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Research Article

Factors Influencing Collaborative Engagement among Omani Healthcare Professionals

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Abstract

Interprofessional collaboration has been identified as an important tool for improved health service delivery and sustainable healthcare systems. It has been shown to promote patient-centred and family-oriented goals and values, improve communication among caregivers, and enhance multidisciplinary involvement in clinical decision-making. The aim of this study was to identify the factors that encourage or hinder interprofessional collaboration among healthcare professionals in Oman. Five focus group discussions were conducted in primary care settings with 18 (7 male, 11 female) health professionals, including health managers and policy makers, physicians, nurses and academics. They responded to questions on two main themes: perceptions of interprofessional collaboration, and factors facilitating and/or hindering collaboration among different healthcare professionals. The discussions were audiotaped, transcribed, and analyzed using NVivo software. The study concluded that only encouraging healthcare professionals in Oman to collaborate and work in teams is not enough, the potential solution involves individual, team and organizational factors. One of the main factors included early introduction of interprofessional education programmes to increase the level of awareness among these professionals. The study also indicated that supportive leadership is a key factor to successful implementation.

Keywords: Interprofessional collaboration; Oman; Perceptions; Healthcare professionals; Facilitators; Barriers; Physician-nurse collaboration

Introduction

Healthcare managers have increasingly highlighted the need for creative and cost-effective initiatives to improve patient care. Interprofessional Collaboration (IPC) has gained acceptance as a method to improve the quality of services delivered to patients by improving communication among healthcare professionals [1,2]. To date, most research on IPC has been conducted in Europe and North America [3]. Only limited research has explored the factors affecting collaborative practice in the Gulf Cooperation Council (GCC) region, including Oman, where the culture is very different. This paper reports the results of a qualitative study conducted in Oman to identify the factors that influence collaboration among healthcare professionals. Healthcare professionals are required to work in teams and collaborate in dynamic and challenging environments [4]. However, the skills necessary for effective collaboration are not innate, but need to be learned. This was considered significant in order to identify and work on frameworks to encourage collaboration in a culture that is different to the one

originally researched.

Background

Research has indicated that teamwork has a substantial positive impact on health service delivery and quality of care. Leading institutions have emphasized the importance of effective communication and collaboration among healthcare professionals on the quality of care received by patients. The World Health Organization (WHO), for instance, has highlighted the importance of collaboration in medical practice and its role in delivering patient-centered care [2,5,6]. Collaborative practice and team-based models are now viewed as a necessity for meeting the public's health needs [6]. According to Reeves, et al., IPC not only affects service quality and patient safety, but also has an impact on cost effectiveness [7].

WHO defines IPC as the scenario in which "multiple health workers from different professional backgrounds work […] together with patients, families, caregivers and communities to deliver the highest quality of care" ([8], p. 4). The effective management of patient care depends on collaboration between physicians, nurses, and other health professionals [9]. Physician-nurse collaboration has been highlighted not only by working together but also by sharing responsibilities and making decisions related to patient care [10].

The aims of this study were twofold: to explore the perceptions of Omani health professionals from different disciplinary backgrounds towards interprofessional collaboration; and to identify what they perceive as the key factors that are important for allowing them to collaborate with other professionals. The results were expected to provide previously unavailable information that could inform the development of interventions to improve interprofessional collaboration and education in Oman.

Method

Study design

This qualitative study was conducted in a primary care setting in Oman. Data were collected through Focus Group Discussions (FGDs). Because the purpose of the study was to identify participants' perceptions of collaboration as a human experience, the method of Interpretative Phenomenological Analysis (IPA) was adopted.

Sampling and recruitment

Purposeful sampling [11,12] was used to recruit healthcare professionals who were currently involved in the delivery of healthcare services and healthcare education in Muscat, the capital of Oman. To ensure diversity of opinion, the sample comprised professionals from multiple disciplines (consultants, family physicians, nurses, health educators and health managers). Some focus groups were discipline-specific while others were mixed. The aim was to recruit between four and eight participants per focus group.

