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The Impact of Demographic and Clinical Factors on Perceptions of Interprofessional Collaborative Practice among Mental Health Clinicians

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The Impact of Demographic and Clinical Factors on Perceptions of Interprofessional Collaborative Practice among Mental Health Clinicians

by

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DISSERTATION

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Abstract

Introduction: Evidence indicates that effective collaborative practice among health professionals may improve care quality, reduce medical errors, and improve work satisfaction. Little is known regarding factors that may be associated with greater collaborative practice, especially among mental health professionals. The purpose of this study was to identify the extent to which gender, specific profession, years of clinical experience and age influence a mental health professional's perception of collaborative practice in his/her work environment.

Methods: A sample of 86 mental health professionals employed at two urban hospitals completed a clinical and demographic questionnaire and the Collaborative Practice Assessment Tool- revised (CPAT-r). Linear regression procedures were used to examine the relationship of predictors to clinician's perceptions of collaborative practice.

Results*:* One predictor, professional group, was significantly associated with perceptions of collaborative practice, accounting for 11% of the variance. Psychiatrists perceived their practice to be more collaborative than did psychiatric nurses. When looking at specific dimensions of collaborative practice, significant differences were found for interprofessional conflict resolution. Psychiatric nurses viewed their work environments as having less collaborative resolution of interprofessional conflicts than did psychiatrists. Individuals who were younger but had more years of clinical experience viewed their environments as having more collaborative resolution of interprofessional conflicts than did older clinicians with fewer years of clinical experience.

***Conclusions*:** Psychiatrists may have lower expectations for the amount of collaboration that should be occurring, resulting in more positive perceptions of the actual collaboration taking place. Congruent with a traditional medical model, the psychiatrist may view his/her role as making the ultimate decision if conflicts emerge, rather than negotiating a collaborative

resolution. Younger clinicians are less likely to have been educated within a traditional medical model and may use more collaborative approaches to resolve conflicts. However, clinical experience may engender sophisticated communication skills that enhance negotiation of conflicts.

Findings should be confirmed with a larger sample across a variety of psychiatric settings. The influence of clinicians' educational preparation and specific work responsibilities should also be examined. Interactions among varied clinical and demographic factors should be assessed, along with the mediating role of communication competence and other skills.

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CHAPTER Ⅰ: Introduction

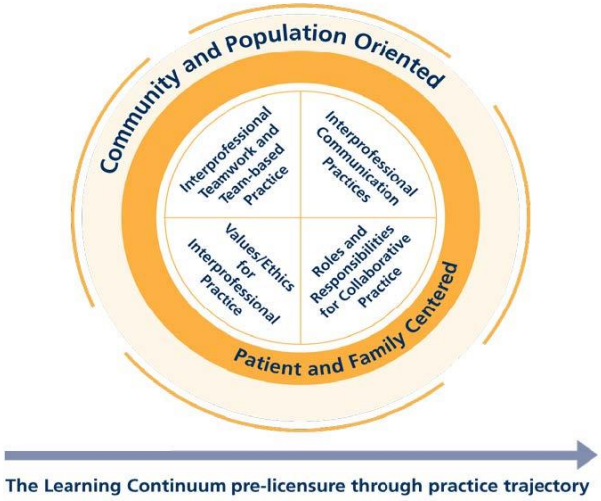
The importance of interprofessional collaborative practice (IPCP) has been discussed for a long time, being emphasized at the first conference of the Institute of Medicine (IOM) in the early 1970s (Interprofessional Education Collaborative Expert Panel, 2011). Interest in collaborative practice has increased over the last 15 years, due to an IOM report highlighting widespread patient errors and preventable mortality and morbidity in U.S. hospitals (Fauteux, 2011; Interprofessional Education Collaborative Expert Panel, 2011). In order to address these problems and provide cost-effective care, the report recommended an interprofessional team care approach. At the same time, political initiatives such as the American Recovery and Reinvestment Act in 2009, and the Patient Protection and Affordable Care Act in 2010, made IPCP a priority as a cost-effective approach to improve health care outcomes in primary care (Interprofessional Education Collaborative Expert Panel, 2011). A flexible, strong, and collaborative health workforce has been recognized as one of the best approaches for meeting complex health care needs of patients and diverse populations (World Health Organization, 2010).

