Interprofessional collaborative practice in primary healthcare settings in Indonesia: A mixed-methods study

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ABSTRACT

Background: Interprofessional collaborative practice (IPCP) in high-quality healthcare is contextual and dynamic. Objectives: The study aimed to identify the perceptions of the current workforce towards IPCP and to explore the challenges and barriers associated with socio-cultural values and other factors that could potentially affect the implementation of IPCP.

Design: This study adopted a mixed-methods-explanatory sequential design.

Participants: Participants were health professionals in primary health care setting who voluntarily participate in the study and recruited using systematic random sampling.

Methods: A 53-item validated Collaborative Practice Assessment Tool (CPAT) with 8 subscales was administered in the quantitative stage and focus group discussions were completed in the subsequent stage.

Results: A total of 303 health professionals participated (61.8% response rate), from which 290 completed questionnaires were eligible for further analysis. Based on the collaborative practice assessment tool, the mean score = 204.05 with highest possible = 265. Nine focus group discussions involving 73 health professionals were held. Comparative analyses based on group demographics on quantitative data and thematic analyses for qualitative data, were conducted. Between the physicians and other groups, there were score differences in the leadership and vision–mission–aims subscales, as well as the decision-making (based on length of work experience) and patient-involvement subscales (based on age). The semantic thematic analysis resulted five themes: structures, supporting factors, inhibiting factors, perceived benefits and challenges of IPCP.

Conclusion: The respondents’ perceptions towards interprofessional collaborative practice were positive. There are differences which could be attributed to professional background, the length of work experience and age. Factors at the organisational, group and individual levels contributed in IPCP at the primary care setting. They include socio-cultural factors such as uncertainty avoidance tendency, power differentials, and collectivist culture.

1. Introduction

The current landscape of health services around the world, including in developing countries, is determined by the emergence of infectious diseases; epidemiological transitions from communicable diseases to non-communicable diseases; and climate, environmental, behavioural and demographic changes. Health professionals are expected to work together effectively to overcome these health risks. There are challenges which need to be considered, however, such as the mismatch between the competencies of health professionals and the needs of the population, as well as poor teamwork skills, weak leadership skills and other issues among health professionals.1,2

The ability to work as a team has become an important pillar of health-service improvement. Relevant competencies in interprofessional communication, conflict management, leadership, patient-centred care and ethical practice3 are developed through interprofessional education (IPE) and interprofessional collaborative practice (IPCP).4 The benefit of interprofessional collaborative health service is...
evident; it improves, for example, access to and coordination of health services, services for patients with chronic diseases, the efficiency of patient-referral and patient-care systems, and the quality of community health services. In addition, interprofessional collaboration also reduces the complications experienced by patients, such as length of hospital care, staff turnover in health services, undesirable events in healthcare, and mortality.\textsuperscript{5-7} Reeves, Perrier, Goldman, Freeth & Zwarenstein, (2013).\textsuperscript{49} An updated systematic review by Reeves et al.\textsuperscript{2} also underlines that interprofessional activities such as collaborative planning, reflection activities, interprofessional rounds, interprofessional meetings, and interprofessional activities may slightly improve patient health outcomes, patient care efficiency outcomes, and collaborative behaviour outcomes. Despite this, the studies which fulfilled the review criteria show low certainty; therefore, this calls for further rigorous mixed-method and longitudinal studies.\textsuperscript{8}

A study by van Schaik, O’Brien, Almeida and Adler\textsuperscript{9} suggests that the characteristics of a strong interprofessional team includes effective teamwork, good leadership and clear common goals. The ways in which group members work and interact with each other greatly affects the quality of their teamwork. For example, a team's hierarchy often determines which member will be the team leader, while the hierarchy itself is influenced by several factors, such as seniority, experience and culture. Van Schak et al.’s\textsuperscript{5} study further emphasises the need for each group member to identify prejudices, negative stereotypes and hierarchies within the healthcare system.