A written invitation was sent to potential participants, together with an information sheet explaining the purpose and nature of the study and requesting their participation in a FGD to be conducted in a particular venue on a certain date. To avoid selection bias and ensure a diverse range of views, participants were sought from a range of institutions in the Muscat region, including physicians from hospitals and health centers, academics from nursing institutes, and managers and academics from Sultan Qaboos University (SQU) and Oman Medical Specialty Board (OMSB).

Procedure

A topic guide (Table 1) was developed based on a systematic review of relevant literature and a series of brainstorming meetings among the research team. It was piloted and reviewed by the research team and a mixed group of professionals, and appropriate modifications were made. This guide was used to facilitate discussion and ensure consistency in data collection. The questions were sequenced from general to particular as recommended by Patton (1990).

	Questions
Opening	How do you perceive collaboration?
Introductory	What is your opinion about collaboration between doctors and nurse?
Transition	Can you give us an example of collaboration?
Key	Explore the factors that facilitate collaboration among healthcare workers.
	Explore the factors that inhibit collaboration among healthcare workers.
	Describe a situation in which you attempted to work in teams.
	Would you want to do things differently?
Ending	Is there anything else you would like to add?

Table 1: Topic guide.

The FGDs were conducted in a primary health care facility and were recorded and transcribed. The groups were arranged in a semi-circle to facilitate discussion. Both written and verbal informed consent was obtained from all participants. Each discussion lasted from 45-60 minutes and was led by HA (principal investigator) with support from YF (research assistant), who was responsible for obtaining consent, distributing information forms, managing time and ensuring the researcher adhered to the topic

guide. Although Arabic was the mother tongue of all participants, all the discussions were conducted in English, which is the common working language in the health sector in Oman.

Analysis

All discussions were audio-recorded and subsequently transcribed. Each transcript was open coded, and the constant comparative method was used to identify themes. Data collection ceased when data saturation was achieved.

The interpretive phenomenological method of analysis was employed. The transcripts were transcribed and independently coded by two team members (HA & YF) using NVivo 12 software. Any disagreements were discussed by two other team members (SR &TG). The full team discussed the results until consensus on the interpretation was reached. An inductive thematic analysis was undertaken to identify common and divergent themes. Themes and subthemes were checked independently by the two researchers (HA, YF) and the final themes were revised by two facilitators (SR & TG) to enhance reliability.

Results

Seven of the 18 participants were male and 11 were female. They comprised three health managers/ policy makers, nine physicians, two nurses and four academics. Participants were from different health, training and academic institutes in Muscat, Oman, including Sultan Qaboos University Hospital (SQUH), Oman Medical Specialty Board (OMSB), Ministry of Health (MoH) and Sultan Qaboos University (SQU).

Theme 1: Perceptions of Inter-Professional Collaboration

There was broad agreement among the participants that the concept of collaboration referred to professionals working together to improve the services delivered to patients. As one nurse expressed it, collaboration is "all to reach the one goal, which is the patient. So, if one system fails, it will always cause delay" (Nurse).

However, some groups of professionals were better able to give a precise definition than others. Junior doctors were less certain about what the concept meant beyond a vague and general idea. For example: "It seems to mean cooperation between the different sectors of the medical field" (Physician).

In contrast, nurses were clear in their definitions of IPC and its importance for the quality of patient care: "For me collaboration means multi-disciplinary team, and we are all here for the sake of the patient … So it's not only doctors and nurses" (Nurse). Health managers' perceptions were similarly specific and to the point. A manager, for instance, defined collaboration as "how different professions in the workplace collaborate with each other for common goals" and highlighted its importance as part of the education of Omani resident physicians: "The collaborative role used to be one of the teaching pillars for residency education here in Oman."

