the delivery of safe, high-quality, and patient-centered care (Schot et al., 2020). Interprofessional communication can take various forms, including face-to-face interactions, telephone calls, written notes, and electronic messages (Reeves et al., 2017).

Research has demonstrated the positive impact of effective interprofessional communication on healthcare outcomes. A systematic review by Schot et al. (2020) found that interprofessional communication interventions, such as team training and structured communication tools, improved patient safety, reduced medical errors, and enhanced patient and provider satisfaction. Similarly, a study by Almalki et al. (2012) found that effective communication among primary healthcare professionals in Saudi Arabia was associated with higher levels of job satisfaction and lower intentions to leave.

However, interprofessional communication can be challenging due to various barriers, such as differences in professional languages, cultures, and hierarchies (Almutairi, 2015). A qualitative study by Fallatah et al. (2020) explored the barriers and facilitators of interprofessional communication between physicians and nurses in Saudi Arabia. The study found that hierarchical structures, workload pressures, and lack of trust and respect were major barriers to effective communication, while shared goals, mutual understanding, and open dialogue were facilitators.

### **Job Satisfaction Among Healthcare Professionals**

Job satisfaction is a key indicator of the well-being and performance of healthcare professionals. Job satisfaction refers to the positive emotional state resulting from the evaluation of one's job experiences (Alshmemri et al., 2017). Healthcare professionals who are satisfied with their jobs are more likely to provide high-quality care, engage in positive work behaviors, and remain in their positions (Almalki et al., 2012).

Research has identified various factors influencing job satisfaction among healthcare professionals, including workload, autonomy, support, and communication. A cross-sectional study by Alshmemri et al. (2017) examined the job satisfaction of Saudi nurses and found that work conditions, pay, and promotion opportunities were the main predictors of satisfaction. Similarly, a study by Al-Hanawi et al. (2019) found that workload, stress, and lack of recognition were the main sources of dissatisfaction among Saudi healthcare professionals.

Interprofessional communication has also been identified as a key factor influencing job satisfaction among healthcare professionals. A study by Almalki et al. (2012) found that effective communication among primary healthcare professionals in Saudi Arabia was associated with higher levels of job satisfaction and lower intentions to leave. Similarly, a systematic review by Vermeir et al. (2018) found that effective communication, collaboration, and teamwork were positively associated with job satisfaction among healthcare professionals.

### **Healthcare Workforce in Saudi Arabia**

The Saudi healthcare system has undergone significant reforms and expansions in recent years, with an emphasis on improving the quality and accessibility of healthcare services (Almalki et al., 2011). However, the Saudi healthcare system also faces challenges related to the shortage of qualified healthcare professionals, the high turnover rates, and the cultural and linguistic diversity of the healthcare workforce (Aldossary et al., 2008; Almutairi, 2015).

Healthcare assistants and technicians play a vital role in the delivery of healthcare services in Saudi Arabia, as they support and complement the work of other healthcare professionals, such

as physicians and nurses (Al-Hanawi et al., 2019). However, there is limited research on the perceptions and experiences of healthcare assistants and technicians in Saudi Arabia, particularly in relation to interprofessional communication and job satisfaction.

A study by Al-Hanawi et al. (2019) examined the job satisfaction of Saudi healthcare professionals, including healthcare assistants and technicians, and found that workload, stress, and lack of recognition were the main sources of dissatisfaction. Another study by Alsulami et al. (2016) explored the perceptions of teamwork and communication among Saudi healthcare professionals and found that hierarchical structures and lack of trust were major barriers to effective collaboration.

### **Research Gaps and Objectives**

Despite the growing body of research on interprofessional communication and job satisfaction among healthcare professionals, there is limited evidence on the perspectives and experiences of healthcare assistants and technicians in Saudi Arabia. Moreover, few studies have examined the relationship between interprofessional communication and job satisfaction in the Saudi healthcare context, particularly across different regions and disciplines.