Understanding the role and authority of each health profession is a crucial factor for effective teamwork. MacNaughton, Chreim and Bourgeault\textsuperscript{10} proposed a useful model for role construction and interprofessional boundaries in primary healthcare teams. Their study highlighted that flexible role boundaries between health professions can be implemented by considering two important aspects: interprofessional interactions (i.e. whether the role can be done autonomously or collaboratively) and distribution of tasks (i.e. whether the roles are differentiated or interchangeable). Several factors can influence the dynamics of interprofessional collaboration, such as workplace characteristics, interpersonal factors (including the dynamics between team members and leadership) and personal attributes.\textsuperscript{10}

Xyrichis and Lowton\textsuperscript{11} conducted a systematic review to identify the factors that drive or inhibit IPCP. They found that teams with a greater variety of health professionals tend to perform better, but uncertainty about team goals and leadership can lead to poor-quality work.\textsuperscript{12} For interprofessional cooperation to work effectively, trust, team confidence, team orientation, psychological comfort, mutual respect and team development are required.\textsuperscript{12} A focus group study performed in the primary health centres of Indonesia underlined several factors that contribute to collaborative practices at the organisational level, the health-system level and the personnel level.\textsuperscript{13}

IPCP in healthcare cannot simply be formed, however; it requires an educational process that enables students to develop interprofessional cooperation, communication skills, recognise the roles and responsibilities of their chosen professions as well as other health professions, and provide patient-centred health services, which are encompassed in IPE.\textsuperscript{14} Differences in the implementation of IPE and IPCP between hospitals or educational institutions is influenced by various factors, including socio-cultural characteristics within an institution or within each group of health professions. To the authors’ best knowledge, the implementation of IPE in Indonesia and other Asian countries varies significantly. Some countries have implemented IPE to a broader degree than others within the region, as evidenced by Watanabe and Koizumi (2010)\textsuperscript{15}, who explored the experiences and practices of various IPE programs in Japan. In Indonesia, while Soemantri et al.\textsuperscript{16} have formulated national guidelines for IPE implementation, including a curriculum framework, IPE is still in a very early stage and tends to be sporadic depending on the abilities and commitment of each educational institution and health professional. The differences between Japan and Indonesia are just a few examples of the state of IPE implementation in Asia. Readiness among educational faculty and students has also been cited as a significant factor in the development and implementation of IPE\textsuperscript{16}.

Prior to the present study, no research has explored the similarities and differences in value and culture that affect the development and implementation of IPCP and IPE in various Asian countries, including Indonesia. Regarding IPCP in particular, no previous study has thoroughly evaluated the ways in which IPCP has been implemented in various healthcare settings, both in hospitals and primary health centres or other primary care settings, and the current workforce in Indonesia has virtually never received interprofessional courses or training. As such, this study aims to identify the gap between the requirement to implement IPCP in Indonesia and the perceptions of the current workforce towards IPCP, thereby highlighting the importance of bridging this gap. To achieve this, the authors measured the IPCP of primary care centres in Depok City, Indonesia, using a validated collaborative practice assessment tool (CPAT).\textsuperscript{17} The authors also explored the challenges and barriers associated with socio-cultural values and other factors that could potentially affect the implementation of IPCP. This exploration is in line with the spirit of the globalisation of health education and practice, which not only imposes homogenisation and the adoption of favourable IPCP and IPE practices from Western countries but also encourages adaptation (hybridisation).\textsuperscript{10}

2. Methods

2.1. Context

The Indonesian health system is evolving from a fee-for-service model towards universal health coverage, thus requiring many alterations to daily practices in primary, secondary and tertiary care settings. One major issue arising from these changes is an increasing demand for team-based practice. The government recently announced a team-based placement model for health professionals, which will be deployed to the most rural areas of Indonesia. The programme is called ‘Nasunanta Sehat’ which comprised of various background of health professionals. An accreditation system was also introduced in the nation’s primary care centres, with an emphasis on implementing collaborative practices.

Primary care centres in Depok City were chosen as the study setting, as the first author's institution is within this area. Depok City covers an area of 200.29 km\textsuperscript{2} divided into 11 regencies, with a registered population of 1,430,190. There are 35 primary care centres in this area, all of which were included in the study.

2.2. Research design

The study adopted a mixed-methods i.e explanatory sequential design, using both quantitative and qualitative approaches. The first stage involved circulating the validated CPAT (Indonesian version\textsuperscript{11}); to all primary care centres in Depok City, whereas the second stage was comprised of focus group discussions (FGDs) to explore the enabling factors and obstacles of collaborative practice, as perceived by health professionals, which were then attributed to the socio-cultural factors present their daily practices. The inclusion criterion was health professionals who self-identified as having experience in IPCP. The definition of IPCP was provided in the questionnaire and introduced in the FGD following the leading question on understanding on the interprofessional collaborative practice (question number 1) to assure that the health professionals can self-identify correctly.