Theme 2: Opportunities and Barriers to Interprofessional Collaboration

Three subthemes emerged in relation to participants' identification of the opportunities and barriers to collaboration: individual (micro) factors, team (meso) factors, and structural and cultural (macro) factors. These categories aligned with those used in previous studies of interprofessional education [13].

Individual factors

Friendliness was identified as one of the personal characteristics that had a positive influence on collaboration as it helped to break down hierarchical barriers between professionals and create a harmonious environment. This view was most frequently expressed by junior physicians, for instance: "What I noticed from my little experience as an intern—yeah …Be friendly, it is really good" (Physician). However, friendliness was not without limits in intra- and interprofessional relationships. As one Nurse explained, being friendly involved "understanding each other and understanding personal situations which will positively affect collaboration." Similarly, one Physician commented that being friendly was justified because it helped to maintain a healthy relationship and improved the ability to work with others: "Because you understand what's happening. So, you know not only their positive points, also their negatives, so you can work accordingly."

Another factor identified as crucial by both nurses and doctors, as well as academics, was the need for individuals to 'buy in' to the concept of collaboration and its benefits for themselves and others. As one academic expressed this: "If you want to sell an idea, you have to buy in" (Academic).

All participants acknowledged the importance of respect as a factor at the individual level. A senior nurse remarked: "I think we are all [human], we should have all the same principles and same skills. Communication, respect, transparency" (Nurse). Similarly, a senior consultant noted: "If the senior shows a proper appreciation and respect to the juniors so they will lead by example. So, if our senior is respectful, appreciating, and encouraging, that will boost the others to do the same" (Physician).

Another personal attribute mentioned by some participants, notably managers and senior physicians, was humility in relation to both colleagues and patients: "So being humble, I think that helps" (Manager). This was considered to be a factor in helping to reduce the barriers and associated tensions between professionals. However, this manager also questioned whether this was a quality that can be taught: "Can we teach somebody to be humble? That's hard because it's something-- the way you're brought up"

(Manager).

Confidence was another individual factor raised by some participants, mainly junior doctors and nurses. Nurses reported that collaboration was more likely to occur when nurses were confident and not retained to themselves, not by language nor by knowledge (Academic). One participant related the confidence to express oneself to experience: "If I'm confident, I will learn the way of saying it to you" (Nurse).

Age and experience were factors perceived to have a negative effect on collaboration. One of the Academics noted that nurse graduates were younger than medical graduates, which led to nurses feeling less confident when dealing with other professionals, particularly doctors: "Age is another factor … You're taking [someone] 18 years old ….. sitting with another 22 or 23 years old, plus they're labeled as medical students. So that creates a barrier" (Academic). Junior doctors identified experience as a barrier not only to collaboration but also to miscommunication between professionals, which in turn can affect the services delivered to patients as well as stress. Junior doctors reported that they could talk to nurses comfortably and build good relations with some of them, but that some physicians, as they became more senior, tended to communicate and collaborate less. "limitation of stress in that environment will facilitate how the communication will happen between the medical staff and the medical team" (Physician). Similarly, a senior manager noted that "interns are very ready to talk the nurses'" (Manager).

Gender was also identified as one of the factors that hinders collaboration. Despite the dominance of female health workers in many fields, one Physician observed that: "Most of the nurses are females … [they have a greater] problem with equity and their rights as compared to males".

Both nurses and doctors identified being busy as factor that limited collaboration between professionals. According to one physician: "It is maybe their professional situation due to busy work [treating] disease … but their collaboration is there" (Physician).

Language was also identified as a barrier to collaboration with non-Omani professionals, "English between nurses and doctors, then Arabic, but the nurse is expatriate, and they may not know a lot of Arabic" (Manager).

Fear of communicating with others, mainly reported among junior health workers, was also considered a barrier. This was raised mainly by academics: "The fear that we can't communicate with them" (Academic).

Having a predetermined mindset was also identified as a barrier affecting collaboration. This could be related to prior education or experience. However, it was suggested that this could be overcome by determination to change: "There will be some resistance due to mindsets … but I think once there's determination to do it, nothing can stop such a thing from happening" (Manager).