This study aimed to address these gaps by examining the relationship between interprofessional communication and job satisfaction among healthcare assistants and technicians in three regions of Saudi Arabia (Riyadh, Jeddah, and Dammam). The specific objectives of the study were:

1. To assess the perceptions of interprofessional communication and job satisfaction among healthcare assistants and technicians in Saudi Arabia.
2. To compare the perceptions of interprofessional communication and job satisfaction across different healthcare roles and regions.
3. To examine the predictors of job satisfaction among healthcare assistants and technicians, with a focus on interprofessional communication.
4. To explore the benefits, barriers, and strategies for improving interprofessional communication and job satisfaction among healthcare

### **Method**

#### **Design and Setting**

This study used a cross-sectional, mixed-methods design to examine the relationship between interprofessional communication and job satisfaction among healthcare assistants and technicians in Saudi Arabia. The study was conducted in three regions of Saudi Arabia (Riyadh, Jeddah, and Dammam) between January and March 2023. These regions were selected because they represent the largest and most diverse healthcare workforce in Saudi Arabia (Almalki et al., 2011).

#### **Participants and Sampling**

The target population for this study was healthcare assistants and technicians working in various healthcare settings (hospitals, clinics, and primary healthcare centers) in the selected regions. Healthcare assistants and technicians were defined as non-licensed healthcare professionals who support and complement the work of licensed healthcare professionals, such as physicians and

nurses (Al-Hanawi et al., 2019). The specific roles included in this study were: pharmacy technicians, nursing technicians, nursing health assistants, and healthy assistants.

A convenience sampling technique was used to recruit participants for this study. The researchers contacted the human resources departments of healthcare facilities in the selected regions and requested permission to distribute the survey questionnaire to eligible participants. The questionnaire was distributed in both electronic and paper formats, depending on the preference of the participants and the feasibility of data collection.

The sample size for this study was determined using G\*Power software (Faul et al., 2009) for a multiple regression analysis with a medium effect size ( $f^2 = 0.15$ ), a power of 0.80, and an alpha level of 0.05. The minimum required sample size was 68 participants. However, the researchers aimed to recruit a larger sample to ensure adequate representation of the different healthcare roles and regions.

### **Instruments**

The survey questionnaire used in this study consisted of three sections: demographic and work experience variables, interprofessional communication, and job satisfaction. The questionnaire was developed in English and Arabic versions to accommodate the language preferences of the participants.

The demographic and work experience section included questions on age, gender, nationality, education level, healthcare role, work setting, and years of experience. These variables were selected based on their potential influence on interprofessional communication and job satisfaction (Almalki et al., 2012; Alshmemri et al., 2017).

The interprofessional communication section used the Interprofessional Communication Scale (ICS) developed by Kenaszchuk et al. (2010). The ICS is a 18-item scale that measures the frequency and quality of communication among healthcare professionals from different disciplines. The scale includes four subscales: communication with physicians, communication with nurses, communication with other healthcare professionals, and communication openness. Each item is rated on a 5-point Likert scale, ranging from 1 (never) to 5 (always). The ICS has demonstrated good reliability and validity in previous studies (Kenaszchuk et al., 2010).

The job satisfaction section used the Job Satisfaction Survey (JSS) developed by Spector (1985). The JSS is a 36-item scale that measures nine facets of job satisfaction: pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, coworkers, nature of work, and communication. Each item is rated on a 6-point Likert scale, ranging from 1 (disagree very much) to 6 (agree very much). The JSS has demonstrated good reliability and validity in various occupational settings, including healthcare (Spector, 1985).

In addition to the quantitative measures, the questionnaire included two open-ended questions to explore the participants' perceptions of the benefits, barriers, and strategies for improving interprofessional communication and job satisfaction. The open-ended questions were:

1. What are the benefits and barriers of effective interprofessional communication in your work setting?

2. What strategies or interventions would you suggest to improve interprofessional communication and job satisfaction in your work setting?

### **Pilot Testing and Reliability**

The survey questionnaire was pilot-tested with a sample of 30 healthcare assistants and technicians from one healthcare facility in Riyadh. The pilot testing aimed to assess the clarity, comprehensibility, and relevance of the questionnaire items, as well as the time required to complete the questionnaire. The participants provided feedback on the questionnaire, which was used to revise and refine the items.

The reliability of the ICS and JSS was assessed using Cronbach's alpha coefficient. The Cronbach's alpha values for the ICS subscales ranged from 0.79 to 0.86, indicating good internal consistency. The Cronbach's alpha value for the overall JSS was 0.92, indicating excellent internal consistency.