Defining Interprofessional Collaborative Practice

Interprofessional collaborative practice involves multiple health workers from different professional backgrounds working together with patients, families, caregivers, and communities to deliver the highest quality of care (WHO, 2010). The Interprofessional Education Collaborative Expert Panel (2011) identified the following four domains as core competencies for IPCP: 1) Values/ethics for interprofessional practice, 2) Roles/responsibilities for collaborative practice, 3) Interprofessional communication practices, and 4) Interprofessional

teamwork and team-based practice. As these competencies indicate, working with other professionals to maintain shared values and mutual respect is viewed as vitally important. Secondly, utilizing available knowledge that is unique to each profession improves the ability to meet the needs of patients and to promote the health of populations. Thirdly, the competencies require that healthcare professionals be responsible for communicating with not only patients, but also families, communities, and other professionals to promote and maintain health as well as prevent and treat disease. Lastly, principles of team dynamics and relationship-building undergird effective planning, delivering, and evaluating of patient-centered care as well as population-oriented programs and policies. A health professional's flexibility, reflection, and adaptability play an important role in carrying out these competencies. It has also been noted that healthcare professionals need to deliver patient/family centered and community/population oriented care across the full spectrum (from prevention to health maintenance) in various healthcare settings. As shown in Figure 1, this includes acute, long-term, chronic and palliative care (Interprofessional Education Collaborative, 2016).

Figure 1: Interprofessional Collaboration Competency Domains (Interprofessional Education Collaborative, 2016).



Based on a comprehensive review, D'Amour, Ferrada-Videla, San Martin Rodriguez, and Beaulieu (2005) identified four concepts related to collaboration, 1) sharing, 2) partnership, 3) interdependency, and 4) power. The first concept, sharing, includes shared responsibilities, shared decision making, shared health care philosophy, shared values, shared data, and shared planning and intervention. The second concept, partnership, is considered a collaborative relationship that requires mutual trust and respect as well as honest and open communication. In this relationship, individuals need to value the other professional's perspectives and contributions, and then share common goals or specific outcomes with other professionals. The third concept, interdependency, relates to mutual dependence. Interdependency, rather than autonomy, is necessary for professionals to collaboratively meet the needs of a patient/population. Interdependency between professionals is viewed as actually maximizing each professional's contribution. The fourth and final concept, power, is also an important factor when discussing collaboration, because "a true partnership is characterized by the simultaneous empowerment of each participant whose respective power is recognized by all" (D'Amour et al., 2005). These authors explain that the basis of this type of power is experience and knowledge, rather than titles or functions. In addition to these four concepts, the authors described collaboration as a dynamic process, which is also evolving, interactive, transforming, and interpersonal.

The Impact of Interprofessional Collaborative Practice

Numerous studies have reported the positive effects of IPCP on various aspects of healthcare. The World Health Organization (2010) reported research evidence supporting various positive effects of IPCP on patient care and safety, health outcomes of individuals with chronic illness, coordination of and access to health services, and appropriate usage of specialized

clinical resources. Effects on mortality and clinical errors, patient complications, admission rates, length of hospitalization, staff turnover, and conflicts/tension among caregivers were also reported by WHO. With regards to community mental health, the report noted that IPCP is beneficial for reducing cost of care, preventing suicide, decreasing treatment duration, reducing outpatient visits, improving treatment for psychiatric illness, promoting better acceptance of treatment, as well as increasing satisfaction of patients/caregivers.

Zwarenstein, Goldman, and Reeves (2009) reviewed existing research regarding the effects of interprofessional approaches such as interprofessional rounds and meetings. Two randomized control trials were reviewed regarding interprofessional rounds. Although no significant impact of rounds was found in one study (Wild, Nawaz, Chan, & Katz, 2004), significant effects were found in the other study conducted by Curley, McEachern, and Speroff (1998). This latter research investigated the effects of interprofessional rounds in inpatient medical units at an acute care hospital in the U.S, comparing them to traditional rounds. Evaluating the effects of interprofessional versus traditional rounds six months later, researchers found significant differences in length of hospitalization for patients experiencing interprofessional rounds as well as reduced hospital charges.

Schmidt, Claesson, Westerholm, Nilsson, and Svarstad (1998) investigated the impact of interprofessional team meetings on the usage of psychotropic medications prescribed for nursing home residents in Sweden. Fifteen nursing homes were randomized to an intervention group where trained pharmacists led monthly interprofessional team meetings for a period of 12 months. Eighteen nursing homes were randomized to the control group where routine care related to medication prescription was offered. While patients receiving more collaborative interprofessional care did not increase in the number of prescribed medications over the 12

month period, a significant increase was found in the control group after 12 months. In addition, the proportion of residents receiving more collaborative, interprofessional care who were prescribed antipsychotic medications and hypnotics actually declined, in contrast to patients in the control group. The authors concluded that IPCP had positive, significant effects on medication management of nursing home residents.

