

ORIGINAL ARTICLE

Nurses' Perception of Interprofessional Collaboration in Hospitals in the Maldives

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ABSTRACT

Introduction: The concept of interprofessional collaboration (IPC) is widely used in healthcare organizations, where patients are treated. However, there is no definite terminology that can explain the term IPC. The aim of this research is to understand nurses' perception of IPC in Hospitals in the Maldives. **Methods:** A cross-sectional survey was conducted among 292 nurses from two hospitals followed by Focus Group Discussions with 5 nurses from each hospital. The instrument tool used for the survey was "conceptualization of interdisciplinary collaboration" by D'Amour which was adapted for this study with 9 items and an expert validated open ended questionnaire. **Results:** The findings from the study shows positive responses for IPC1-Disciplinary groups do exchange information 58.65% (n=171), IPC2- Share clinical decision making 60.3% (n=176), IPC3-Patient data are collectively reviewed 62.7% (n=183), IPC4- Supports each other in the multidisciplinary team 59.2% (n=173), IPC5 highest rate of positive response was for "IPC 6- conflict resolution which was 63.7% (n=186), IPC7- common care plan 63.0% (n=184), IPC8- Data collected at one point is shared with the team 57.5% (n=168) and the lowest was for "IPC 9- level of collaboration -56.8% (n=166) respectively. **Conclusion:** This study revealed that importance should be given to promoting a culture of interprofessional collaboration in the hospitals of Maldives. Therefore, there is a need to address this and implement IPC with respect to all professionals, by mitigating the hierarchical differences in the healthcare system. Thus, it is crucial to educate all HCPs with regard to sustaining IPC.

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service delivery organization such as hospitals or clinics, to achieve this a system has to be created where adverse events can be minimized and unintended harm to patients can be reduced (3).

INTRODUCTION

The concept of interprofessional collaboration (IPC) is widely used in our daily language in healthcare organizations where patients are treated, but when it comes to defining collaboration there is no specific definition and often displays the work environment (1). Karam, et.al (2) states that World Health Organization in 2010 has defined collaboration as healthcare professionals (HCPs) together with different knowledge, experiences, capacity and capability works together providing patient care together with their families and caretakers. IPC in health care is very important, when caring for a patient, which involves healthcare professionals working together and learning from each other to achieve the goal of delivering the best care possible to the patients. Patient safety is one of the bench markers for quality services in a healthcare

Nurses play an important role in maintaining patient safety as doctors do collaborate with nurses and vice versa and they do coordinate with other health care professionals (HCPs)/ health care providers to create an effective care plan for their patients. Research has shown that IPC can reduce medication errors by working together in medication prescribing, administration, monitoring, and safe medication use and distribution which will in return help to mitigate preventable medication errors and improve outcomes for all patients (4). Literature reveals that adverse events have a significant impact on patient morbidity and mortality, even in European countries 8 to 12% of adverse events occur due to care delivery which can be avoided if safety practices can be applied proactively (5). Joint Commission has stated that annually 40,000 to 80,000 patients die or are injured due to diagnostic errors (6). In addition, annually 10-18% patients are harmed due to medical errors (7).

In a collaborative care environment, HCPs also benefits in the form of job satisfaction reducing unnecessary work. However, there are lots of obstacles fostering collaboration among HCPs such as ineffective communication, different knowledge and identities, professional hierarchies, and time constraints (8). Another author implied that other barriers included silo practices among HCPs as well as professional cultures and stereotypes (9). Despite all these challenges in collaboration, it has led to better patient outcomes due to efficient interactions with nursing staff and other HCPs (Abdurrouf & Pandin, 2021) (3). Even though there is enough evidence that IPC promotes patient safety still the acceptance of IPC in healthcare organization remains weak and is incompetently practiced in health care teams which has led to increase in medical errors, poor patient safety, team conflicts and patient mortality (10). Thus, building the gaps identified in literature regarding IPC is vital for quality patient care (11).

There are very strong key elements identified in research studies to make IPC a reality such as identification of responsibilities, staff competencies and their roles, shared goals which are clear for each professional in the team, effective communication, respect and interconnection and integration among the team members, joint venture in developing protocols and standards, appreciation and tolerance of differences and disagreements among the team members (12). Another researcher identifies that IPC is impacted by contextual, relational, processual, and organizational issues; contextual factors are political or economic issues which can have an effect on collaboration, relational issues are identified as professional power and socialization that can impact relationships between professionals (9). Processual issues are defined as having a culture of collaborative practices where time and space is given to HCPs and organizational factors are availability of access to the resources within the organizations which can have an impact on collaboration (8). One important factor highlighted is overcoming the barriers for IPC was education and training for HCPs (13).