### **Data Collection and Ethical Considerations**

The data collection for this study was conducted between January and March 2023. The researchers distributed the survey questionnaire to eligible participants in the selected healthcare facilities. The participants were informed about the purpose, procedures, and voluntary nature of the study, and were assured of the confidentiality and anonymity of their responses. The participants provided written informed consent before completing the questionnaire.

The completed questionnaires were collected by the researchers and checked for completeness and accuracy. The data were then entered into a computer database for analysis. The electronic data were stored in a password-protected computer, and the paper questionnaires were stored in a locked cabinet accessible only to the researchers.

This study was approved by the Institutional Review Board (IRB) of the King Saud University College of Medicine (approval number: E-23-0042). The study was conducted in accordance with the ethical principles of the Declaration of Helsinki (World Medical Association, 2013) and the Saudi National Committee of Bioethics (2010).

### **Data Analysis**

The quantitative data were analyzed using IBM SPSS Statistics version 27.0 (IBM Corp., Armonk, NY, USA). Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize the demographic and work experience variables, as well as the scores on the ICS and JSS.

Independent samples t-tests were used to compare the scores on the ICS and JSS between male and female participants. One-way analysis of variance (ANOVA) was used to compare the scores on the ICS and JSS across the different healthcare roles and regions. Post-hoc tests (Tukey's HSD) were used to identify the specific differences between the groups.

Multiple regression analysis was used to examine the predictors of job satisfaction among healthcare assistants and technicians. The dependent variable was the overall JSS score, and the independent variables were the ICS subscale scores, as well as the demographic and work experience variables. The assumptions of multiple regression, including linearity, normality, homoscedasticity, and multicollinearity, were tested before conducting the analysis.

The open-ended questions were analyzed using thematic analysis (Braun & Clarke, 2006). The responses were read and re-read by the researchers to identify the initial codes and themes. The codes and themes were then refined and defined through an iterative process of discussion and consensus among the researchers. The final themes were presented with illustrative quotes from the participants.

The level of significance for all statistical tests was set at  $p < 0.05$ . The effect sizes for the t-tests and ANOVAs were reported using Cohen's  $d$  and eta-squared ( $\eta^2$ ), respectively (Cohen, 1992). The effect sizes for the multiple regression analysis were reported using the standardized regression coefficients ( $\beta$ ) and the coefficient of determination ( $R^2$ ).

## Results

### Demographic and Work Experience Characteristics

A total of 432 healthcare assistants and technicians participated in this study, representing a response rate of 86.4%. The demographic and work experience characteristics of the participants are presented in Table 1.

[Insert Table 1 here]

The majority of the participants were female (63%), Saudi nationals (92.1%), and had a diploma degree (79.6%). The most common healthcare roles were pharmacy technicians (33.8%) and nursing technicians (31.9%). The participants worked in various healthcare settings, including hospitals (48.6%), primary healthcare centers (28.7%), and clinics (22.7%). The average years of experience was 7.63 (SD = 6.14), with a range of 1 to 30 years.

### Perceptions of Interprofessional Communication

The scores on the ICS subscales and total scale are presented in Table 2. The highest scores were observed for the communication with other healthcare professionals subscale (M = 3.81, SD = 0.68), followed by the communication openness subscale (M = 3.75, SD = 0.74). The lowest scores were observed for the communication with physicians subscale (M = 3.45, SD = 0.82) and the communication with nurses subscale (M = 3.50, SD = 0.79).

[Insert Table 2 here]

The independent samples t-test showed no significant difference in the ICS total score between male (M = 3.68, SD = 0.63) and female participants (M = 3.62, SD = 0.61),  $t(430) = 0.97$ ,  $p = 0.332$ ,  $d = 0.10$ . The one-way ANOVA showed significant differences in the ICS total score across the healthcare roles,  $F(3, 428) = 6.24$ ,  $p < 0.001$ ,  $\eta^2 = 0.04$ . Post-hoc tests revealed that pharmacy technicians (M = 3.82, SD = 0.58) had significantly higher scores than nursing technicians (M = 3.52, SD = 0.62) and nursing health assistants (M = 3.57, SD = 0.63). There were no significant differences in the ICS total score across the regions,  $F(2, 429) = 1.86$ ,  $p = 0.157$ ,  $\eta^2 = 0.01$ .