Team characteristics

Having clear objectives was the main meso level factor identified by all participants. It was considered vital to have clear policies, objectives and scope of practice for all team members involved in the delivery of healthcare: "It would be good if every team member has his own clearly [defined] objectives and duties, as [part of] his job specification" (Physician). This was also linked to the standardization of care.

Having regular assessments and follow-up was also mentioned as a factor that contributed to the delivery of quality care, and it was suggested that IPC itself should be included as an element of any assessment: "[The] collaborator role is one of the pillars of the framework of residency education, or implicitly part of the communication people teach" (Manager).

Both nurses and physicians agreed that acceptance of change by all professionals was essential, "That's the first thing we have to be able to accept" (Physician). It was noted, however, that this was not always the case: "They [nurses] are reluctant to accept it" (Nurse).

Strong leadership was identified by most participants, both junior and senior, as an important factor in creating a positive, collaborative environment: "If the management or the leadership has good control … they are very resourceful and have control of their environment" (Physician).

The two main factors that were identified as barriers to collaboration were power differentials and the busy schedules of academics. One intern, for instance, asked "why we should feel there is a huge gap between the senior and the juniors?" (Physician). Others reported that "collaboration is different as we go up in the hierarchy, for example, nurses will contact interns" (Physician). In relation to lack of time available to educators in universities and colleges, an academic observed that "faculty are very busy and I never blame them because they have their own courses, their own college, their own research programs, [they are] very busy" (Academic).

Structural and cultural factors

Education in medical and nursing schools was widely discussed by participants as a macro level factor in IPC: "The other one is education, as I said … How we can bring health professionals together?" (Academic). It was suggested that gaps between professionals in their approach to patient care could be addressed by introducing the concept of collaboration into the curriculum.

Participants also discussed the importance of a healthy environment and supportive culture. Health managers emphasized the importance of ensuring a positive culture with supportive and encouraging atmosphere that works for everyone (Manager). In a healthy environment, people show respect and care towards each other: "In a friendly environment, everyone respects each other so we can work even if the center is busy" (Physician). Such an environment was said to reduce stress and enhance equity: "I think part of it is how the work environment -- stress on the teamwork, and the equity and contribution of every member in the team to healthcare and to the care of patients" (Manager).

The "physical structure" of the institution was also identified as "a very critical element" (Academic). It was noted that the structure of some institutes limit collaborative work and encourage working individually (Manager).

Senior health workers raised the policy of Omanization as a factor that can affect collaboration. This refers to the government policy of employing Omani health workers in preference to those from other nationalities. The main issue here was the potential for the language barrier to have a detrimental effect on patient care: "Omani nurses are firm and know what their job is, so they will do it for you" (Physician).

The absence of a health council that oversees the work of all health professionals was identified as a factor that hindered collaboration. Such a body would ensure that different professionals worked together in the interest of patients: "There is no council for all health colleagues like what exists in other places, so everyone works independently. They learn independently" (Manager).

Questions were also raised about the rigidity of the system and its failure to adopt a future-oriented perspective: "Rigid systems. Very rigid system. … We talk about the education that we use, [which relies on] educational methods from our grandfather's age, taught by our fathers to people who will live in the future" (Manager).

All groups of professionals emphasized the importance of education for collaboration, and the need for appropriate educational infrastructure in order to "try to see how we can bring professionals together, get trained together" (Manager).

Some physicians argued that the existence of a multi-ethnic culture, such as that in Oman, had both negative and positive effects on collaboration. Some considered that the presence of people from different cultural and educational backgrounds could lead to problems. For instance, a Physician commented: "Communication, transparency is very important, especially in this hospital. Really, Oman is a very multi-ethnic country. We get people from different places, with different cultural backgrounds. Not only cultural, even practice backgrounds. We have doctors who have graduated from different countries with different medical practice" (Physician). On the other hand, some participants observed that experience with a culture other than one's own could have a positive influence on collaboration: "You know, the very interesting thing, for example, when doctors go outside, they will work very nicely with nurses and collaborate, but the moment they come here, they stop. I have witnessed this, really. And there is a reason: because there, there is a system" (Academic).

