2022-04

Inter-Professional Collaboration of Health Professionals During Health Care Provision and Associated Factors at Public And Private Hospitals in Bahirdar Town, North West Ethiopia

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COLLEGE OF MEDICINE AND HEALTH SCIENCE

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DEPARTMENT OF Health Systems Management and Health Economics

Inter-Professional Collaboration of Health Professionals During Health Care Provision and Associated Factors at Public And Private Hospitals in Bahirdar Town, North West Ethiopia

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A THESIS REPORT SUBMITTED TO DEPARTMENT OF HEALTH SYSTEMS MANAGEMENT AND HEALTH ECONOMICS, COLLEGE OF MEDICINE AND HEALTH SCIENCE BAHIR DAR UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIRMENTS FOR DEGREE OF MASTER OF HEALTH SYSTEM AND PROJECT MANAGEMENT

APRIL, 2022

BAHIR DAR, ETHIOPIA

BAHIR DAR UNIVERSITY

COLLEGE OF MEDICINE AND HEALTH SCIENCES

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FULL TITTLE OF THE RESEARCH THESIS	INTER-PROFESSIONAL COLLABORATION OF HEALTH PROFESSIONALS DURING HEALTH CARE PROVISION AND ASSOCIATED FACTORS AT HOSPITALS IN BAHIRDAR TOWN, NORTH WEST ETHIOPIA
DURATION OF THE RESEARCH	AUGUST 2021 - APRIL 2022
STUDY AREA	BAHIR DAR

BAHIRDAR UNIVERSITY

COLLEGE OF MEDICINE AND HEALTH SCIENCE

SCHOOL OF PUBLIC HEALTH

DEPARTMENT OF HEALTH SYSTEMS MANAGEMENT AND HEALTH ECONOMIC

I hereby certify that I have supervised, read and evaluated this proposal titled "assessment of inter-professional collaboration of health professionals during health care provision and associated factors at hospitals in bahirdar town, North West Ethiopia, 2022" prepared under my guidance. I recommended the thesis be submitted.

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ACKNOWLEDGEMENTS

My gratitude goes to Bahir Dar University College of Medicine and Health Sciences, School of Public Health and Department of health system and health economics for giving me to do this thesis.

I would also like to express my deepest appreciation and thanks to my Advisors Mr Ayinegida (MPH, assistant professor) and Ms. Tsion (MPH, assistant professor) for their Unreserved support and provision of valuable advice and ideas starting from the topic selection to write this thesis.

My thanks extended to Tibebe Ghion Comprehensive Specialized Hospital, Felege Hiwote Comprehensive Specialized Hospital, Adinas General hospital and Gambi Teaching General hospital. Finally, my thanks go to data collectors and supervisors and to all study participants who involved in this study.

ACRONYMS AND ABBREVIATIONS

AGH	Adinas General Hospital
AOR	Adjusted Odd Ratio
ATLAS TI	Archive for Technology, Lifeworld And everyday language Text interpretation
BDU	Bahir Dar University
CNM	Certified Nurse-Midwife
CI	Confidence Interval
COR	Crude Odd Ratio
ETB	Ethiopia Birr
FGD	Focused Group Discussion
FHCSH	Felege Hiwot Comprehensive Specialized Hospital
FMOH	Federal Ministry of Health
GTGH	Gambi Teaching General Hospital
IPC	Inter-Professional Collaboration
IPE	Inter-Professional education
SPSS	Statistical Package for Social Science
TGCSH	Tibebe Ghion Comprehensive Specialized Hospital
WHO	World Health Organization

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ABSTRACT

Background: Inter-professional collaboration is defined as working together for the same goal, working with agreement, having a good communication and exchange of ideas, listening to each other, meeting the needs of other professionals, being available to each other and achieving high quality of patient care. In health care, where the majority of actions are performed as a team, inter-professional collaboration is critical to improve the quality service provided. Many health systems and health professionals around the world are disconnected and overwhelmed to meet unmet health demands.

Objective: To assess inter-professional collaboration of health professionals during health care provision and associated factors at hospitals in Bahir dar city, Northwest, Ethiopia, 2022

Methods: A Cross-sectional study with both quantitative and qualitative method was conducted among 380 health professionals at hospitals in Bahir dar city.
The study participants were selected using a stratified sampling technique and stratified by profession, systematic random sampling was employed to select each study participants. The quantitative data were collected using a structured self-administered questionnaire and the qualitative data was collected by FGD guided interview. Purposive sampling technique was used for qualitative study. SPSS version 23 and ATLAS ti7 data analysis software were used for quantitative and qualitative data respectively. The level of significance is set at a $p< 0.05$

Result: A total of 380 respondents with a 98.68% response rate were included. Around two third, 353(67.5%) respondents had favorable IPC. Factors higher institution learning background of respondents (AOR=2.32, CI: 1.37-3.94), culture of teamwork the organization (AOR=2.21, CI: 1.27-3.84), physical environment and rule and regulation of the organization (AOR=2.47, CI: 1.38-4.40) were found statistical significance.

Conclusion: This study shows, most of health professionals had favorable IPC during health care provision. It was relatively good compared other related studies.

Keywords: Inter-professional collaboration, health care provision, Bahir dar city

1. IRODUCTIONNT

1.1. Background

Inter-professional collaboration is defined as " multiple health workers from different professional backgrounds provide comprehensive services by working with patients, their families, careers and communities to deliver the highest quality of care across settings"(1).

Nurses, doctors, and other medical practitioners, as well as other care providers, join together and collaborate to improve their approach to healthcare in order to improve patient outcomes.(2).

Inter-professional collaboration is also defined as "working together for the same goal, working with agreement, having a good communication and exchange of ideas, listening to each other, meeting the needs of other professionals, and being available to each other to improve quality of care of the patients"(3)

Inter-professional collaboration is not a new concept in healthcare. The Institute of Medicine advocated team-based patient care as a means to improve patient outcomes and safety back in 1972. The concept became a hot topic in 2009, and the World Health Organization has since emphasized the need of inter-professional education as a strategy to promote patient care and global health populations(4).

In recent years, there has been a surge in inter-professional collaboration in health care or in medical education are now increasingly common, inter-professional courses in education programs are multiplying at a rapid rate, and inter-professional collaboration among professional associations is unprecedented in quantity and scope (5-7).

In the United States, Collaboration with physicians, nurses, and other healthcare providers has been an essential component of the care provided by certified nurse-midwives/certified midwives (CNMs/CMs). However, there has been an explosion of inter-professional collaboration(IPC) in health care recently(8).

Essential characteristics of successful inter-professional collaborative teams have been identified. They include individual professional competence, mutual respect and understanding of team members' skills, and a shared goal, among others(9, 10).

The benefits of IPC are expected to include identifying and utilizing each member of the health professional team's capabilities, as well as exploiting those strengths to prevent and treat complicated diseases, offer high-quality care, and enhance patient and health worker outcomes(1, 11). This is because IPC improves communication and teamwork and promotes coordination across the continuum of health care. IPC also makes it easier for health professionals to form equal-opportunity relationships(12), and it contributes to the alleviation of health-care workforce shortages(1). Some researchers believe that poor health-care quality is caused by a lack of or sub-optimal IPC among members of health-care teams(13).

As care needs become more complex, it is less likely that a single health care professional was able to address them alone, emphasizing the importance of collaboration(14). Therefore, in a dynamic and complicated care setting, effective collaboration of health professionals helps to improve patient well-being, quality of treatment, and provider satisfaction (15-17).

As most developing countries, Ethiopia has insufficient healthcare services but with a vast healthcare needs and with hospitals which are congested with patients placing immense pressure and heavy workload to the health care providers(18). Apart from the government's efforts to increase the number and quality of healthcare facilities, it is critical to have a positive collaboration between health professionals.

To the author's knowledge, inter-professional collaboration, especially between midwives and physicians, anesthetics and physician, has been less investigated and is insufficient to inform policymakers and other interested bodies in Ethiopia. Important factors, especially at the interpersonal level, such as attitude and behavioral aspects, communication and organizational factor were not assessed in the few works of literature available in Ethiopia. As a result, this study attempted to fill the gap and provide a more accurate assessment of the issue.