2.3. Data collection

For the first stage, a systematic random sampling technique was implemented, which considered the proportion of each health profession in the primary care centres. The minimum sample size was
calculated at 216 (with $Z_{a}$ power was determined at 1.96 with sensitivity of 5%, confidence level of 95%, and an anticipated dropout rate of 10%). The sample size for each health-profession group was adjusted according to the total population of 490 and the proportion of health professionals available in the primary care centres. A total of 420 questionnaires, with informed consent forms attached, were distributed to the eligible health professionals. The total number of distributed questionnaires considered the aim of involving different health professionals in 35 district primary care centres in Depok and in facilitating the questionnaire administration (a total of 12 questionnaire was directly distributed in each centre).

For the second stage, the authors invited 73 of the respondents from the first stage to participate in FGDs. The authors arranged the participants into small groups of 8–10, based on the professions. There were nine groups in total, which consisted of two groups each of midwives, physicians, nurses and other professions, and one group of dentists. The total number of groups of each profession considered the proportion of the profession in the primary health centres (see Table 2). Unprofessional groups were chosen to give participants convenience to share specific perspectives from each profession in regards to the interprofessional collaborative practice. To determine the total number of FGDs, data saturation was considered. The duration of each FGD ranged from 60 to 90 min, in which one researcher acted as the moderator. Another researcher assisted with recording each session, after obtaining the participants’ consent. Verbatim transcriptions were developed from the recordings.

### 2.4. Instruments

A validated Indonesian version of CPAT questionnaire was used in the first stage of this study. The CPAT was originally developed in Canada to assess levels of collaboration based on the health professionals’ perceptions in practice setting. The 56-item instrument underwent a robust adaption process: translation and back translation, expert panel review and exploratory factor analysis, and resulted in 53 questionnaire items with 8 subscales (Cronbach’s $\alpha$ value of 0.916). This present study used the 53-item CPAT Indonesian version.

The FGD was moderated by researchers and utilised several guiding questions (Table 1).

### 2.5. Data analysis

Quantitative analyses were completed using SPSS 22.0. Descriptive analysis was conducted to describe the respondents’ characteristics. Internal consistency analysis of the CPAT instrument using Cronbach alpha was completed. Given the abnormal distribution of data based on health profession, length of work and age group (Kolmogorov–Smirnov test, $p < 0.05$), further analysis used a non-parametric approach to compare median for more than two groups of data (Kruskal–Wallis test). Afterwards, Mann-Whitney test was used as a non-parametric post-hoc test to assess difference between each two groups in the respective dataset.

After the FGD transcriptions were completed, they were analysed to identify key themes. Independent theoretical thematic analyses were conducted by four of the authors (AF, DS, DRK, ABT). Each two authors independently identified explicit meanings of what the participants had said and documented in the transcription. The researchers discussed the emerged themes and subthemes until agreement was reached. The subsequent thematic analysis process of the five transcriptions was completed using the agreed-upon themes.

### 2.6. Ethical considerations

This study has been approved by the Research Ethics Committee of the Faculty of Medicine, Universitas Indonesia. All quantitative and qualitative data has been kept secure and can only be accessed by the authors. The questionnaires were completed anonymously, and pseudonyms were used in the FGD transcriptions as well as any reports or publications that resulted from the study.
3. Results

3.1. Survey of IPCP using the CPAT

Out of 490 total, 303 health professionals in Depok City primary care centres participated voluntarily in the study, resulting in a 61.8% response rate, which exceeds the minimum sample size required. A total of 13 respondents self-identified themselves as having no experience in healthcare interprofessional collaboration despite the provided definition in the questionnaire. Therefore, the 13 responses were excluded from the dataset and resulted in the final 290 responses to be analysed further. The 53-item CPAT used in this study has high internal consistency (0.901). The reliability coefficients of the subscales range between 0.539 and 0.890.