The physical environment of both education and work was also raised as an impediment to collaboration. According to one administrator, lack of collaboration was actually built into the design of hospitals: "So, we built it [collaboration] within the structure. So, it is no collaboration by design, actually" (Manager). Similarly, the colleges of medicine in universities are completely separated from the colleges of nursing and related disciplines. For example: "I think this is something that we could also make to think about in terms of learning management and leadership skills" (Academic). "The current structure of training does not help, does not engage doctors and nurses to collaborate, that collaboration. So, at the macro level, I would say there are some people who would have to look at that but, at the micro level, it's also individual attributes and attitudes that are [relevant]" (Manager).

Discussion

This study explored interprofessional collaboration in Omani healthcare settings from the perception of a range of health professionals Participants expressed different views towards interprofessional collaboration and provided information that might improve future collaboration among healthcare workers in Oman.

Although senior professionals provided clear and specific definitions of IPC, their junior colleagues were less certain about the meaning of the concept. This suggests that understanding of collaboration improves with experience and the knowledge that comes with it. This could be the result of professional training or personal development [14]. Alternatively, as Baggs and Schmitt have proposed, the disparity could simply reflect the excessive workload placed on junior professionals, whose focus is necessarily getting through each rotation and their multiple patient responsibilities rather than on their interaction with other professionals [14].

Overall, however, the results showed that all participants had some understanding of the concept of collaboration. This is consistent with previous findings reported in the literature.

Study participants identified a number of individual factors that facilitated collaboration. These included friendliness, respect, humility and empathy, as well as having confidence and buying in to the concept of collaboration. These findings are consistent with those reported in previous research [14-17]. Most of these individual factors were mentioned by all participants as factors that

encourage teamwork. Some, however, were raised more frequently by specific groups of participants. For example, friendliness was mainly discussed by junior doctors and nurses. A possible explanation is that junior doctors mainly viewed themselves are complementary and non-competitive role in patient care [17]. This encourages them to socialize and communicate more with other professionals.

The finding that friendliness encourages interprofessional collaboration by breaking down hierarchical barriers is consistent with the results reported by Wear and Keck-McNulty [15]. As these authors noted, however, this could have a negative effect if a friendly doctor comes to be taken for granted or regarded as a 'soft touch'. To address this, participants in the current study suggested that there need to be clear limits on friendliness to ensure that professional boundaries are not overreached.

Respect and mutual understanding among colleagues, regardless of profession or seniority, were also identified as facilitators of interprofessional collaboration. A doctor should understand the roles of other health professionals and appreciate their important contribution to healthcare delivery. This is line with similar findings reported by Baggs and Schmitt [14]; Weller et al., [17] & Wear et al., [15].

Confidence as an individual attribute was mainly mentioned by junior physicians and nurses. Lack of confidence was attributed by our junior participants to differences in language, knowledge and, sometimes age, as nurses tend to graduate at a younger age than physicians. To the best of our knowledge, no previous study has identified (lack of) confidence as a factor affecting IPC. This lack of confidence has also led to fear of communication and speaking up with other professionals. This was opposite to Weller et al., 2011 observations where they noticed junior professionals mainly doctors were very open to discussions and in some instances challenge consultants they work with. This was raised mainly by nurses indicating there is a gap between physicians and nurses and empowering them to speak up is an important element to collaboration and getting them to work together rather than just follow orders.

The team factors identified by participants as encouraging collaboration included clear objectives and policies, regular assessments, acceptance of change and strong leadership. This is consistent with findings from previous research [14,17,18]. According to Ho et al., leaders and champions bring dedication and persistence to teamwork and collaboration, without which interprofessional collaboration will not succeed [13]. The importance of having appropriate leadership even within teams themselves were identified.