1.2. Statement of the problem

There are numerous interfaces in the existing health-care delivery system for providing patient care among various health-care practitioners with differing levels of educational experience. Information must be communicated accurately in order for clinical practice to be effective. Patient safety is jeopardized when health care workers do not collaborate and communicate properly for numerous reasons: key information gaps, misinterpretation of data, ambiguous commands, and status changes that go unnoticed(19).

As a result, health professional collaboration in the practice of healthcare setting is important issue that requires international attention because of its relationship with health provider's job satisfaction, turnover, patient safety, can prevent medical mistakes and above all the quality of care(20-22) ,and strong professional communication and respect are key to successful collaboration(23) and good teamwork will reduce the risk of medical errors(24).

Many health systems and health professionals around the world are disconnected and overwhelmed to meet unmet health demands, according to the World Health Organization (WHO) Framework for inter-professional education and collaboration(1). Despite the fact that medicine and other health providers are fields that work closely together and share a commitment to patient well-being, a prevalent type of conflict in hospitals is that between physicians and other health professionals, which is created by a lack of daily interaction and coordination(25).

Lack of collaboration in health care system today is filled with errors and both the human and financial costs are huge. In 2011, the U.S. Department of Health and Human Services reported that, at any given time, about one in every 20 patients has an infection related to their hospital care. On average, one in seven Medicare beneficiaries is harmed in the course of their care, costing the government an estimated $4.4 billion every year(26). Dysfunctional inter-professional collaboration communication is linked to medication error ,a major risk factor to patient injury, and its failure was reported by joint commission to be the leading root cause of sentinel events in all categories in 2005 (10) , 65% of sentinel events in 2006 (19) , 82% of the sentinel events in 2007 (17,20), and , 60 % in 2011 (21).

In Ethiopian hospitals, medication errors are common, with at least one out of every two medications being prescribed and administered incorrectly. The study shows, the overall occurrence of medication error in Ethiopia is 57.6%(27). Majority of unwanted events occur due to miscommunication, and communication failure and deficits in collaboration, particularly between nurses, midwives and physicians are the leading cause of preventable patient injuries and death and medical malpractice claims(21, 28, 29).

Different study shows that, more than half of health professionals specially, nurse and midwives exhibited non-collaborative behaviors and usually did not collaborate well with physicians (30, 31). According to study done Bojnurd in Iran show 81% of physicians and 52% of nurses exhibited disruptive behaviors. These disruptive behaviors could result in adverse clinical and psychological adverse outcomes on health professional and patient care. Adverse clinical outcomes, such as, effect on nurse satisfaction(81%), physician satisfaction(78%), patient satisfaction(78%), effect on patient safety (53%), effect on quality of care (72%), and errors (70%) and; adverse psychological outcomes such as, stress (97%), reduce team collaboration (81%),reduce information transfer(79%) and reduce communication(85%)(31).

Another study performed in Iran also showed that, near to half of nurses (48%) claim that their comments about the patient's health are ignored by physicians(32). A study conducted in Amhara region at Felegehiwot and Gondar referral hospitals in Ethiopia found that more than one third of nurses (41%) rate their collaboration as poor, while only 3% rate it as excellent(18).

A range of patient outcomes could be affected by effective collaborative care in health care. Hence, inter-professional collaboration between professionals is crucial in health care where most of the activities are undertaken in a team. From these collaborations nurses, midwives, laboratory, anesthetics and pharmacy with physicians are the major collaboration in clinical practices. From these IPC outcomes including improved safety, reduced errors, adherence to evidenced based practice, reduction in the amount of unnecessary interventions, fewer cesarean sections, increased satisfaction with care, reduced cost, and improved efficiency(33, 34) Therefore creating smooth working environment and collaboration culture is very crucial.

There is a need to investigate IPC in public and private hospitals of Bahir dar city like other hospitals in the country because it increases health professional collaboration, higher

patient satisfaction and outcomes, lower length of stay. It is an actual observed problem during clinical practice that needs to be studied to see optimal patient care from health professional collaboration. Therefore; this study was tried to see IPC of health professional and associated factors at public and private hospitals in Bahir dar city.

1.3. Significance of the study

IPC improves the delivery of care in hospital since it decreases mortality, morbidity and long hospital stay, which in turn Contribute to the community and country's socio-economic development. Hence, study finding will help to identify and act on areas where gaps are identified.

The finding of the study will help for the hospitals, each school department and policy makers by showing areas of gaps and making plan and act based on the gaps identified.

The findings will be also useful to increase the awareness of health professional communication in hospital and health professional to improve their inter-professional collaboration which help them to achieving positive patient outcomes.

Lastly, to our best knowledge there are limited previous studies that have examined inter-professional Collaboration level of health professionals at country level and findings of this study is used as source for other studies to be conducted related to inter-professional collaboration.

2. LITERATURE REVIEW

2.1. Inter- professional collaboration of health professionals during health care provision

Inter-professional collaboration (IPC) has gained popularity among healthcare professionals as a means of improving communication and, as a result, the quality of patient care(25). Intra-professional collaboration is a relational, respectful process among nursing colleagues that allows for the effective use of the knowledge, skills and talents of all nursing designations to establish and achieve optimal client and health system outcomes(35, 36).

The findings of a study on inter-professional collaboration among health professionals in the treatment and management of cleft lip and palate in the public health sector of South Africa reveal that overall IPC was sub-optimal or in need of development, as the overall mean score was below 4(37).

Related Studies done towards midwife-physician collaboration are in the Netherlands shows Less than half of the midwives described only 44.9% with obstetricians, and 38.4% with GPs had good interaction (30), research done in Iran 10.5% of nurses not communicate with physician(32) and research done in Ethiopia around 41% nurses had poor satisfaction of collaboration with physicians(18). And study conducted in Malaysia Better collaboration of nurses with physician (91.8%)(38).

Recent study done in Ethiopia stated that nurses and midwives with physicians collaboration is one of the IPC(33). From this study, the result shows that 66.7% nurses and midwives had a satisfactory inter-professional collaboration with physicians and (58.2%) had good relationship with physicians. On the other hand study done north Ethiopia 42% of participant not satisfied with nurse physician relationship(39). The study done in South West Ethiopia about attitude of nurses and midwives towards collaborative care with physicians shows 57.2%of participants had a good attitude and the rest 42.8% had poor attitude toward it(40).

2.2. Factor associated to IPC of health professionals during health care provision

2.2.1 Socio demographic factors

Various studies have recognized that different factors affect IPC of health professionals. From these factors socio-demographic factors Age, year of experience, sex, educational level and Occupational status) are affects either positively or negatively. Occupational statuses of health professional (ordinary staffs, those who have no managerial role) were 8.18 times more likely to have satisfactory inter-professional collaboration with other professions (3, 33, 41).

2.2.2. Organizational factors

Organizational factors (working area, Healthy environment and supportive culture of the organization, hospital laws and regulations) are factors under organization. Supportive hospital laws and regulations are can enhance IPC of health professional in health care profession , varied professional care plans, a lack of adequate health professionals from each disciplines like midwives and nurses at the administrative level, and a lack of enough time have all been identified as associated factor. Healthy environment and supportive culture of the organization also factor for IPC. Hence, healthcare managers stressed the importance of supportive positive cultures in order for healthcare providers to work together, the IPC culture is developed. Good culture of team of the organization affects positively the IPC. The qualitative study in Quebec hospital according to participant views; the hospital's multidisciplinary professional, as well as the midwives working in the birth centers, stated that they are motivated to practice uniformly, operate as a team, and support one another. It was a facilitating factor in terms of collaboration within and between professions and organizations. This study also states that organizational rules and regulations affect the effective IPC. Here the participants revealed that the structure of the hospital and the wards (physical environment), as well as their organizational norms and regulations, may have an impact on the nature of collaboration amongst maternity care professionals in those institutions. The hierarchical natures of the hospital with the doctors in influential positions represent barriers for inter-professional collaboration (3, 42)

2.2.3. Individual factors

Individual factors are highly influence the IPC. From these factors attitude toward IPC and experience of disruptive behaviors are the main associated factors. Experiences of disruptive behaviors affect negatively the inter-professional collaboration of health professionals. The study done about disruptive behavior shows that 81% of physicians and 52% of nurses exhibited disruptive behaviors. These behaviors could result in adverse outcomes, such as stress (97%), job dissatisfaction and can compromise patient safety (53%), quality of care (72%), and errors (70%) (30, 31, 33).