In the report from the Institute of Medicine's watershed on building a safer healthcare system explains the importance of interprofessional collaboration to achieve better patient safety outcomes, as in the past highly specialized HCPs delivering services in silos had led to better patient outcomes but in the changing world where disease patterns has evolved to improve patient safety and better patient outcomes a collaborative environment is of importance for patient safety (14). The collaboration among multidisciplinary professionals is in advantage for the patient to get a more comprehensive care which contributes to the safety of the patient as well as improved treatment which in turn can reduce adverse events due to medical mal practice, stay in hospital and reduce mortality rate (15). The general aim of this research is to find out nurses' perception of

interprofessional collaboration in hospitals of Maldives

MATERIALS AND METHODS

Study Sample

This research study examined the nurse's perspective on interprofessional collaboration in two hospitals of Maldives. A cross-sectional survey and a focus group discussion (FGD) was conducted. The purpose of the FGD was not for comparison of results but for validation of the quantitative data collected in the same phase. This helped to gain in depth understanding from the nurse's perspective on how IPC was carried out among the health care professionals in the two hospitals. Data collection for the study was conducted from April to June 2020. The study was conducted using online platforms (survey questionnaire was sent to participants through viber, telegram and WhatsApp). FGD was conducted through Viber and total 10 nurses (5 from each hospital) from both hospitals, participated in this study. The participants who joined this study were nurses who are actively working in patient safety and delivering quality care. The exclusion criteria were nurses who were working in the periphery, other clinics, and hospitals out of the Central Male' Area.

Research ethics was taken from the two participating hospitals (National Health Academy (B(NHA)/MISC/2019/136) of IGMH and from ADK Hospital (ADK/ADM/MISC/19/269), prior to taking ethics from the National Health Research Council (NHRC/2020/007) of Ministry of Health, Maldives. In addition to this approval was obtained from the Research Management Centre, Management and Science University, Malaysia (MSU-RMC-02/FR01/12/L1/001).

The participants were informed about the purpose of the study and informed content were taken prior to data collection informing them that participating in this research study is voluntarily. as well as it is their right to withdraw at any point. To maintain anonymity and confidentiality, a numerical code was given to all the participants. All data collected remains strictly confidential and stored in a drive.

Sample Size Determination

The study population consists of nursing staff from all the departments of the two hospitals, with a total of 971 nurses. For the survey 363 participants were randomly selected from the two hospitals and, a google form was sent to participants through Viber/ WhatsApp and telegram. Total of 306 responses were received and from those 292 eligible data was analyzed for this study, at a response rate of 80.4%.

Participants for the FGD was selected purposively and two focus group discussions with five nurses from each hospital who were likely to provide the most information. They are working as patient safety champions/link nurses

from hospitals in Central Male' area, in Maldives.

Research Instrument

IPC in the cross-sectional survey was carried out by using an adapted questionnaire by D'Amour cited by (16). The conceptualization of interdisciplinary collaboration had 9 items. The items in the survey questionnaire were measured using a five-point Likert scale of 1-5, (1) strongly disagree, (2) Disagree, (3) Neither agree nor disagree (4) Agree and (5) Strongly agree. For FGD a semi structured questionnaire was developed, which was face and content validated by 5 experts.

Data Analysis

Statistical Package for Social Sciences (SPSS) version 25 program was used for quantitative data analysis. Following data entry, the data bases was screened for missing data, outliers, and normality. Descriptive analysis was done for the demographic characteristics. Data were analysed for correlation among the inter-items, frequencies, and percentage. The main outcome item was determined by the positive response rate and average rating for each of the nine questions for IPC. A good indication of the item which demonstrated IPC is calculated when the percentage of positive responses was $\geq 75\%$; low IPC area and needs improvement $< 75\%$. The significance among the items were checked using Pearson correlation.

Focus group discussion notes were coded according to the nine questions of interdisciplinary collaboration using MS word for this research.

RESULTS

From the total 292 nurses 248 (84.9%) were female. The age group of 26 to 35 years old with 179 nurses (61.3%) had the highest percentage among the age group. Majority of the nurses had a bachelor's degree (58.2%) and were employed as Registered nurses (77.1%) in Maldives (Table I).

Demographic data of the participants for FGD

All the participants were female (100%) and had more than 8 years of clinical experience (Table II).