### Perceptions of Job Satisfaction

The scores on the JSS facets and total scale are presented in Table 3. The highest scores were observed for the nature of work facet (M = 4.72, SD = 0.86), followed by the coworkers facet (M = 4.56, SD = 0.92). The lowest scores were observed for the pay facet (M = 3.45, SD = 1.12) and the promotion facet (M = 3.51, SD = 1.08).

[Insert Table 3 here]

The independent samples t-test showed no significant difference in the JSS total score between male ( $M = 4.15$ ,  $SD = 0.74$ ) and female participants ( $M = 4.08$ ,  $SD = 0.71$ ),  $t(430) = 0.98$ ,  $p = 0.329$ ,  $d = 0.10$ . The one-way ANOVA showed significant differences in the JSS total score across the healthcare roles,  $F(3, 428) = 4.79$ ,  $p = 0.003$ ,  $\eta^2 = 0.03$ . Post-hoc tests revealed that healthy assistants ( $M = 4.32$ ,  $SD = 0.68$ ) had significantly higher scores than nursing technicians ( $M = 3.99$ ,  $SD = 0.73$ ) and nursing health assistants ( $M = 4.05$ ,  $SD = 0.72$ ). There were no significant differences in the JSS total score across the regions,  $F(2, 429) = 2.52$ ,  $p = 0.082$ ,  $\eta^2 = 0.01$ .

### **Predictors of Job Satisfaction**

The results of the multiple regression analysis are presented in Table 4. The ICS subscale scores, as well as the demographic and work experience variables, were entered as predictors of the JSS total score. The model was significant,  $F(12, 419) = 18.69$ ,  $p < 0.001$ , and explained 34.8% of the variance in job satisfaction ( $R^2 = 0.348$ ).

[Insert Table 4 here]

The significant predictors of job satisfaction were the communication openness subscale ( $\beta = 0.28$ ,  $p < 0.001$ ), the communication with physicians subscale ( $\beta = 0.15$ ,  $p = 0.004$ ), the communication with other healthcare professionals subscale ( $\beta = 0.13$ ,  $p = 0.011$ ), and the healthcare role ( $\beta = -0.11$ ,  $p = 0.007$ ). Higher scores on the communication openness, communication with physicians, and communication with other healthcare professionals subscales were associated with higher job satisfaction. Being a nursing technician or nursing health assistant was associated with lower job satisfaction compared to being a pharmacy technician or healthy assistant.

### **Benefits, Barriers, and Strategies for Improving Interprofessional Communication and Job Satisfaction**

The thematic analysis of the open-ended questions revealed three main themes: benefits of interprofessional communication, barriers to interprofessional communication, and strategies for improving interprofessional communication and job satisfaction.

The participants identified several benefits of effective interprofessional communication, including enhanced patient care, increased efficiency, and improved job satisfaction. For example, one participant stated:

"Effective communication among healthcare professionals leads to better patient outcomes and faster recovery. It also makes our work easier and more efficient, as we can coordinate our efforts and avoid duplication or errors."

The participants also identified several barriers to effective interprofessional communication, including hierarchical structures, workload pressures, and lack of trust and respect. For example, one participant stated:

"There is a hierarchy in the healthcare system that makes it difficult for assistants and technicians to communicate with physicians and nurses. Sometimes we feel that our opinions and contributions are not valued or respected by the higher-level professionals."



The participants suggested several strategies for improving interprofessional communication and job satisfaction, including training programs, team-building activities, and recognition and rewards. For example, one participant stated:

"I think we need more training on communication skills and teamwork, especially for the new and junior staff. We also need more opportunities to interact and socialize with our colleagues from different departments, to build trust and rapport. Finally, we need more recognition and appreciation from our supervisors and managers for our hard work and dedication."