Research indicates the effect of IPCP in mental health care as well. Doran et al. (2010) investigated the effects of an electronic record system to improve interprofessional care planning and implementation for patients with schizophrenia or comorbid disorders. The authors found that the use of this system significantly improved symptoms of clients, including their depression, aggressive behavior, psychosis, and withdrawal. Markle-Reid et al. (2014) examined the efficacy of an interprofessional nurse-led mental health promotion intervention for older clients with depressive symptoms receiving home care services. The authors found a statistically significant decrease in depressive and anxiety symptoms after this intervention was provided. They also found statistically significant improvements regarding various aspects of the clients' quality of life. Additionally, there were reductions in the costs spent for some types of health care services, such as acute hospitalization, ambulance services, and emergency room visits. Lastly, Happell, Platania-Phung, Scott, and Nankivell (2014) found that interprofessional communication helped nurses to provide more direct physical health care for patients with mental problems.

Barriers to Interprofessional Collaborative Practice

Despite the need for and efficacy of IPCP in health care, various barriers to IPCP, such as professional conflicts, have been identified with a negative impact on patient safety (Baldwin & Daugherty, 2008). Due to the traditional approaches in health care, where each profession works

independently, many health care professionals lack the necessary knowledge and required skills to work collaboratively (Miller et al., 1999). In the field of mental health, Supper et al. (2015) found a number of barriers to IPCP, including challenges in the following areas: awareness and definition of each profession's roles and competencies, interprofessional training, team building, joint monitoring, long-term funding, as well as shared information, responsibility and confidentiality. Chong, Aslani and Chen (2013) also identified barriers to shared decision-making. These factors included the lack of integration of various mental health services, as well as the lack of continuity of care after patients were discharged from a hospital to a primary care setting.

Overall Purpose and Organization of the Dissertation

The studies described above provide evidence of the value of interprofessional, collaborative practice and the need to better understand factors that may influence its use. In particular, little is known regarding perceptions of collaborative practice that are held by mental health professionals or factors that may influence their perceptions. The purpose of this dissertation is to examine the potential influence of demographic and clinical factors on perceptions of interprofessional, collaborative practice among mental health clinicians.

This dissertation is organized into six chapters. Following this introductory chapter, a literature review is presented regarding what is known from existing research about factors that may influence individuals' perceptions of interprofessional practice in health care settings (Chapter II). Chapter III includes a discussion of relevant conceptual frameworks that informed the study as well as a specific framework that was used to guide the dissertation research. A description of the research method, including study design, sample, procedures, measures and statistical analyses, is presented in Chapter IV. The findings are reported in Chapter V, with their

interpretation and implications, as well as limitations of the study and recommendations for future research, being discussed in Chapter VI. References and appendices are included at the end.

CHAPTER Ⅱ: Background and Specific Purpose of the Study

Impact of Demographic and Clinical Factors on Perceptions of IPCP

Previous research does indicate that certain factors may influence perceptions of IPCP. Both positive and negative effects of variation in individuals' characteristics are found in previous studies. Although heterogeneity of skills within various teams is often beneficial for their performance, differences in individuals' characteristics may also trigger prejudice and/or stereotypes which can lead to conflicts that interfere with effective team process and outcomes (Borrill et al., 2000). As evidenced in previous research, gender of the health care professionals, their specific profession, their clinical experience and their age may influence perceptions of IPCP.

Gender and Collaborative Practice. Bell, Michalec and Arenson (2014) discussed the importance of gender when investigating phenomena related to IPCP. They applied a socio-historical lens and Expectation Status Theory (EST) to explain the influence of gender in IPCP. They argued that some professions like nursing carry a gendered cultural background, which has an implicit influence on the focus and goals of their work. Seenandan-Sookdeo (2012) also reported that gender inequality is one of the causes for the power imbalance within relationships of professionals in the Canadian healthcare system.

The majority of IPCP research on gender has been among health care students in various disciplines including medicine, dentistry, nursing, occupational therapy, physiotherapy, social work, and physician assistants. Findings suggest that females are more receptive to IPCP than males (Falk, Hammar & Nystrm, 2015; Hertweck et al. 2012; Reynolds, 2003; Wilhelmsson, Ponzer, Dahlgren, Timpka, Faresj, 2011). Curran, Sharpe and Forristall (2007) distributed a survey to faculty members in various health care disciplines (including medicine, nursing,

pharmacy and social work) and found that female faculty had more positive attitudes toward interprofessional health care teams and interprofessional education. Findings of these studies suggest that females may view their interprofessional teams as more collaborative than will males.