Strong leadership was also identified as an important contributing factor to the development of collaboration within a team. It is important for the leader to buy-in to the concept and lead by example. A similar finding was reported by Weller at al. [17].

The factors that were considered as barriers to teamwork and interprofessional collaboration included age, gender, stress, experience, resistance to change, being busy and language. With the exception of language, these factors have been reported in other research [2,14,19]. Wear and Keck-McNulty, for instance, noted that gender affected not only individuals' choice of profession but also the communication between them [15]. Conflicts based on gender role perception were reported as a concern in Ethiopia. Our study's findings and other evidence indicate that gender roles continue to be an issue in the Omani healthcare system [20-22].

The organizational structure was also reported as a barrier, particularly the absence of an umbrella health council in Oman to oversee the various health colleges. Weller et al. also identified organizational structure as a barrier to collaboration [17].

Our findings indicate that the current structure of the health system in Oman hinders collaboration and teamwork among health professionals and show that improvement in team-based care can only be achieved by addressing factors at the level of the individual, team and organization [23-25].

Conclusion

IPC is one of the goals in Oman's Vision 2050 healthcare plan. To achieve this goal, the Ministry of Health needs to collaborate with other public and private healthcare providers and medical education providers to align medical education curricula and the skills of graduates with the country's current and future healthcare needs.

To date, most studies on IPC have been conducted among Euro-American populations. In comparison, little attention has been paid to the situation in Arabic speaking insight into the factors that promote or hinder collaboration in Oman. The results identified individual, team and organizational factors that influence interprofessional collaboration. Most of the factors explained were similar to other studies conducted in other regions indicating that similarities are present and adopting solutions presented elsewhere could be implemented to facilitate collaboration.

An important implication of our findings is that, in some ways, collaboration and teamwork in Oman can only be addressed by changes at the individual, team and organizational levels. One potential strategy to ensure that IPC is effective and sustainable is education as it can play an important role in encouraging IPC in medical settings and that it should be included in the curricula of health professional schools. Education is crucial to provide healthcare professionals with the knowledge and skills required for effective collaboration. At the university level, changes to the curricula involving the introduction of specific content on IPC

should be considered as a long-term policy priority. Short-term measures could include workshops and courses for health workers on IPC.

Limitations of the Study

The main limitation of the study was the fact that the FGDs were conducted in English, which was not the first language of the participants. Although all participants had a good working knowledge of English, their responses may have been limited because of this. Another potential limitation during the focus group discussions, the information gathered in the interview could have been affected by recall bias. To circumvent this limitation, a concerted effort was made to maintain the uniformity of the data collection procedures across the study groups to avoid any misclassification that could occur. This was done through a unified question guideline that was developed and used by the interviewer to direct the discussion to track.

Ethics Approval and Consent to Participate

Prior to the commencement of each focus group, an explanation of the aim of the study was given along with details of what participation would entail. Participants were advised that they were free to refuse to participate or withdraw from the study at any time without any disadvantage or prejudice, and that their anonymity and confidentiality would be protected. All participants provided written informed consent.

Approval to conduct the study was obtained from the Ministry of Health and Oman Medical Specialty Board Research Ethics Committee (MoH/DGPS/CSR/Proposal approved/7/2017, REC/10/2017) and all procedures adhered to the Code of Ethics of the World Medical Association (Declaration of Helsinki) for human experiments.

Availability of Data and Materials

Sharing of the data is restricted by Omani data protection laws. The data used in this study cannot be deposited in publicly accessible archives. Transcripts of the focus group discussions are available on request and approval from the Oman Ministry of Health.

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Authors' Contributions

HA, SR and AM were responsible for designing the study. HA and YF were involved in the acquisition of data. HA, YF, TG contributed to the interpretation and the writing of results. The initial draft of the manuscript was prepared by HA and then circulated among all authors for critical revision.

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Conflict of Interest

The author reports no conflicts of interest in this work.

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