### **Discussion**

This study examined the relationship between interprofessional communication and job satisfaction among healthcare assistants and technicians in Saudi Arabia. The results showed that the participants had moderate to high levels of interprofessional communication and job satisfaction, with some variations across healthcare roles and regions. The multiple regression analysis identified three dimensions of interprofessional communication (communication openness, communication with physicians, and communication with other healthcare professionals) as significant predictors of job satisfaction, controlling for demographic and work experience variables.

The findings of this study are consistent with previous research on the importance of interprofessional communication for the well-being and performance of healthcare professionals. A systematic review by Vermeir et al. (2018) found that effective communication, collaboration, and teamwork were positively associated with job satisfaction among healthcare professionals. Similarly, a study by Almalki et al. (2012) found that effective communication among primary healthcare professionals in Saudi Arabia was associated with higher levels of job satisfaction and lower intentions to leave.

The participants in this study identified several benefits of effective interprofessional communication, including enhanced patient care, increased efficiency, and improved job satisfaction. These benefits are in line with the goals of interprofessional education and practice, which emphasize the importance of collaboration and coordination among healthcare professionals to improve the quality and safety of patient care (Interprofessional Education Collaborative, 2016).

However, the participants also identified several barriers to effective interprofessional communication, including hierarchical structures, workload pressures, and lack of trust and respect. These barriers are similar to those reported in previous studies on interprofessional communication in healthcare settings (Almutairi, 2015; Fallatah et al., 2020). Hierarchical structures and power differentials can hinder open and respectful communication among healthcare professionals, while workload pressures and time constraints can limit the opportunities for meaningful interactions and collaboration.

The participants suggested several strategies for improving interprofessional communication and job satisfaction, including training programs, team-building activities, and recognition and rewards. These strategies are consistent with the recommendations of interprofessional education and practice frameworks, which emphasize the importance of developing communication skills,

fostering teamwork, and creating supportive environments for collaboration (Interprofessional Education Collaborative, 2016).

### **Implications for Practice and Research**

The findings of this study have several implications for practice and research in the field of interprofessional communication and job satisfaction among healthcare assistants and technicians in Saudi Arabia. At the practice level, healthcare organizations and managers should prioritize the development and implementation of interventions to enhance interprofessional communication and collaboration, such as training programs, team-building activities, and recognition and rewards systems. These interventions should be tailored to the specific needs and contexts of the healthcare assistants and technicians, taking into account their roles, settings, and cultural backgrounds.

At the research level, future studies should further explore the factors influencing interprofessional communication and job satisfaction among healthcare assistants and technicians in Saudi Arabia, using larger and more representative samples, longitudinal designs, and mixed-methods approaches. Researchers should also evaluate the effectiveness of different interventions and strategies for improving interprofessional communication and job satisfaction, using rigorous and culturally sensitive methods.

### **Limitations**

This study has several limitations that should be acknowledged. First, the study used a convenience sampling technique, which may limit the generalizability of the findings to other healthcare settings and populations. Second, the study relied on self-reported measures of interprofessional communication and job satisfaction, which may be subject to social desirability and recall bias. Third, the study used a cross-sectional design, which does not allow for causal inferences about the relationship between interprofessional communication and job satisfaction.

### **Conclusion**

In conclusion, this study provided insights into the perceptions and experiences of healthcare assistants and technicians in Saudi Arabia regarding interprofessional communication and job satisfaction. The findings highlighted the importance of effective interprofessional communication for the well-being and performance of healthcare professionals, as well as the benefits, barriers, and strategies for improving communication and collaboration in healthcare settings.

study also identified several areas for future research and practice, including the development and evaluation of interventions to enhance interprofessional communication and job satisfaction among healthcare assistants and technicians in Saudi Arabia.

Healthcare organizations and professionals should prioritize the promotion of effective interprofessional communication and collaboration as a key strategy for improving the quality and safety of patient care, as well as the satisfaction and retention of healthcare assistants and technicians. This requires a commitment to ongoing education, training, and support for interprofessional practice, as well as the creation of supportive environments and cultures that value and respect the contributions of all healthcare team members.

By fostering effective interprofessional communication and collaboration, healthcare organizations in Saudi Arabia can not only improve the well-being and performance of their healthcare assistants and technicians, but also enhance the quality and outcomes of patient care, and contribute to the achievement of national healthcare goals and priorities.

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