2.2.4. Professional learning background related factors

Competent communication is enhancing the inter-professional collaboration of health professionals. But the flow of communication between the professions is not as it should be. Communication between health professionals was the main factor that strongly associated with excess hospital mortality in a classic study on the outcomes of intensive care. According to more recent study, verbal miscommunication between nurses and physicians accounts for 37% of all medical errors. Nearly 40% of nurses in hospitals around the world were dissatisfied with their interactions with physicians. Relationships between health professionals have been found to have a substantial impact on health provider work satisfaction and retention (37, 43).

Another studies state that pre -service training towards inter-professional collaboration is one of significant for good collaboration. Inter professional education (IPE) is one of the strategies. IPE Program introduces learners to the skills and knowledge essential to help functionally participate in health-care team. The competency developed during this process is necessary to equip learners experience on client-centered approach to collaboration and problem solving. Which mean if there simulation center in medical education, the health profession can develop collaborative culture for clinical practice(44).

3. CONCEPTUAL FRAME WORK

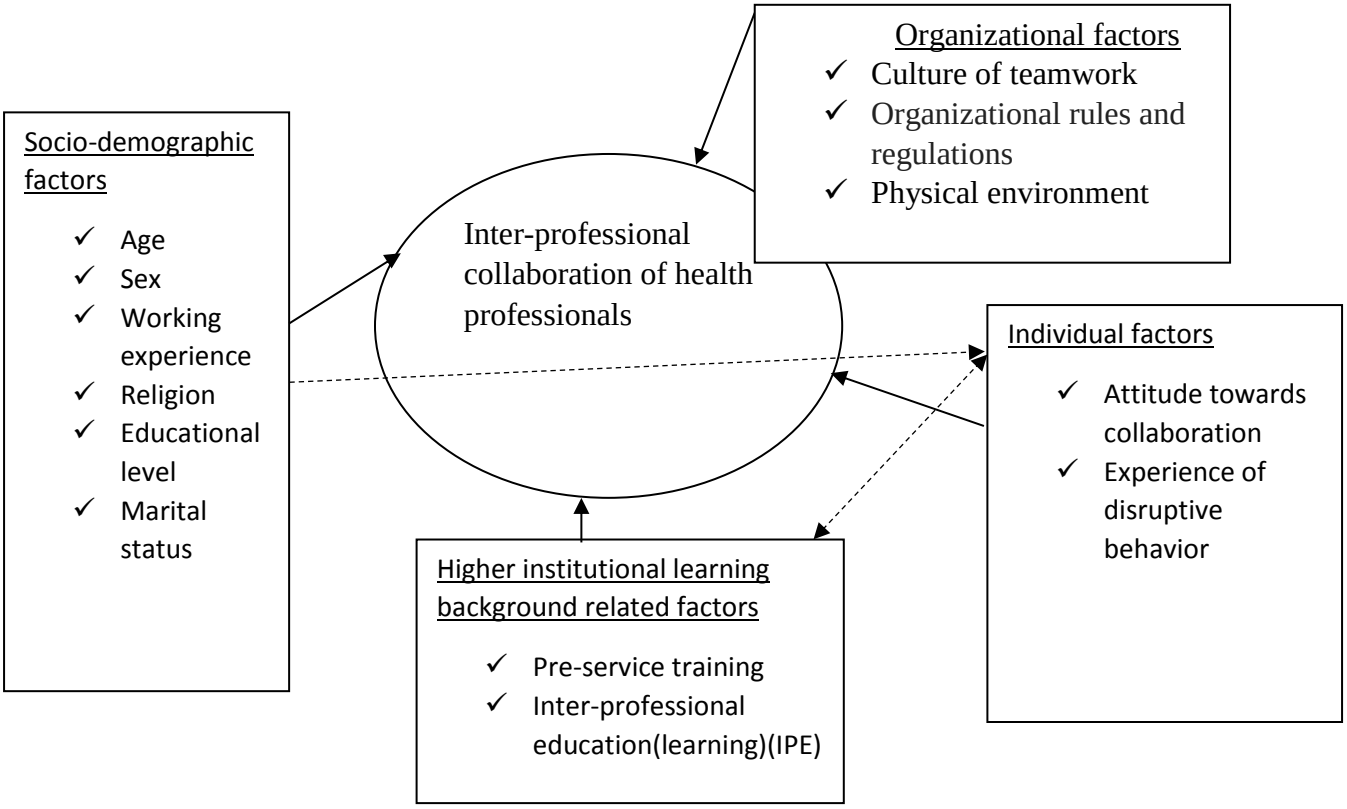


Figure 1- Conceptual frame work of inter-professional collaboration professionals during health care provision 2022

4. OBJECTIVE

4.1 General objective

To assess inter-professional collaboration of health professionals during health care provision and associated factors at hospitals, in Bahir dar city, North West Ethiopia, 2022.

4.2 Specific objectives

1. To assess magnitude of inter-professional collaboration health professionals during health care provision at hospitals, in Bahir dar city, North West Ethiopia, 2022.

2. To identify factors associated with the inter-professional collaboration health professionals during health care provision at hospitals, in bahir dar city, North West Ethiopia, 2022.

5. METHODS AND MATERIALS

5.1. Study area

In Bahirdar town, there are three public hospitals (Tibebe Ghion Compressive Specialized Hospital, Felege Hiwot compressive hospital and Addis Alem primary hospital) and private four (Dream care, Adinas, Afillas and Gambi General) hospitals. The study was conducted in two public hospitals and two private hospitals. These are Tibebe Ghion Comprehensive Specialized hospital (TGCSH) and Felege Fiwot comprehensive specialized hospital from public hospitals; and Adinas General Hospital and Gambi Teaching General hospitals from private hospitals. Tibebe Ghion Comprehensive Specialized hospital (TGCSH) is early established (2011 E.C) tertiary hospital and founded in bahirdar city Sebatamit kebele. There are around 1006 health professionals in this hospital. From those professionals nurses, midwives, pharmacy, laboratory and anesthetist accounts 511(302 nurse, 79 midwife, 42 pharmacy, 46 laboratory and 42 anesthetist) and medical doctors (general practitioner and above) are 353. It has around 500 beds and 9 wards and now it serves around 5, 000, 0000 people). Felege Hiwot comprehensive specialized hospital is one of the earliest known governmental hospitals in the region established with the German State government during the regime of Emperor H/ Silassie ፩ in April, 1955 E.C. It is found in Bahir Dar City, the capital of Amhara National Regional state, Ethiopia. During that time, it was planned to serve for 25,000 populations. At this time about 10 million people have been getting the health service. It contains around 716 health professionals (417 nurse, 61 midwife, 51 pharmacy, 72 laboratory and 18 anesthetist and 142 medical doctors). In the hospital there are a total 477 beds, 12 wards, and 42 departments with diagnostic and curative services. Gambi Teaching General hospital (GTGH) is one the private hospital in Bahir Dar town. It established more than 26 years with medium clinic and expanded to teaching and general hospital since 2004. It contains around 85 permanent health professionals (13 physicians, 35 nurses, 5 midwives, 2 anesthetists, 14 laboratories, 2 radiologists and 11 pharmacies). It has 38 beds and provides all types of services. Adinas General Hospital (AGH) is found in Bahir dar town kebele 14 and it established 2003 E.C. It contains 55 permanent health professionals (8 physicians, 17 nurses, 6 midwives, 2 anesthetists, 9 laboratories, 5 radiologists and 5 pharmacies). It has 35 beds and provides all types of services except dental and ophtal services.