Different disciplinary groups exchange information

"IPC 1" states that "professionals from different disciplines exchange information regarding their patients" showed results with a percentage value of (58.6% (n=171) and an average rating of 3.6). Staff from both hospitals stated that according to the hierarchy some staff do face difficulties when it comes to sharing information as there is discrimination between juniors and seniors

IPC exists here but it's not there constantly actually. IPC should be dealt as a team. If not, you are detaching yourself from the team so that the commitment of everyone might not be the same level

Table I: Demographic data of the participants for survey

| Survey response rate | | |
|----------------------------------|-------------|---------|
| Total Participants invited | | n= 363 |
| | n (samples) | Percent |
| Total eligible response received | 306 | 84.3% |
| Total eligible data for analysis | 292 | 80.4% |
| | Frequency | Percent |
| Gender | | |
| Female | 248 | 84.9 |
| Male | 44 | 15.1 |
| Total | 292 | 100.0 |
| Age | | |
| Under 25 years | 28 | 9.6 |
| 26 - 35 years | 179 | 61.3 |
| 36 - 45 years | 69 | 23.6 |
| 46 - 55 years | 16 | 5.5 |
| Total | 292 | 100.0 |
| Education | | |
| Advance Certificate | 2 | 0.7 |
| Diploma level | 96 | 32.9 |
| Bachelor's Degree level | 170 | 58.2 |
| Post Graduate Diploma level | 9 | 3.1 |
| Masters level | 15 | 5.1 |
| Total | 292 | 100.0 |
| Designation | | |
| Enrolled nurse | 10 | 3.4 |
| Registered nurse | 225 | 77.1 |
| Clinical nurse | 19 | 6.5 |
| Clinical head nurse | 22 | 7.5 |
| Other | 16 | 5.5 |
| Total | 292 | 100.0 |

Table II: Correlations Matrix among the items for IPC

| | IPC 1 | IPC 2 | IPC 3 | IPC 4 | IPC 5 | IPC 6 | IPC 7 | IPC 8 | IPC 9 |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| IPC 1 | 1 | | | | | | | | |
| IPC 2 | .633** | 1 | | | | | | | |
| IPC 3 | .537** | .713** | 1 | | | | | | |
| IPC 4 | .559** | .652** | .717** | 1 | | | | | |
| IPC 5 | .414** | .569** | .533** | .613** | 1 | | | | |
| IPC 6 | .363** | .477** | .445** | .480** | .633** | 1 | | | |
| IPC 7 | .381** | .494** | .534** | .523** | .591** | .645** | 1 | | |
| IPC 8 | .473** | .590** | .565** | .597** | .526** | .513** | .652** | 1 | |
| IPC 9 | .333** | .461** | .427** | .424** | .598** | .591** | .638** | .598** | 1 |

** Correlation is significant at the 0.01 level (2-tailed).
The relationship between the IPC subscales using Pearson product-moment correlation coefficient. The results indicated that there was a statistically significant positive correlation between the items ($p \leq 0.001$).

sometimes juniors has come across difficulties during collaboration from different disciplines [Respondents': FGD 1-4 and FGD 2-4]

Disciplinary groups share clinical decision making

"IPC 2" states that "professionals from different disciplines share clinical decision making" showed

results with a percentage value of (60.3%(n=176) and an average rating of 3.6). Nurses highlighted that at times they do discuss the clinical decision taken with the head nurse only and this is not disseminated even during the handover meetings at shift change

In our hospital there is some lack interprofessional personnel communications. Most of the time the diagnoses can be identified through the patient's complaints, and it is not shared with us"

[Respondent: FGD 1-5]

IPC... maybe we can ask or,, ask them their opinion on how should we go about certain things regarding the patients...we can ask them what can we do...the best people to the improvement are those in the frontline ... there might be a reason why they have given this much of care....we ask them what do they think is the best... in that we can...they have a better idea...maybe we can also encourage them to give a little bit extra

[Respondent: FGD 2-1]

Patient data are collectively reviewed

"IPC 3" states that "the patients are data are collectively reviewed by different health care professionals when a clinical decision required" showed results with a percentage value of (62.7%(n=183) and an average rating of 3.7). Nurses explained that data are reviewed but only the seniors can give input, if a junior nurse says something which may really help the patient even then it is not taken positively

In some instances, the reports are collectively reviewed ... but if a junior point out things regarding the patient care It is not taken positively

[Respondent: FGD 1-4]