Profession and Collaborative Practice (nurses versus other health professionals). The impact of professional differences on the perception of IPCP has been examined in previous studies. Hughes and Fitzpatrick (2010) found that nurses have more positive attitudes toward IPCP as compared to physicians. Hendel et al. (2007) also reported that nurses are significantly more collaborative than physicians when they face interprofessional conflicts. Other researchers found that medical students had less positive beliefs about IPCP and/or teamwork than nursing students (Falk, Hammar & Nyström, 2015; Hood et al., 2014; Lindh et al., 2015; Wilhelmsson et al., 2011). Curran et al. (2007) found that faculty in medicine had significantly less positive attitudes toward interprofessional health care teams, education and learning as compared to faculty in nursing. Ousey, Stephenson, Brown and Garside (2014) reported that nursing, occupational therapy, and physiotherapy students in the UK had more positive perceptions of collaborative learning environments than students who were preparing to work in a surgical setting as a member of a perioperative team.

Chong et al. (2013) conducted a qualitative study and found that mental health professionals had different perceptions about the desired level of patient involvement in decision-making depending on their professional discipline. These authors reported that medical practitioners (such as psychiatrists and general practitioners) expect more active participation from their patients when they make treatment decisions. In contrast, non-medical practitioners (such as nurses, occupational therapists, pharmacists, psychologists and social workers) appeared

to recognize that patients may need support or encouragement to participate in treatment decisions. Examples of their support include: 1) encouraging the patients to discuss the treatment plan with their medical practitioner, 2) providing opportunities for the patients to voice their treatment concerns, and 3) identifying and addressing the patients' needs. The authors also found that these non-medical practitioners can play an important role as a liaison between the physicians and their clients in their decision making process. Findings of these studies indicate that nurses may view their interprofessional teams as more collaborative than will psychiatrists. They also suggest that nurses' views will be similar to those of other mental health professionals.

Clinical Experience and Collaborative Practice. In their qualitative study, Veerapen and Purkis (2014) reported an impact of clinicians' experience on their perceptions of IPCP. Residents found a connection with junior nurses regarding common interests and learning status outside of their hierarchical system. On the other hand, senior nurses accepted the hierarchical framework, yet found difficulties when applying this framework to inexperienced residents. The authors also reported that residents acknowledged the senior nurses' expertise and contribution to patient care. According to the qualitative study conducted by Freeman, Gorter, McWilliams and Williams (2007), clinical experience also influenced dental students' professional demarcation and hierarchical working styles. These authors found that novitiate dental students perceived nurses as "teachers or supporters" for assisting their learning process. In contrast, clinically experienced dental students perceived nurses as "helpers" for running things smoothly. Hood et al. (2014) distributed a survey to students in various health care disciplines (including medicine, nursing, midwifery, paramedics, physiotherapy, and nutrition-dietetics) and found that students with prior experience of Interprofessional (IP) learning had more positive attitudes regarding Interprofessional Education (IPE). These previous findings are somewhat conflicting. However,

there is some evidence that clinicians with more years of clinical experience may view their interprofessional teams as more collaborative than clinicians with fewer years of experience.

Age and Collaborative Practice. The impact of clinicians' age on their perceptions of IPCP has been investigated in previous studies as well. Pollard, Miers and Gilchrist (2005) conducted a survey targeting healthcare students from various disciplines (including nursing, diagnostic imaging, occupational therapy, physiotherapy, radiotherapy, and social work) and found that older students had more confidence regarding their teamwork and communication skills than younger students did. They also reported that older students displayed more positive attitudes towards IP learning than younger students did. Lastly, Jones (1994) reported profiles of physicians and nurses who might be less collaborative, which included middle age nurses (from 32 to 42) and older age physicians (from 51 to 72). However, findings from this study are more than 20 years old. Results of more recent research indicate that clinicians who are older view their interprofessional teams as more collaborative than clinicians who are younger.

Summary of the Background

Only a few researchers have investigated the impact of individuals' demographic and clinical factors (gender, age, profession, and years of clinical experience) on their perceptions of IPCP. Findings from these studies have informed hypotheses for this proposed research. However, many of these studies involved healthcare students rather than practicing clinicians. In addition, there is no evidence regarding factors that may influence perceptions of collaborative practice in a mental health setting. As a result, it is not known whether results of previous research apply to practicing mental health professionals.

Specific Purpose of the Study

The specific purpose of this study was to identify the extent to which gender, specific profession, years of clinical experience, or age influence a mental health professional's perception of collaborative practice in his/her interprofessional work environment. As discussed above, the following hypotheses were examined.