5.2. Study design and period

A cross-sectional with quantitative and qualitative method (explanatory sequential mixed method) was conducted from September 1 to September 30, 2021.

5.3. Population

5.3.1. Source population

All health professionals working at public and private hospitals in Bahir Dar Town

5.3.2. Study population

All health professionals who are working at least six months and above from selected hospitals

5.4. Inclusion and exclusion criteria

5.4.1. Inclusion criteria

All health professionals working at selected public and private hospitals and available during data collection were included in the study.

5.4.2. Exclusion criteria

All health professionals who work less than six month and who are in year leave were excluded from study.

5.5 Variables

5.5.1 Dependent variable

Inter-professional collaboration of health professionals during health care provision (Favorable=1 and Unfavorable=0)

5.5.2 Independent variables

- Socio-demographic factors (age, sex, work experience, occupational status).
- Organizational factors (Culture of team work, organizational rules and regulations, physical environment).
- Individual (personal) factors (Attitude towards collaboration and experience of disruptive behavior).

- Higher institutional learning background related factor (pre-service training and inter-professional learning background).

5.6 Operational definitions

Inter-professional collaboration: The collaboration of nurses, midwives, pharmacists, laboratories, anesthetist and physicians during health care provision in order to enhance quality of care and patient safety. The IPC measuring scale containing fourteen "YES" or "NO" item were used to measure it.

Favorable inter-professional collaboration

Higher score (10 and above) on overall score of the 14 inter-professional collaboration measuring item scales

Unfavorable inter-professional collaboration

Lower score (9 and below) on overall score of the 14 inter-professional collaboration measuring items scales(33)

Culture team work: two or more health professional that practiced good interaction in health care provision with a common purpose, working toward measurable goals that benefit from leadership that maintains stability while encouraging honest discussion and problem solving (45)

Good culture of team work: respondents score higher (31 and above) mean score from measuring items.

Poor culture of team work: respondents score lower (30 and below) mean score from measuring items.

5.7. Sample size and sampling procedure

5.7.1. Sample size determination

Sample size for objective one by using the single population proportion formula, the sample size (n) is calculated:

n = n = $(Z_{\alpha/2})^2 \frac{p\,(1-p)}{d2}$. Then, the minimum sample size is n = (1.96) (2.66) (0.34) (0.05). From fluency related previous study done in South West Ethiopia, the proportion of 66% is taken as p = 0.66(33). The final sample Size was by adding 10% for non-response rate, n = 345 + 34.5≈380. Population proportion formula was used to select sample from each health profession proportionally: ni = Ni × n/N, number of nurses = 771 * 380/1752 = 167, number of Midwives = 151 * 380/1752 =33, medical doctor (all level) = 516*380/1752=112, number of pharmacy =109*380/1752 =24, number of laboratory = 141*380/1752 =30 and number of anesthetist =64*380/1752 =14.

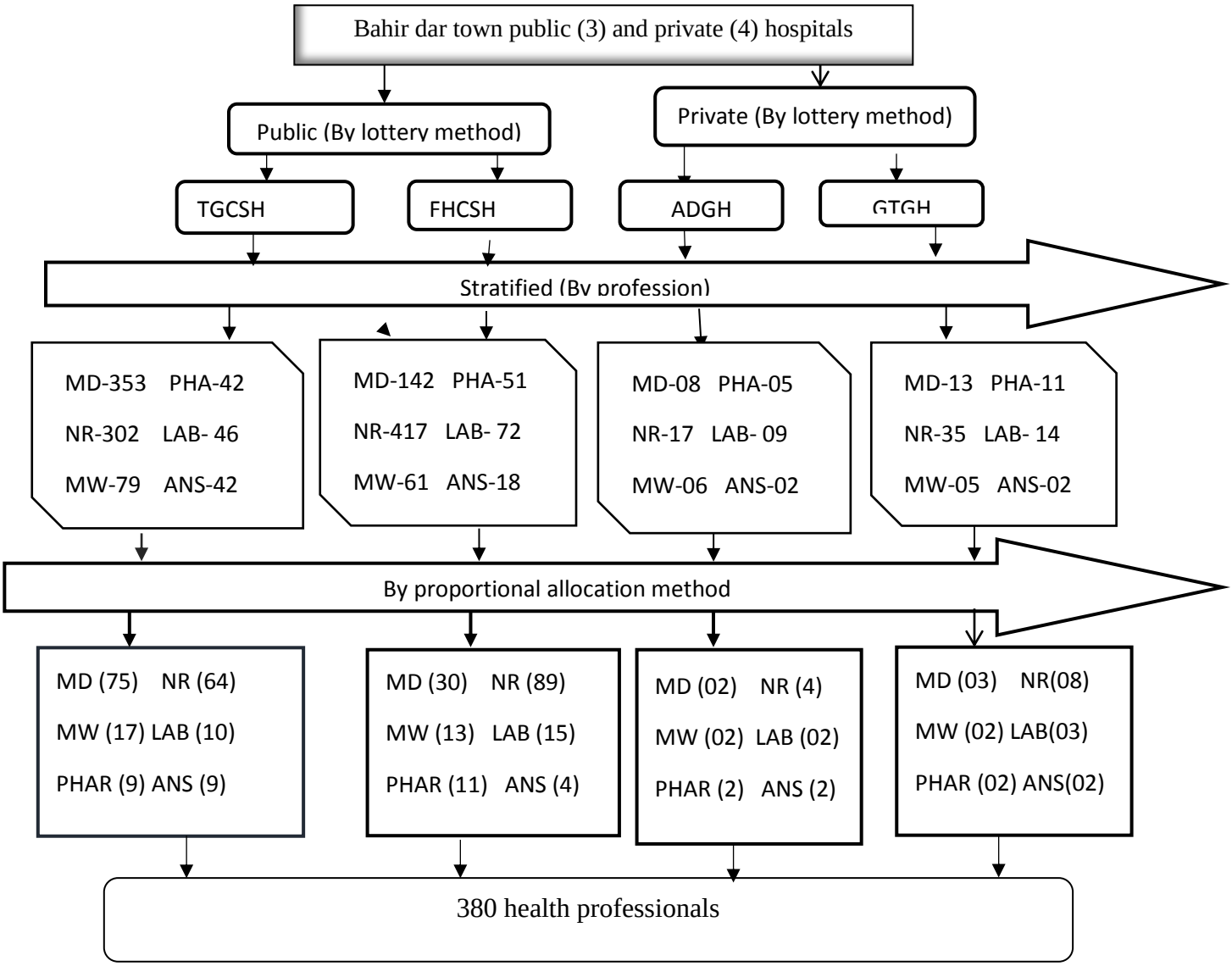
Sample size for objective two was determined by using Epi info version 7 considering the following assumptions: confidence interval (CI) 95%, power 80%, ratio 1:1 and non-response rate 10%. Factors was taken from explore previous studies conducted (33, 46).

No	Factors	Assumptions			
		Favorable on IPC among exposed	Favorable on IPC among unexposed	AOR	Sample size with 10% non-response rate
1.	Good relationship with physicians	78.6	50.3	3.478	104
2.	Attitude towards inter-professional collaboration with physicians	76.1	54.3	3.085	130
3.	Experience of disruptive behaviors	80.8	47.1	0.229	82
4.	team work	70.7	37.7	2.53	165

Finally, single population proportion formula was provided the largest sample size (380).

5.7.2. Sampling technique and procedure

A stratified sampling technique was used to choose the study populations. The study population was stratified by profession and the sample was taken from each stratum proportionally. Individual participants were selected using systematic random sampling technique. A list of professionals identification number used as a sampling frame. The first participant was recruited by lottery method and others selected every five interval up to attain the final sample size. Purposive sampling was used to select sampling group and they were selected from each profession and one FGD was contains six members one participant from each profession. The focus of FGD was on each participant's experience with, trend and attitudes towards collaborative practice in their working area. A digital recorder was used to record the FGDs. One FGD took 75 minute and the session of FGD was determined by saturation point.