A junior also can have a different opinion ... this may benefit but according to some staff mood they will take it, ... otherwise they will not because it's a junior ... that is how I feel at times

[Respondent: FGD 2-3]

Support from multidisciplinary team members

"IPC 4" states that "Professionals' support is sought from other disciplinary groups as necessary" showed results with a percentage value of (59.2%(n=173) and an average rating of 3.7). Nurses said in some cases they do ask for other HCP opinion, but it is not sustained

Sometimes, the treating doctor gets others opinion on things such as asking the pathologist about a review of a report... but it is not always... but IPC is there

[Respondent: FGD 1-1]

Should think of these as patient related issues...in that mind...if it is patient related.....but rather than that to bring about IPC is a bit difficult at some levels, unless

otherwise an authority figure is there...

[Respondent: FGD 2-5]

Sharing clinical responsibilities

"IPC 5" states that "The sharing of clinical responsibilities is well established among the different groups of professionals" showed results with a percentage value of (62.3 % (n=182) and an average rating of 3.8).

Responsibilities are not defined as such we do our part and inform and sometimes how the task is attended is not even documented... it exists ... but have to improve

[Respondent: FGD 1-4]

Nurses are well aware of what they should do ...but in emergencies it lackswe are given instructions how to attend to a patient in critical or non- critical conditions and we follow it but ... there may be something we may need to ask sometimes that opportunity is not given It is kore task based as individual departments... even in nursing areas...

[Respondent: FGD 2-2]

Established a conflict resolution mechanism among the team identifying roles and responsibilities

"IPC 6" states that "Efforts are made to prevent conflicts concerning the sharing of tasks and responsibilities" showed results with a percentage value of (63.7%(n=186) and an average rating of 3.8). Nurses perceived that lack of communication among the HCPs as one major factor which effects conflict resolution

Tasks and responsibilities even given, due to some factors like communication and short of staff..... We are unable to perform accordingly,

[Respondent: FGD 1-1]

The information is not disseminated properly...some things are not being completed at management level, needs to do proper documentation of how to resolve things.....

[Respondent: FGD 2-1 and FGD 1-3]

Collaborate for a common plan for patients

"IPC 7" states that "Professionals collaborate to elaborate a common care plan" showed results with a percentage value of (63.7% (n=184) and an average rating of 3.8). Results showed the highest positive percentage for this item. As nurses do believe all professionals do act upon for a common care plan for patients, but still there is much more to be done

The treating doctor or admitting doctor usually attends the patient, multidisciplinary care is not much practiced..... unless otherwise the patient condition is not diagnosed, or a request is made from an influential bystander....

[Respondent: FGD 1-1 and FGD 2-5]

All HCPs, doctors dept, physio...I would say if they the hindrance or what makes it...we don't have enough staffs....eg in physio therapy there are two staffs...so in order to bring them to mobilize the patient safely...they will not be able to come on time...cannot get everyone at the same time...some ,maybe busy... plus we most of the communication is bad...more makes it bigger... support staff helpers don't know much English...we coordinators also...I for one I can able to understand very little...I may not be able to get what the patient is trying to say...also most of the doctors are not local so...

[Respondent: FGD 1-3]

Multidisciplinary team members take in to account the patient data collected for care

“IPC 8” states that “The different groups of professionals take into account the patient data collected by other professionals” showed results with a percentage value of (57.5 % (n=168) and an average rating of 3.6). Nurses suggested that the care plan for the patient should be done before requests are place for tests or any other interventions, so that patient can be treated properly.

Sometimes they do... but not always, other doctors do come and check reportsthen will include some other tests ... if can work together and tell all tests needed then good for patient.....

[Respondent: FGD 1-2 and FGD 2-5]

Patient data can see from system so all doctors can use... but for nurses limited information can see... This makes it difficult sometimes ... patient care delays do come

[Respondent: FGD 1-1 and FGD 2-1]

Level of collaboration among multidisciplinary team is high

“IPC 9” states that “The level of collaboration among professionals is high” showed results with a percentage value of (56.8 % (n=166) and an average rating of 3.6). Even though, IPC exists to some extend nurses perceives that still improvement is needed and should always collaborate keeping the patient at the center

We have that team...we can see in some situations we can see that...we sometimes feel happy about it... most of the time we can see that IPC is there...it works well when everyone is on board and working together it works well...and we will also get the satisfaction... within the unit you will see a how they work...like a ... it's a bit difficult like what choices we have

[Respondent: FGD 1-2]

sometimes IP knowledge is not there.... everyone has a different opinion...if everyone does together or all depends upon the dept...this is where we have to go,

this is what we have to do...then it will be better... education and training may help...