Table 2 describes the demographics of the respondents in the survey and FGD stages. Almost all the respondents were female (91.4%), with a larger proportion between the ages of 31–50 years old. Physicians, nurses and midwives were the three largest health-profession groups, and most of the respondents (62.4%) had been working in their respective professions for more than 10 years.

The mean CPAT score was 205.8, which is 77% of the highest possible score of 265 (scores ranged between 157 and 255). Based on health profession, there are no differences in scores across the CPAT subscales, except for leadership (Subscale 6) and missions, goals and objectives (Subscale 7) (see Table 3 for the comparison of the 5 groups using Kruskal-Wallis test). A post-hoc analysis using the Mann–Whitney test showed that the differences are as follows:

- **Subscale 6: Leadership**: There were significant differences between the physician and nurse group and between the physician and midwife group ($p = 0.017$ and $0.035$, respectively), physician and other-health-profession group ($p = 0.007$), and the dentist and other-health-profession group ($p = 0.042$).

- **Subscale 7: Missions, goals and objectives**: There were significant differences between physician and nurse group ($p = 0.030$), physician and midwife group ($p = 0.004$), and physician and other-health-profession group ($p = 0.006$).

Based on length of work experience, there was a significant difference (Kruskal–Wallis test, $p < 0.05$) in scores for Subscale 5 (Decision making and conflict management). This subscale was only comprised of two items, which reflects its instability. A post-hoc test revealed a significant score difference between groups with 1–5 years and more than 10 years of work experience (Mann–Whitney test, $p = 0.006$).

Finally, based on age group, there was a significant difference in scores for Subscale 8 (Patient involvement, responsibility, autonomy). A post-hoc test showed that there were significant score differences between the age groups of 20–30 years and 31–40 years ($p = 0.048$), 20–30 years and $>$ 50 years ($p = 0.005$), and 41–50 years and $>$ 50 years ($p = 0.006$).

3.2. FGDs on factors influencing IPCP

Table 2 describes the composition of the FGD participants based on gender, health profession, age group and length of work in the profession. The proportion reflects the composition of the respondents based on the demographic characteristics in the survey stage quite adequately.

Thematic analyses revealed the themes and subthemes of the participants’ responses (see Table 4). The number of quotes reflecting each theme and subtheme were tallied, and descriptions for each theme and subtheme, along with a selection of quotes, is provided in the following subsections. The quotes were tagged using a detailed set of information, including the FGD number (“FGD#”), the participant’s number/code within the respective FGD (e.g. ‘T’, ‘R’, ‘N#’, etc.), the participant’s profession and the page the quote can be found on within the
findyartini et al. did not work according to their competencies. One of the nurses noted:

...between health professionals when they are not profession-specific. In a smaller healthcare setting, the roles of health professionals are blurred, especially when boundaries are not professional and as long as blurring them does not harm the patients and communities being served. A study shows that, given the heavy burden of work in the primary care setting, since the scale of healthcare is smaller compared to the hospital setting. In addition, given that there is much work to do in individual/patient-based and community-based healthcare, collaboration is inevitable; health professionals must work collaboratively by recognising each health profession’s role for patient care because all their healthcare and administrative obligations would not be completed otherwise.

Most of the participants underlined that the structure of interprofessional collaboration is impacted by limited human resources. This study shows that, given the heavy burden of work in the primary health care setting, the roles of health professionals are blurred, especially when they are not profession-specific and as long as blurring them does not harm the patients and communities being served. A selection of quotes on this topic is as follows:

"Since we do not have any dental nurses in our primary healthcare centre, I do rely on my paramedic friends who were not trained as dental nurse[s] to help me [provide dental care]." (FGD3_Dentist_N_5)

This study also identified the danger of blurring the boundaries between health professionals’ roles, which occurred when there were problems in delegating patient care and when the health professionals did not work according to their competencies. One of the nurses noted:

"If the doctor needs to attend important meetings, sometimes—reluctantly—we need to cover everything, from registration [and] patient examination to prescribing drugs." (FGD8_Nurse_S_4–5)

There are two categories of primary healthcare settings in Depok City; Technical Implementation Units (Unit Pelaksana Teknis [UPT]) and Functional Implementation Units (Unit Pelaksana Fungsional [UPF]). The first category had more health professionals from diverse backgrounds. Consequently, interprofessional collaboration in these settings was more feasible and ideal. Interprofessional collaboration was also observed in the referral system between health professionals, as evidenced in the following quote:

"The nurse will take the history of the dental patient first, and [then measure] their blood pressure. I will then treat the patient. Then, when I prescribe [a] certain drug and [it] turns out that our pharmacy does not have it, the pharmacist assistant will contact [us] and say, ‘The drug you prescribed is not available. Can we change it with another drug? Will there be any allergic reaction?’ And then I will ask the patient whether he/she is allergic to certain drugs or not. If the problem is, for example, high blood pressure, I will refer [the patient] to the physician first; [this is the] internal referral system. The physician will prescribe antihypertensive drugs. I am grateful that the patient can be treated holistically [in this way]." (FGD3_Dentist_I_4)

Finally, the participants also suggested that meetings among health professionals in the primary healthcare setting is one of the most important elements of interprofessional collaboration.

### 3.4. Supporting factors for IPCP in primary healthcare settings

Several supporting factors for IPCP were identified. The five most common factors across the focus groups were communication and ‘togetherness’ of the team members, standard operational procedures...
(SOPs) for interprofessional collaboration, supportive leadership and role model, role distribution of health professions and good medical records and referral documentation. The participants from diverse health-professional backgrounds highlighted ‘communication and togetherness’ as the backbone of IPCP. A selection of quotes on this topic is as follows:

“Given [the] small scale of our primary healthcare centre, we have this benefit of frequently meeting...each other. In the morning, we usually [meet to coordinate] what we will do today, where to go and so on. Such communication is very important.” (FGD4_Psychiatric_N5_14)

“When we do it together and we have good communication, it means [our] differences can be overcome.” (FGD6_Other health profession_1_8)

SOPs were also found to be a supporting factor for interprofessional collaboration. In this setting, SOPs are those which explain the health professionals’ roles and responsibilities in collaborative healthcare practices, as described in the following quote:

“The work and organisational structure has to be developed well. Physicians, dentists and other health professionals have their own roles and responsibilities. I will add [further details,] such as who [is] responsible for patient-based healthcare and who [is] responsible for community-based healthcare. Therefore, the roles and responsibilities are clear [and] in accordance with the competencies, ...both individual/patient-based and community-based healthcare can be conducted.”(FGD3_Dentist_R_24)

Furthermore, supportive leadership and role models are considered fundamental for IPCP. The participants suggested that supportive leaders should nurture collaboration, balance health professionals’ workloads and provide good role-modelling for collaborative practice. Leadership was also expected to distribute the roles of the health professionals in each primary healthcare setting in a clear and balanced manner. One example of this can be seen in the following quote:

“In our centre, there are groups of health professionals. [The head of the centre] is very smart in encouraging and allowing all of us from different groups [to work together]. No one has hard feelings, and whenever there is conflict [among us], [the head of the centre] will not accuse certain groups.” (FGD2_Midwife_12)

The understanding of role distribution for patient care according to each profession’s competence was also recognised as one of the supporting factors of IPCP, as described in the following quote:

“....when I have an incoming prescription, I would prepare it accordingly. [When I give the medicine to the patient], I usually ask the chief complaint of the patient before I give the medicine. [This way], I can check whether there are mismatches of the patient’s chief complaints and the prescription. [Should I find something suspicious], I would reconfirm it to the doctor.” (FGD7_Other health profession_2_5)

As mentioned earlier, participating in an internal referral system, especially between different health professions, is considered an important form of collaboration. Accurate medical records and referral documentation were identified as supporting factors for IPCP. A selection of quotes on this topic are as follows:

“We have a referral form [for patients transferring] between outpatient clinics. [We realise] that [referrals] cannot [only] be done... verbally, since there will be no evidence.” (FGD3_Dentist_N_11)

3.5. Inhibiting factors for IPCP in primary healthcare settings

This study also uncovered several inhibiting factors for IPCP, including unbalanced workloads, inadequate human resources and interpersonal barriers, such as issues with communication. Unbalanced workloads among health professionals could be caused by ineffective leadership. Since IPCP in primary healthcare settings are often conducted with limited human resources, unbalanced workloads may hinder collaboration. The following two quotes describe this finding:

“I wonder why [the] physicians tend to ask [for] help from the nurses while different attitudes are directed towards [the] midwives. I feel like my midwife colleagues are very relaxed. For example, when a physician want[s] the midwives to measure [a] patient’s blood pressure, they can say no, while we cannot.” (FGD8_Nurse_T_17)

Limited human resources was identified as the main deterrent keeping primary healthcare centres from achieving ideal collaborative practices. One participant shared a strong opinion about this, as follows:

“I think all primary healthcare centres would face the same problem. [The health professionals] will have a lot of roles and responsibilities. For example, a physician will be assigned to lead four to five programmes. When we, for example, have to deal with trauma patients in the emergency [department], we have to leave the outpatient clinic. When there is only one physician in the centre, ... patient care in the outpatient clinic will stop. [In another case], when a physician need[s] to fulfil [their] duty [in the] integrated health services unit [in the community], the outpatient clinic in the centre will have no physician and needs to be run by other health professionals.” (FGD4_Psychiatric N6_13)

In addition, both interpersonal and interprofessional communication barriers were identified as inhibiting factors for collaborative practice. The participants considered these barriers to be related to the socio-cultural backgrounds of the individuals and the health professions. Seniority and hierarchy within the health system was also suggested as an inhibiting factor. A selection of quotes on this topic are as follows:

“When I was assigned [to] the primary health centre [in Depok] before moving to current primary health center, the nurses were all more senior than me. I think I was the youngest health personnel [at] that time. Because there was a high patient load, and there were only two physicians—myself and the head of the centre—we often asked for the nurses’ help to manage patients who did not need antibiotics. One of the nurses refused to help me even though she [was] not doing anything [at] that time. I was upset and complained about this attitude.” (FGD4_Psychiatric N2_23)

3.6. Perceived benefits of IPCP in primary healthcare settings

Most of the health professionals in the primary healthcare settings noted that the main benefit of IPCP is safer, more effective patient care. For example:

“For us, it means that we can work more safely. When I had an elderly patient with teeth problem, I suspected that he might have diabetes mellitus. He looked sick. When we referred [him] to the lab, [it] turned out that [his] glucose level was 500. If I did not collaborate with the analyst in the lab, it could [have been] dangerous for the patient [to undergo] a dental procedure.” (FGD3_Dentist_I_15)

Other perceived benefits include pride among health professionals when they collaborated well and help each other while conducting health services. Feelings of pride also came from having the role of each health profession in interprofessional collaboration.
3.7. Challenges of IPCP in primary healthcare settings

The final theme resulting from the thematic analyses is the challenges of implementing IPCP in primary healthcare centres. Two main challenges were identified: implementation of the national health insurance system and patient/public expectations regarding the roles of health professionals in healthcare provision. One example of this appears in the following quote:

"...In our society, the paradigm being [maintained] is not disease prevention. Whenever [patients] are ill and they feel that they have already paid for...health insurance, they want to get treated and get medicine. Therefore, we are not yet able to arrange time for outpatient [care] and other programmes..." (FGD4-Physician_N1_7)

4. Discussion

This mixed-methods study assesses IPCP in primary healthcare settings within Depok City, Indonesia, using a CPAT (Indonesian version), thereby revealing the perceptions of health professionals towards IPCP, as well as the influencing factors. The demographic data captured by the CPAT shows that the participants are varied in their health profession backgrounds (i.e. physicians, dentists, nurses, pharmacists, health analysts, radiographers, public health practitioners and nutritionists), which allows for the contribution of each field to the healthcare and interprofessional collaboration in each primary healthcare centre. The more diverse the health professionals’ background are, the better the team performance. However, each health professional may want to demonstrate the roles specific to their profession; this can lead to team conflict if it is not well anticipated.

In the primary healthcare setting, the internal consistency of the CPAT (0.901) and its subscales (0.539–0.890) are high. For Subscales 2 (barriers in team collaboration), 5 (decision making and conflict management) and 8 (patient involvement, responsibility and autonomy), the internal consistency tended to be lower than for other subscales. Internal consistency for each subscale was determined by the response patterns, the total number of items within the subscale and the item relevance, among other factors.