Note: MD - Medical doctor, MW - Midwifery, NS – Nurse, LAB – Laboratory, PHAR – Pharmacy, ANS - Anesthetist

Figure 2: The sampling procedure of study participants who incorporated to the study at public and private hospitals in Bahir dar city

5.8. Data collection tools and methods

5.8.1. Data collection tools

The inter-professional collaboration of health professionals was assessed using 14 items with "YES" or "NO" options that were developed after a review and modification of relevant literature(33). The health professional IPC factor tools are developed after reviewing different related literatures. Organizational factors contained total 13 items with subscale (physical environment and rule (4 items) and culture of team work (8 items)) and it was assessed by 5-point Likert-type scale from (1- never to always) and this tool was checked the validity with Cronbach-α of 0.92. Professional educational learning background related factors contains 5 items, individual factor has 6 items with sub scale(disruptive behavior(2 items) and attitude of health professional towards IPC(4items)) and these factors was answered with 4-point Likert-type scale from (1- strongly disagree to 4- strongly agree)(44, 45). Open ended questionnaire was used to collect the qualitative data.

5.8.2. Data collection method

Data were collected by pretested written self-administered semi structured questionnaire to study participants. The qualitative data was collected using open ended questionnaire for focused group discussion (FGD).

5.8.3 Data quality control

A pretest on 10% of health professionals from selected study hospitals in Bahir Dar, North West Ethiopia was undertaken to ensure the quality of the data, and suitable modifications, including wordings, were made to the questionnaire before it was administered to the research population. The questionnaires were also double-checked for accuracy before being entered into the database. Before being uploaded to (SPSS) version 23, the data was entered into Epi data version 3.1 software which immediately detected data collection errors. One day training for two BSc midwife and three BSc nurse were provided. Supervisors were continuously checking the data collector during data collection.

5.8.4 Data processing and analysis

The data was entered into epi data version 3.1 before being cleaned and analyzed in SPSS version 23. Binary and multivariable logistic regressions were employed to investigate the connection between the dependent and independent variables. P-values of less than 0.25 and 0.05 in binary and multivariable logistic regression, respectively, were considered significant at a 95% confidence level. Thematic analysis with both inductive and deductive approaches was used for qualitative data analysis. Data was analyzed by software Atlas ti7 and this was allowing the data to be coded inductively and deductively in order to gather information related to perspectives on collaborative practices. Descriptive statistics of different variables were presented in the form of frequency, proportion and percentage.

5.9. Ethical consideration

Ethical clearance was obtained from the Institutional Review Board (IRB) of Bahir Dar University, College of Medicine and Health sciences. Further approval was granted from the Amhara Regional public health institution. Furthermore, letters of support was obtained from each hospital managers. Informed written consent was obtained from each study participants. Respondents were informed about their right not to participate in or with draw from the study at any stage. Name of the respondents were not addressed for the sake of confidentiality.

6. RESULT

6.1. Socio-demographic characteristics of study participants

A total of 380 respondents with a 98.68% response rate were included. Of the total respondents, 252(67.2%) were males and of 231(61.6%) were BSc. Of the respondents 347(92.5%) were orthodox Christian follower. From respondents age 220(58.6%) were between age of 20-29 years and the mean age was 29.27(SD ± 3.634) years. The mean income (salary) of the respondent was 8594.35(SD ± 3533.880). Most of respondents 358(95.5%) had 0.5-10.5 years working experience. Most of respondents 359(95.7%) were working staff in their position.

Table 1 the socio-demographic characteristics of respondents at public and private hospitals in Bahir dar city 2022 (N=375)

Variable	Category	Frequency	Percent
Age	20-29	220	58.6
	30-39	151	40.3
	40-62	4	1.1
Sex	Male	252	67.2
	Female	123	32.8
Marital status	Married	206	54.9
	Single	167	44.5
	Divorced	2	.5
Religion	Orthodox	347	92.5
	Muslim	21	5.6
	Catholic	3	.8
	Others	4	1.1
Level of education	Diploma	19	5.1
	BSC	231	61.6

	MSC	15	4.0
	MD(all levels)	110	29.3
Working experience in year	0.5-10.5	358	95.5
	10.6-20.6	17	4.5
Position of respondent	Staff	359	95.7
	Department head	12	3.2
	Matron	2	0.5
	Medical director	2	0.5

6.2 Inter-professional collaboration of health professionals

Around 253(67.5%) respondents had favorable inter-professional collaborations, and the remaining 122(32.5%) had unfavorable inter-professional collaboration during health care provision.

The table two below shows that, the inter-professional collaboration response of health professionals during health care provisions. As result show in the table 354(94.4%) respondents had greeting with team members and other disciplines. On other hand, around 109(29.1%) respondents not always consult their team member and other discipline.

Table 2 Response of respondents on inter-professional collaboration measurement items at public and private hospitals in Bahir dar city 2022(N=375)

Characteristics	Yes	No
Do you greet with work team and other discipline	354(94.4%)	21(5.6%)
Do you discuss patient's problem with work team member and give solutions	316(84.3%)	59(15.7%)
Do you hold discussions to resolve differences of opinion with work team member in the event of discrepancy about direction of patient care	299(79.7%)	76(20.3%)

Do you plan together with work team member and other discipline about patient needs when patient is to be admitted or discharged to the hospital?	281(74.9%)	94(25.1%)
Do you set together the future directions of patient care with work team member and other discipline	268(71.5%)	107(28.5%)
Do you try to prevent medical care accidents together with work team member	276(73.6%)	99(26.4%)
Do you share each other information about a patient's condition and reaction to treatment with work team member	298(79.5%)	77(20.5%)
Do you support each other with work team member and other discipline during patient care	308(82.1%)	67(17.9%)
Do you exchange information and opinion about matters related to work with work team member and other discipline	296(78.9%)	79(21.1%)
Do you show concern for one another with work team member when they are in need of your help	307(81.9%)	68(18.1%)
Do you share each other's opinions with work team member to resolve problems related to patient care	309(82.4%)	66(17.6%)
Do you take into account each other's schedule when you make plan to give care for the patient with team member and other discipline	275(73.3%)	100(26.7%)
Do you always consult work team member and other disciplines when you need consultation	266(70.9%)	109(29.1%)
Do you respond to each other's call when you are in need during patient care	338(90.1%)	37(9.9%)

From qualitative study most of focused group discussion participant stated that the trend/culture of collaboration of the health organization is more or less good. But, the health organization system not usually supports the collaboration practice and it depends on the health provider wiliness.

As gynecologist from FGD2 mentioned that, "*trend of collaborative care between health professionals in our health organization is good. However, it is occasionally not system based. Since, there is no pre organized multi-disciplinary emergency team for collaborative care and the health organizations not create conducive environment for collaboration.*"