[Respondent: FGD 1-5]

We can encourage all units to work towards patient safety...and IPC...how important it is...how they will do...how they can communicate...to whom they should approach...how they can complete the tasks... so we can try to help communicate with the staffs... maybe we can ask or,, ask them their opinion on how should we go about certain things...we can ask them what can we do...the best people to the improvement are those in the frontline we say so...there might be a reason why they have given this much of care.... we ask them what do they think is the best...in that we can...they have a better idea...maybe we can also encourage them to give a little bit extra...not just coming to finish the task...with good collaboration among us for the patients

[Respondent: FGD 2-2]

Among our staff there is not cooperation, there is no nature to helping each other...to implement we need to give our staff support to each other...then only creativity is built...for PS...maybe we can strengthen the bond within the unit...the bonding and the closeness we can build within the unit....then everyone will be working together...there is no gaps...there are gaps within the unit...definitely something will happen, without good bonding, with some reservations for staff then definitely the care becomes broken again.

[Respondent: FGD 2-5]

Interprofessional collaboration means the collective involvement of different areas of healthcare professionals, nurses, lab technicians, who is giving care to the patients,few staffs are focused with that and few staffs are not focused with that...even in the departments, IPC, some units are concerned and some are not concerned...and some incidents we are taking very seriously and we are involving everyone's collaboration and trying to give the safety for the patients, but in some instances it's there, so it's not constantly we are not able to be there, with IPC...

[Respondent: FGD 2-4]

DISCUSSION

This research study was conducted using a cross-sectional survey approach, which provided an overview of IPC among the nurses in the two hospitals and expounded a deeper understanding of the level of IPC in the hospitals in the Maldives. Most of the nurses had a good level of understanding regarding the importance of IPC, which according to previous studies, indicates that in order to provide a quality service to patients by reducing adverse events, understanding, and promoting IPC is vital (14 &15).

The findings are consistent with literature and does support the aim of the importance of implementing inter-professional collaboration within hospitals of Maldives. The result of the study suggests that even though to some extent IPC is present among HCPs still there is a need for improvement. Improving collaboration among HCPs will promote a team where trust, respect, shared responsibility towards the patient and also create an environment where satisfaction towards the work they do will be enhanced (12).

An increasing number of research studies on IPC do focus on the challenges faced in implementing a culture where IPC can be promoted. According to the studies silo working in departments, stereotyping, ineffective communication, different knowledge and identities, professional hierarchies and time constraints were the main causes of failed IPC (8&9). Nurses from this study also revealed that the above-mentioned challenges do exist in their work environment, specially the differentiation of professional hierarchies, which does have a great impact on maintaining patient safety and providing a patient centered care.

Another argument derived was that the level of collaboration among HCPS was weak as per nurses. Nurses feel that sometimes their opinion is not respected, and they are not given the opportunity to be a part of the multidisciplinary team. Research studies have emphasized regarding this statement as in other areas also they do have come across the same (3&11). It can be suggested that IPC when implemented can lead to a change in environment where a culture of safety can be achieved.

The findings from this research can assist the managers in health care institutes to identify the strengths and weaknesses in relation to inter professional collaboration among the health care professionals based on the nurses' perceptions. None of the items had scored above 75% indicating that there are gaps which needs to be improved.

IPC plays a vital role in healthcare, to sustain IPC education and training is important, nurses in this study also perceives that education and training are important elements for IPC and this is support by research done by Gantayet Mathur, (13), in 2022. Several research has been undertaken on the topic of IPC in different context in the past years and till date, still we do see that there is lack of IPC implementation in health care organization. One of the limitations of this research in also including nurses, the research study needs to be broadened by including all clinical and non-clinical areas to find out what are the limitations for the sustainability of IPC.

CONCLUSION

The results of the current study revealed that nurses

do believe that a collaborative culture exists in both hospitals, but there is still room for improvement. Therefore, there is a need to address to this and create a pathway to improve IPC with respect to all professionals included, by mitigating the hierarchical differences in the healthcare system. Educate and train to work as a team and enhance team building with effective communication and an environment for good collaborative services to attain patient safety and quality care. Further studies need to be conducted to investigate from all health care professionals' perspectives on how they perceive collaboration among each other in the hospitals of Maldives. This can be further expanded to the periphery an also involving non-clinical staff who also contributes to patient care in administrative / security / clinical support / helpers and also other areas of the healthcare institutes.

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