The relatively low internal consistency of Subscale 5 (0.553) can be explained by its very limited number of items (only 2). In the hospital setting, however, the CPAT administered had better internal consistency in this subscale (0.768). For all subscales, tendencies towards low internal consistency may be explained by inconsistent response patterns by the health professionals, which can be attributed to socio-cultural factors influencing interpersonal and interprofessional interactions.

The low internal consistency in barriers in team collaboration (Subscale 2) can be explained by the high amount of uncertainty avoidance among Asians. This cultural phenomenon reflects the anxiety or discomfort of a group of people when they are exposed to uncertain or unknown situations. Barriers in team collaboration encourage members to assess the conflicts that may happen at the individual, interpersonal and interprofessional levels. Individual responses to these barriers require flexibility, as both the problem-solving process and its solution can be uncertain. High uncertainty avoidance encourages individuals to favour the presence of rules and clear guidelines for overcoming barriers. In a study by Soemantyri et al., the internal consistency of this subscale is better (0.663) than in the present study, but it was still relatively low compared to the other subscales. The possible influence of uncertainty avoidance was also evident in other studies, as seen in the low internal consistency of the ‘flexibility in thinking’ subscale in a diagnostic thinking inventory.

Furthermore, low internal consistency in decision making and conflict management (Subscale 5), and patient involvement, responsibility and autonomy (Subscale 8) may reflect a hierarchical culture, which is also common in Asian countries. Reeves stated that power differentials can influence IPCP in healthcare. Hierarchical culture corresponds to large gaps in power, in which authority, including decision making, is not equally distributed throughout society.

Overall, the CPAT scores were good, indicating that the health professionals in the primary healthcare centres of Depok City have a positive perception of interprofessional collaboration. Further analyses of the CPAT showed differences between several subscales, based on health profession, age group and length of work experience. When analysing the scores based on health profession, the authors found a significant difference in the leadership subscale (6), in which the physician group had a slightly lower score compared to other groups (nurses, midwives and other health professions). Leadership is fundamental to IPCP in healthcare, including the primary healthcare setting. Moreover, leadership in IPCP is quite a complex concept, due to several reasons, one of which is the need to be dynamic and flexible according to healthcare needs.

According to Turner (1995), from a sociological perspective on health profession development, physicians may see leadership in IPCP as one of three processes: subordination, limitation and exclusion. In the subordination process, physicians delegate professional healthcare activities to nurses or midwives; hence, the autonomy or self-regulation of other professions is limited. In the present study, the results may indicate that this process operates within the primary healthcare centres of Depok City. As mentioned earlier, the physicians’ leadership approaches may also explain the difference in perspectives regarding the missions, goals and objectives of IPCP in healthcare (Subscale 7) between the physician group and the nurse and other-health-professional groups.

The FGD results underline the importance of leadership in primary healthcare settings, which nurtures and encourages a balanced distribution of roles and responsibilities within the interprofessional team. The concepts of transformative leadership, which include becoming a good role model for the surrounding people, nurturing the spirits of others and inspiring others when around them and providing moral encouragement from the rear are highly relevant to interprofessional collaboration. Transformative clinical leadership, which highlights both leadership and active followership, is considered to be a key determinant in the success of IPCP implementation in any clinical setting.

The present study also demonstrated that most health professionals in primary healthcare centres within Depok City have worked in their respective fields for a long time. For Subscale 5 (decision making and conflict management), there was a significant score difference between the groups with more than 10 years of experience and the groups with 1–5 years of experience. Having diverse lengths of work experience within the interprofessional team allows members to interact with other health professionals whose backgrounds differ from theirs, thereby helping them adapt to a variety of collaborative processes, and gaining more work experience enhances the health professional’s understanding of the roles of other health professions involved in the collaborative practice; Sayed, 2011). This may further support the group dynamics within a health interprofessional team towards performing stage. In addition, self-confidence in decision making and conflict management may also be facilitated by maturity, seniority and knowledge of the health system, and self-confidence influences the effectiveness of the collaborating team. This finding was also supported by the FGDs, which underscored that seniority may have a positive impact when senior health professionals use their positions to be good role models for junior health professionals, thus helping them adapt to the IPCP environment.