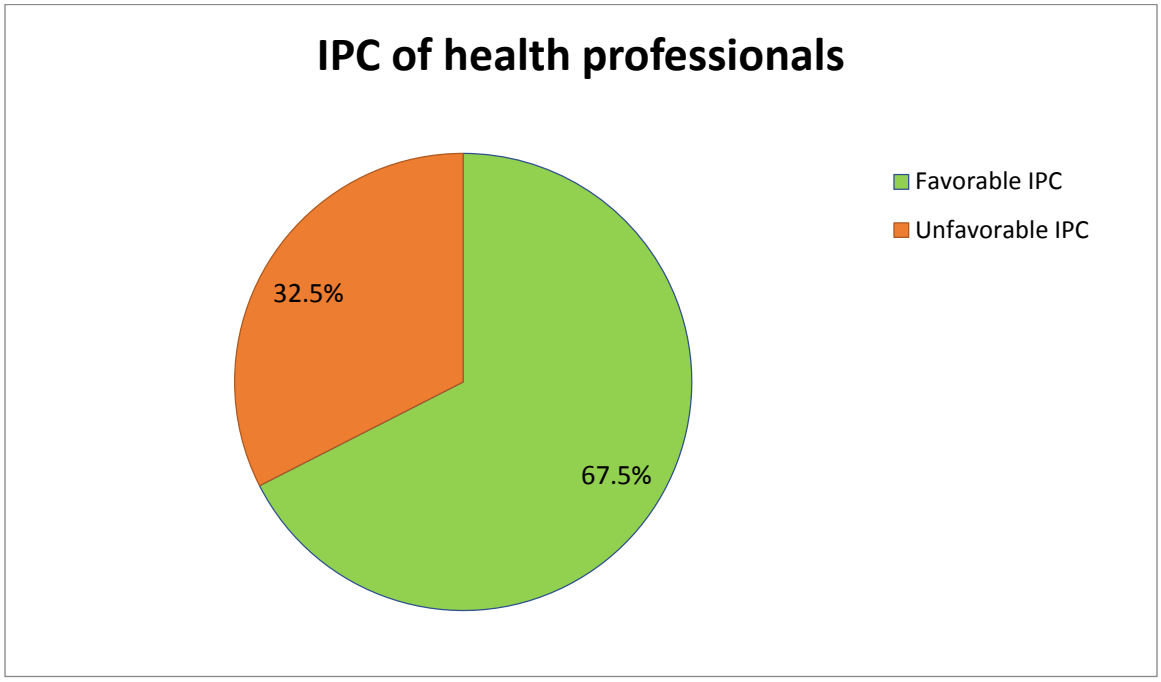


Figure 3: The proportion of inter-professional collaboration of health professionals at public and private hospitals in Bahir dar city, 2022

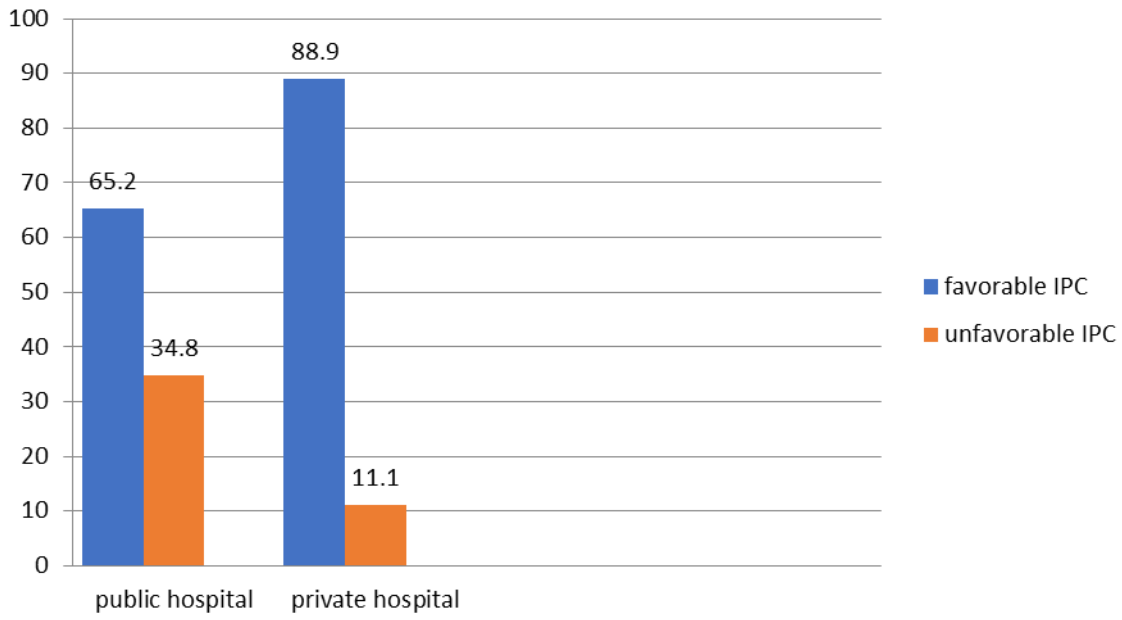


Figure 4: The proportion of IPC in public and private hospitals in Bahir dar, 2022 (N=375)

6.3. Factor associated to inter-professional collaboration of health professionals during health care provision

Models were fitted to assess the inter-professional collaboration. The bi-variable logistic regression result showed that age, marital status, level of education, learning background of the health providers, culture of team work of the organization, physical environment of the organizations, experience of disruptive behavior of individual, attitude of individuals to wards IPC and types of working hospital were candidate variable to multivariable logistic regression.

In multivariable logistic regression (last model) outcomes, learning background, culture of teamwork of the organization, physical environment of the organization and types of working hospital were got statistically significant.

From qualitative findings majority of respondent explained that different factors can promote or hidden the inter-professional collaboration of the health professional during care provision.

As illustrated in table below, the odds of those health professionals who had good learning background increase more than two fold to have favorable IPC when compared those who had not good learning background (P=0.002, AOR=2.32, CI: 1.37-3.94).

Participants from FGD said the inter-professional learning background and preservice training of health professionals was important to develop IPC in real patient caring. It helps them collaborate and communicate easily with other professionals.

One of anesthetist from FGD2 explained *"My good pre service training helps me to interact easily with other health professions. Since in my university there was a good trend of inter-department collaboration. There were simulation center that every department students come together and train how can manage case in collaboration. That helps me to collaborate and communicate with other professions easily."*

And also, good culture of teamwork of the organization increased 2.21 times the favorable inter-professional collaborative practice of health professionals than poor culture of teamwork (p=0.005, AOR=2.21, CI: 1.27-3.84).

The Other FGD1 participant from labor ward, midwife added that
"…*culture of teamwork of the hospital can influence positively or negatively the collaborative practice. Good culture of teamwork of organization/hospital can enhance IPC practice. One of good culture of teamwork is multi-disciplinary round. It is important to improve the collaboration culture during care provision. Because of multi-disciplinary round can improve sharing of skills, knowledge and collaborative decision between health professionals*."

Furthermore, the comfortable physical environment and supportive rule and regulation of the health organization had capability to increase the favorable IPC of health professional by 2.47 times compare with that of uncomfortable physical environment and unsupportive rule and regulation (p=0.002, AOR=2.47, CI: 1.38-4.40).

In qualitative study most of participant agreed that hospital physical environment and supportive rule and regulation can influence on the development and applicability of inter-professional collaboration between health professionals.

One of the FGD1 participant resident explained that "*the organizational level, physical environment and supportive rule and regulation of the hospital can affect the collaboration of health professional during care provision. From my experience in primary and private hospitals the department is small compare to tertiary as well as the number of health providers limited.*

This increases the chance of knowing each other even if call by their name and they can collaborates easily."

Table 3: Multi-variable logistic regression analysis result of inter-professional collaboration of respondents at public and private hospitals Bahir dar city, 2022 (N=375)

Variables		IPC		COR (95% CI)	AOR(95%CI)	P-value
		Unfavorable	Favorable			
Age	20-29	61(27.7%)	159(72.3%)	1	1	
	30-39	64(42.4%)	87(57.6%)	0.52(0.34-0.81)	0.91(0.50-1.66)	0.910
	40-62	1(1.3%)	3(2.7%)	1.15(0.12-11.28)	1.39(0.11-18.39)	0.804
Marital status	Married	82(39.8%)	124(60.2%)	1	1	0.280
	Unmarried	44(26%)	125(74.0%)	1.88(1.21-2.93)	1.38(0.77-2.45)	
Leve of education	Diploma	7(36.8%)	12(63.2%)	1.28(0.47-3.50)	0.15(0.02-1.04)	0.060
	BSc	69(29.9%)	162(70.1%)	1.75(1.09-2.81)	0.96(0.54-1.71)	0.883
	MSc	3(20.0%)	12(80.0%)	2.98(0.80-11.18)	2.65(0.51-13.,84)	0.250
	MD	47(42.7%)	63(57.3%)	1	1	0.150
Profession learning background	Poor	80(50.6%)	78(49.4%)	1	1	0.002*
	Good	46(21.2%)	171(78.8%)	3.81(2.43-5.98)	2.32(1.37-3.94)	
Working experience in year	0.5-10.5	118(93.7%)	240(96.4%)	1	1	0.136
	10.6-20.6	8(6.3%)	9(3.6%)	0.55(0.21-1.47)	0.37(0.10-1.37)	
Culture of team work	Poor	93(73.8%)	93(37.3%)	1		0.005*
	Good	33(26.2%)	156(62.7%)	4.73(2.70-6.96)	2.21(1.27-3.84)	

Physical environment and rule and regulation	Uncomfortable	94(49.0%)	98(51.0%)	1	1	0.002
	Comfortable	32(17.5%)	151(82.5%)	4.53(2.82-7.28)	2.47(1.38-4.40)	
Experience of disruptive behavior	no	84(66.7%)	131(52.6%)	1	1	0.849
	yes	42(33.3%)	118(47.4%)	1.80(1.15-2.82)	1.06(0.61-1.81)	
Attitude of health profession	Unfavorable	78(61.9%)	105(42.2%)	1	1	0.295
	Favorable	48(38.1%)	144(57.8%)	2.23(1.44-3.46)	1.33(0.78-2.27)	

*P<0.05, **p<0.01, ***p<0.001

7. DISCUSSION

In this study, the inter-professional collaboration of health professionals during health care provision is favorable. This study result indicated 253(67.5%) health professionals had favorable IPC.

The finding was nearly in lined study done in Jima university hospital Ethiopia (66.7%)(33). This consistency may be due the study period, study design used, measuring scale of dependent variable and sociodemographic characteristics of study population.

The result of this study was relatively similar to those of studies conducted in Saudi Arabia (59.5%), the Middle East (64%) and Tigray, Ethiopia (60%) (39, 41). However, the finding show better IPC collaboration compared to studies done in Amhara Ethiopia (41%), Tigray Ethiopia (54.3%), Netherlands (38.4%) and Iran (10.5%) (18, 30, 32, 46).

The inconsistency of this finding may be due to study participants in Netherland, the study conducted between midwives and doctors and it limited to only obstetric care unit and study done in Ethiopia may be due to study period, currently the inter-professional learning is better than the previous which helps to develop IPC in health care setting and study done in Iran, the researcher assess only the relation nurses and physicians. It may not be express the whole collaboration.

The finding also thought to be low compared the study done in Malaysia (91.8%)(38). The difference may be due to sample size and study unit. Since, the study conducted in small sample size (146) and only tried to find the relation between nurse and doctors.

Some factors influence this study, one of these higher institution learning backgrounds of health professionals (p=0.002, AOR=2.32, CI: 1.37-3.94), here, professional who had good learning background like multidisciplinary education (IPE), CPD, inter-professional simulation learning practice were crucial to obtained favorable IPC. This is an important way that helps practitioner to develop favorable IPC in clinical area and it should be package of the curriculum.

In the qualitative study the finding was strengthening this factor higher institution learning backgrounds of health professional. Since, most of respondent of FGD participants agreed their

higher institution (university) learning approach influence the current inter-professional collaboration practice. This finding supported by study done in Nakuru country, Kenya, that majority of the respondents were inclined to agree with the statements regarding professional-related factors influencing inter-professional collaboration(a mean of 3.973 and a standard deviation of 0.959) and at primary health care setting in middle east county(41, 44).

The other significant factor this study is, Culture of team work of the organization (P=0.005, AOR=0.45, CI: 0.26-0.79) that is the organization which settled good culture of teamwork was a key to enhance favorable IPC of health professionals. This finding was consistent to study conducted in Tigray Ethiopia and south Africa(45, 46). This indicates the culture of teamwork was a significant factor so as to improve the collaborative practice health care providers.

Again, this finding noted that 192(51.2%) respondent responds physical environment and rule and regulation of the organization not comfortable to implement the IPC. It is significantly associate with IPC respondents (p=0.002, AOR=2.47, CI, 1.38-4.40).

The physical environment and rule and regulation of the hospitals can influence IPC practice of the health professionals. The evidence was supported qualitative findings. Since most of FGD participants were agreed by these factors. This finding is supported study conducted in Oman. That states “The physical environment was seen as a significant element in collaboration. That can be either hindrance or something positive and it added Strong leadership was identified by most participants, both junior and senior, as an important factor in establishing a positive, collaborative environment”(47).

8. LIMITATION OF STUDY

The limitation of the study was self-administered questionnaire used to obtain quantitative data which may under or overestimate the result. To overcome this train the data collectors about data collection and ambiguous words and items were modified.

9. CONCLUSION AND RECOMMENDATION

9.1. Conclusion

In this study most of health professionals had favorable IPC during health care provision.

Some factors like culture teamwork of the organization, physical environment and rule and regulation of organization and higher institution learning background of respondent were found significantly affect the inter-professional collaboration of respondents from considered different possible factors.

9.2. Recommendation

1. For health professional:

Health professionals should be adapted working in team, sharing education, open communication and timely consultation in order to practice IPC and provide quality patient centered care.

2. For organization/hospitals:

The hospital should create conducive working environment and supportive rule and regulation for all health professional to upskill of culture of teamwork and collaborative practice. This may develop by conducting on-job workshops and seminars on inter-professional collaboration skills and knowledge by participating all health providers and providing continuous professional development (CPD) for all health professionals.

3. For regional health bureau:

The regional health bureau should support the hospitals to create good organization culture of teamwork in order to improve inter-professional collaboration of health professionals by providing training, orientation and creating system how to collaborate.

4. Federal ministry of health (FMOH) and higher educational institutions:

FMOH should be giving emphasis about inter-professional collaboration of health practitioner to achieve the mission and vision of health system and incorporate it in to curriculum. Academicians change the learning approach to inter-professional learning. It achieved by applying interactive learning, inter-professional education (IPE) and make IPC as one competency for academic performance.

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12. Annexes

I: Participant Information Sheet

Good morning/ afternoon?

My name is----------. Currently I am a post graduate student at Bahirdar University, College of medicine and Health Sciences, School of Public health, Department of Health system and health economics. And now I am conducting a research to assess inter-professional collaboration of health professionals during health care provision and associated factors.

Title of the research: Inter-professional collaboration of health professionals during health care provision and associated factors at hospitals, in Bahir dar city, North West Ethiopia.

Objective: To assess inter-professional collaboration o of health professionals during health care provision and associated factors at hospitals, in Bahir dar to city, North West Ethiopia, 2022.

I would like to ask you few questions. Your honest response to the questions can make the study to achieve its objective. All the information that you give are kept confidential and private. You are kindly requested to respond voluntarily. You can also choose not to participate in this study or if you become uncomfortable during the study, you were allowed to leave the study at any time. At any time if you have questions, you can contact me by using the following addresses.

Dessalegn Zelelew

Mobile: 0918409227, E-mail: dessalegnzelelew@gmail.com

II: Informed consent

Bahir Dar University

College of medicine and Health Sciences

School of Public Health

Department of Health System and Health Economics

I understand that participation in this study is completely voluntary and that I may withdraw at any time without supplying reasons. I agree to participate in this study to be interviewed, provided my privacy is guaranteed. When signing this consent form to participate in the study, I promise to answer honestly to all reasonable questions and not provide any false information or in any other way purposely mislead the researcher.

Signature of the participant _____ date _____

Name of data collector: _____Signature _____ Date: _____

Questionnaire code ----------

III. English version questionnaire

Part 1 – Background Information

Instruction: Please circle the number in front of the option you choose& fill in the blank

Space that best describe you on the right side of the table.

No.	Questions	Coding categories (Responses)
101	Sex	1. Male 2. Female
102	Your Age in years	_____years
103	What is your current marital status?	1. Married 3. Divorced 2. Single 4. Widowed
104	Your religion	1. Orthodox 2. Muslim 3. Catholic 4. Other (specify)_____
105	Your working experience	_____Years
106	Level of educational qualification	1. Diploma 4. MD 5. Other(Specify____) 2. BSC 3. MSC
107	What is your Position that you presently hold within the hospital	1. Staff (specify)_____ 2. Department head 3. Matron 5. Medical director 6. Others (specify) _____
108	Your current salary(ETB)	_____
109	Your working hospital	1. TGCSH 2. FHCSH 3. GTGH 4. AGH

Part II: Measurements of participants' on the inter-professional

Collaboration of health professional questionnaires.