Subscale 8 of the CPAT explored the perceptions of health professionals towards patient and family involvement in decision making and the role of each health profession in the process. The quantitative analysis revealed that these perceptions can be influenced by age group; health professionals > 50 years old achieved a lower score in this subscale compared to the other age groups. This finding can be explained by the generational gap between older and younger health professionals, which led to different perspectives on patient...
involvement in the decision-making process. The older generation did not seem to regard patient involvement as a critical aspect of healthcare provision in primary health centres. This may reflect the hierarchical nature of the relationships between health professionals, their patients and the patients' family members. The FGD results also showed that the health professionals (i.e. physicians) attempted to satisfy their patients' requests that all information related to nutrition and disease management be directly provided by the physician. This may introduce challenges to the IPCP, since the attempt may limit delegation process of healthcare management to other health professionals.

Results from the qualitative analysis of the nine FGDs, some of which were mentioned earlier in relation to the quantitative results, provided further insights into the structures of collaborative practice and its influencing factors in the primary healthcare setting. The findings indicate that IPCP should be encouraged in primary healthcare. All the health professionals, regardless of background, were unable to take on the heavy burden of providing comprehensive health services for individuals, families and communities in Depok City without collaborating with colleagues from other health professions. This is in accordance with the definition of IPCP, which is described as integrated co-operation among health professionals with different professional backgrounds, accompanied by a possible blending of competencies and skills that allows the effective utilisation of human resources for patient care. This blending is an attempt to overcome the burden of patient care, both in the primary healthcare centres and in the community, despite limited human resources, thereby enabling the interprofessional team greater flexibility and responsiveness to patient needs. However, this method must be used in tandem with a deep understanding of the competencies and roles of different health professions, thus ensuring that the interprofessional team does not exceed patient needs while still complying with patient- and community-safety protocols. In addition, the blending of professional roles in healthcare may erode professional identity. In the present study, example of confusion over professional roles happened among dental nurses who were assigned to perform a tooth extraction while the dentist completed other healthcare tasks.

Professional role formation requires both the creation and negotiation of tasks, which refer to individual multi-functions to fulfil the team's responsibilities; A role reflects the uniqueness of a professional's competency, knowledge and skills. The present study revealed that, in the primary healthcare setting, health professionals tend to engage in collaborative interactions and differentiated role distribution when dealing with individual patient care, whereas, in community-based healthcare, they tend to engage in collaborative interactions and interchangeable role distribution. Limited human resources seemed to be the main determinant of the form of IPCP the health professionals engaged in. Leadership, as an interpersonal element, as well as the attitudes and competencies of the health professionals in this setting also affected the form of IPCP. Health professionals should consider their role boundaries to be in constant flux, due to cultural and social interactions. The present authors believe that this concept is highly relevant to leadership in the primary healthcare setting, especially concerning the distribution of roles and responsibilities among health professionals according to individual or community-based healthcare needs. The dynamics of the professional role formation also highlight that patient-centred care in various settings also requires the provision in primary healthcare centres. This may reflect the hierarchical nature of the relationships between health professionals, their patients and the patients' family members. The FGD results also showed that the health professionals (i.e. physicians) attempted to satisfy their patients' requests that all information related to nutrition and disease management be directly provided by the physician. This may introduce challenges to the IPCP, since the attempt may limit delegation process of healthcare management to other health professionals.

5. Conclusion

IPCP is a vital component in improving the quality of health services. The socio-cultural complexity of the setting, including the socio-cultural aspects of each health profession, must be understood as a common challenge in IPCP implementation. For students of the health professions, collaborative health practices are an integral part of IPE; in certain stages of their education, students need to engage directly with and be shown examples of such practices in the daily operation of health services. This study demonstrated that the Indonesian version of the CPAT can be used in the primary healthcare setting. Several characteristics, including professional background, age group and length of work experience, may influence the perceptions of health professionals towards IPCP, especially in terms of leadership; decision making and conflict management; and patient involvement, responsibilities and autonomy. Socio-cultural factors such as uncertainty avoidance tendency, power differentials between professions, and collectivist culture, the healthcare setting and organisational factors also affect the effectiveness of IPCP. In the primary healthcare setting, IPCP involves the blending of roles and responsibilities among health professionals, especially in community-based healthcare. Future explorations of IPCP require an understanding of the specific characteristics of the healthcare setting and an awareness of the socio-cultural factors that exist at the organisational, group and individual levels.

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Declaration of interest

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of this article.

Appendix A. Supplementary data

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References


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