Instruction: Please circle the number in front of the option you choose on the right side of the table.

No.	Questions	Responses	
		Yes (1)	No (2)
201	Do you greet with work team member and other discipline?	1	2
202	Do you discuss patient's problem with work team member and give solutions?	1	2
203	Do you hold discussions to resolve differences of opinion with work team member in the event of discrepancy about direction of patient care?	1	2
204	Do you plan together with work team member and other discipline about patient needs when patient is to be admitted or discharged to the hospital?	1	2
205	Do you set together the future directions of patient care with work team member	1	2

	and other discipline?		
206	Do you try to prevent medical care accidents together with work team member?	1	2
207	Do you share each other information about a patient's condition and reaction to treatment with work team member?	1	2
208	Do you support each other with work team member and other discipline during patient care?	1	2
209	Do you exchange information and opinion about matters related to work with work team member and other discipline?	1	2
210	Do you show concern for one another with work team member when they are in need of your help?	1	2
211	Do you share each other's opinions with work team member to resolve problems related to patient care?	1	2
212	Do you take into account each other's schedule when you make plan to give care for the patient with team member and other discipline?	1	2
213	Do you always consult work team member and other disciplines when you need consultation?	1	2
214	Do you respond to each other's call when you are in need during patient care?	1	2

Part 3. Professional learning background related factors questionnaires

Instruction: Please circle the number in front of the option you choose on the right side of the table.

	Questions	Responses			
		Strongly disagree(1)	Disagree (2)	Agree (3)	Strongly agree (4)
301	My inter-professional learning with other healthcare professionals will help me to communicate better with patients and other professionals	1	2	3	4
302	My pre-service training and continuous professional development (CPD) have prepared me to collaborate effectively with other professionals	1	2	3	4
303	I believe presence of inter-professional simulation in pre-service training may improve IPC in clinical patient care practice.	1	2	3	4

304	Inter-professional learning is important to enhance IPC and to work in harmony with medical professional of other disciplines	1	2	3	4
305	Inter-professional groups do not work because some health care professionals dominate the meetings	1	2	3	4
306	My pre-service learning help me to develop inter-professional communication skill	1	2	3	4

Part 4. Organizational factors related questionnaires

	Subscale I. Physical environment and rule	Responses				
	Questions	Never (1)	Rarely (2)	Sometimes (3)	Usually (4)	Always (5)
401	Does the health provider team implement multidisciplinary round to provide integrative planning and decision for patient care	1	2	3	4	5
402	Does the hospital use fast communication channel for other discipline during emergency management	1	2	3	4	5
403	Does hospital make physical environment (space, structure..) suitable for IPC	1	2	3	4	5
404	Does hospital rule and regulation support you to implement IPC for quality of patient care	1	2	3	4	5

	Subscale II. Culture of team work	Responses				
	A health-care system that supports effective teamwork can improve the quality of patient care, enhance patient safety, and reduce workload issues that cause burnout among professionals. To support inter-disciplinary practice, you able to:	Never (1)	Rarely (2)	Sometimes (3)	Usually (4)	Always (5)
405	Understand the process of team development	1	2	3	4	5
406	Develop a set of principles for working together that	1	2	3	4	5

	respects the ethical values of members					
407	Effectively facilitate discussions and interactions among team members	1	2	3	4	5
408	Implement multidisciplinary round to improve patient care	1	2	3	4	5
409	Participate, and be respectful of all members' participating , in collaborative decision making	1	2	3	4	5
410	Establish and maintains effective and healthy working relationships with patients/clients, and families, whether or not a formalized team exists	1	2	3	4	5
411	Respect team ethics, including confidentiality, resource and allocation, and professionalism	1	2	3	4	5
412	Collaborate and engage together to formulate implement and evaluate care	1	2	3	4	5
413	Assess, Practice and reflect upon effective group processes	1	2	3	4	5

5. Individual related factors

	Subscale I. Disruptive behaviors	Responses			
	Disruptive behavior is disruptive behavior as any inappropriate verbal or physical violation behavior that affect IPC…patient outcome	Strongly disagree (1)	Disagree (2)	Agree (3)	Strongly agree (4)
501	Facing physical violence (throwing objects, pushing or hitting, violating' privacy, pointing fingers) from your colleague or other health professionals can disrupt the IPC.	1	2	3	4
502	Facing sexual harassment and condescending language from colleague or other health professionals can disrupt the IPC.	1	2	3	4
	Subscale II. Attitude of health professional to IPC				
503	Multidisciplinary interaction believes to improves quality of patient care	1	2	3	4
504	It is believed that IPC improve quality of work and performance, enhance knowledge and skill sharing, reaching more achievable goal for patient centered and reduced medical errors	1	2	3	4
505	In my feeling the individual health professional skill and	1	2	3	4

	knowledge is enough to deliver quality of care				
506	I think inter-professional collaboration is not necessarily important in health care provision.	1	2	3	4

IV. Qualitative data collection questionnaire (for FGD)

i. English version questionnaire

1. What seems like (trend of) the inter-professional collaboration of during care provision?

- Related collaborative discussion and intervention
- Multi-disciplinary care eg. Mother who came with PPH, MI, and orthopedic case

2. What will be the factor that brings good IPC and poor IPC? This related to

- Level of or size of working hospital(from experience)
- Culture of team work of the hospital
- Individual inter-professional learning background
- Physical environment of hospitals
- Others--------

3. What is the benefit of inter-professional collaboration? in context of

- Providing standard quality of care for patients
- Provider professional satisfaction
- Achieving the goal of the organization

ii. የ አማረኛ ማጠይቅ ለ ኤፍጂዲ

- የ ጥራት ሚጃ ማነብሰብ ማጠይቅ (ለ ኤፍጂዲ)
- የ መጀመሪያ ው የ ወይይት ጥያቄ

1. በ እንክብካቤ አቅርቦት ወቅት በ ባለ ሙያዎች መካከል ያለ ው ትብብር (አዝ ምዒያ) ምን ይመስላል?

- ሁሉን ባለ ሙያ ወችን ያሳተፈ የ ትብብር ወይይት እና ወሳኒ ከ ማስጠት አንፃር

- ባለ ብዙ ዲሲፕሊን እንክብካቤ ለሚፈልጉ ታካሚዎች ለምሳሌ. የደም መፍሰስ፣ የልብ ህመም እና የአጥንት ስብራት የገጠማቸው እናት በምትመታበት ጊዜ ያለውትብብር ምን ይመስላል

2. ጥሩ የሆነ በባለሙያዎች መካከል ያለ ሙያዊ ትብብር እና ደካማየሆነ በባለሙያዎች መካከል ያለ ሙያዊ ትብብር የሚያመጣውምን ሊሆን ይችላል? ይህም

- ከሚሰሩነት ሆስፒታል ደረጃ ወይምማጠን አንጻር
- ከሆስፒታሉ የቡድን ስራ ባህል አንጻር
- ከባለሙያዎች የከፍተኛ ትምህርት አሞጫር ሁኒታ (የኢንተር-ፕሮፌሽናል ትምህርት ዳራ) አንጻር
- የሆስፒታሎች አካላዊ አካባቢ ሁኒታእና ማጠን አንጻር
- ሌሎች-------

3. የባለሙያች ትብብር ምን ጥቅምአለው? አወድ ወስጥ

- ለታካሚዎች ደረጃውን የጠበቀ የህክምና አገልግሎት ማስጠት አንጻር
- ከባለሙያች ሙያዊ እርካታጋር ተያይዞ
- የድርጅቱን አላማከማሳካት አንጻር

APPROVAL SHEET

Submitted by:

Dessalegn Zelelew		05/04/2022
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Approved by:

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2. _____	_____	_____
Name of Advisor	Signature	Date
3. Melesse Belaynesh		05/04/2022
Name of Evaluator	Signature	Date
4. _____	_____	_____
Name of Evaluator	Signature	Date
Hab...		13-10-14 E...