1. Females will view their interprofessional teams as more collaborative than will males.

2. Nurses will view their interprofessional teams as more collaborative than will psychiatrists, but nurses' views will be similar to those of other mental health professionals.

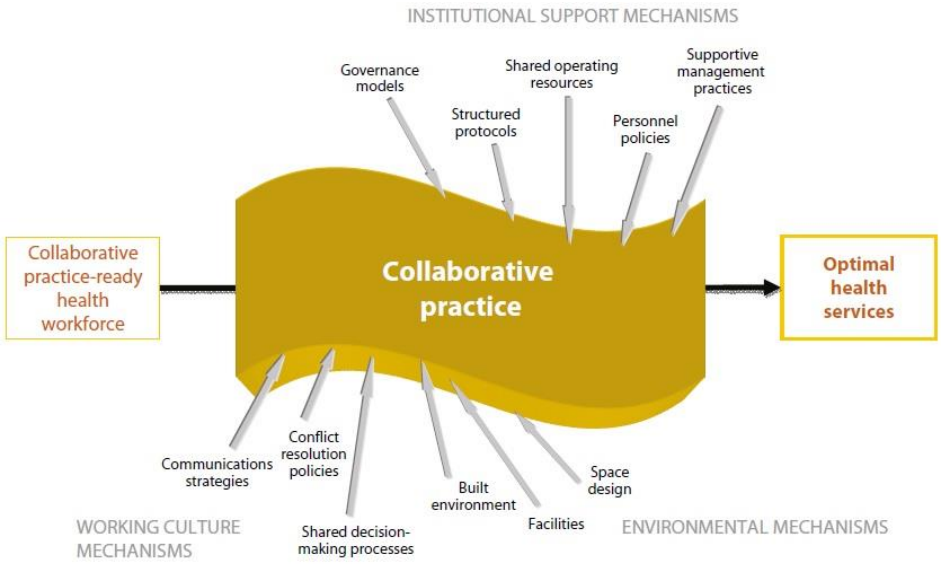
3. Clinicians with more years of clinical experience will view their interprofessional teams as more collaborative than will clinicians with fewer years of experience.

4. Clinicians who are older will view their interprofessional teams as more collaborative than will clinicians who are younger.

CHAPTER Ⅲ: Theoretical Framework

There are three frameworks that have informed this dissertation research. The first is a general framework introduced by the WHO (2010) to describe the mechanisms that shape collaboration in healthcare practice (Figure 2). The framework emphasizes the importance of a "collaborative practice-ready" health workforce, where individuals are well-trained/educated to work as a member of an interprofessional team. This workforce functions as a basis on which effective collaborative practice is grounded. However, the framework indicates that, by itself, it doesn't guarantee optimal health-services. Other mechanisms are required to manifest the effects of IPCP. These mechanisms include institutional supports, environment, and working culture. The mechanisms within the 'working culture' were of interest to this research, including communication strategies, shared decision-making processes, and conflict resolution as critical factors that should be examined when understanding any culture within the work environment.

Figure 2: Mechanism that Shape IPCP (WHO, 2010)



Input - Process - Output Model

A second framework guiding this study was the input-process-output model. D'Amour, Ferrada-Videla, San Martín-Rodríguez, and Beaulieu (2005) conducted a review to identify theoretical frameworks for deepening the understanding of research related to IPCP. Out of seven frameworks they identified, the 'input-process-output model' (Sicotte, D'Amourb, and Moreaultc, 2002), was particularly salient to this study. In the model, an individual's characteristics (such as a clinician's demographic and clinical factors) are considered to be important factors contributing to interdisciplinary collaboration. The framework also has been widely used for identifying factors related to work group performance (Sicotte et al., 2002).

The first group of factors in this model includes input factors, also known as the contextual factors, which describe the environment where teams are functioning. These factors include characteristics of organizations and individuals, such as age and gender. The second set of factors is called the intragroup process factors. These variables are separated into the following six dimensions; 1) belief in the benefits related to interprofessional collaboration, 2) social integration within groups or group cohesiveness, 3) interprofessional conflicts (which are further categorized into two groups such as relationship conflicts and task conflicts), 4) attitudes associated with traditional professional logic, 5) attitudes related to interdisciplinary logic, and 6) an organization's rules such as work group design characteristics (i.e. interprofessional case discussions). The authors emphasized the importance of these intragroup process variables because interprofessional health care team members share their responsibilities and tasks. Intragroup process is crucial for team members who have the authority to make decisions collectively, such as interprofessional healthcare workers. The last group of factors in the model includes output factors. These factors address work performance and are outcomes of the input

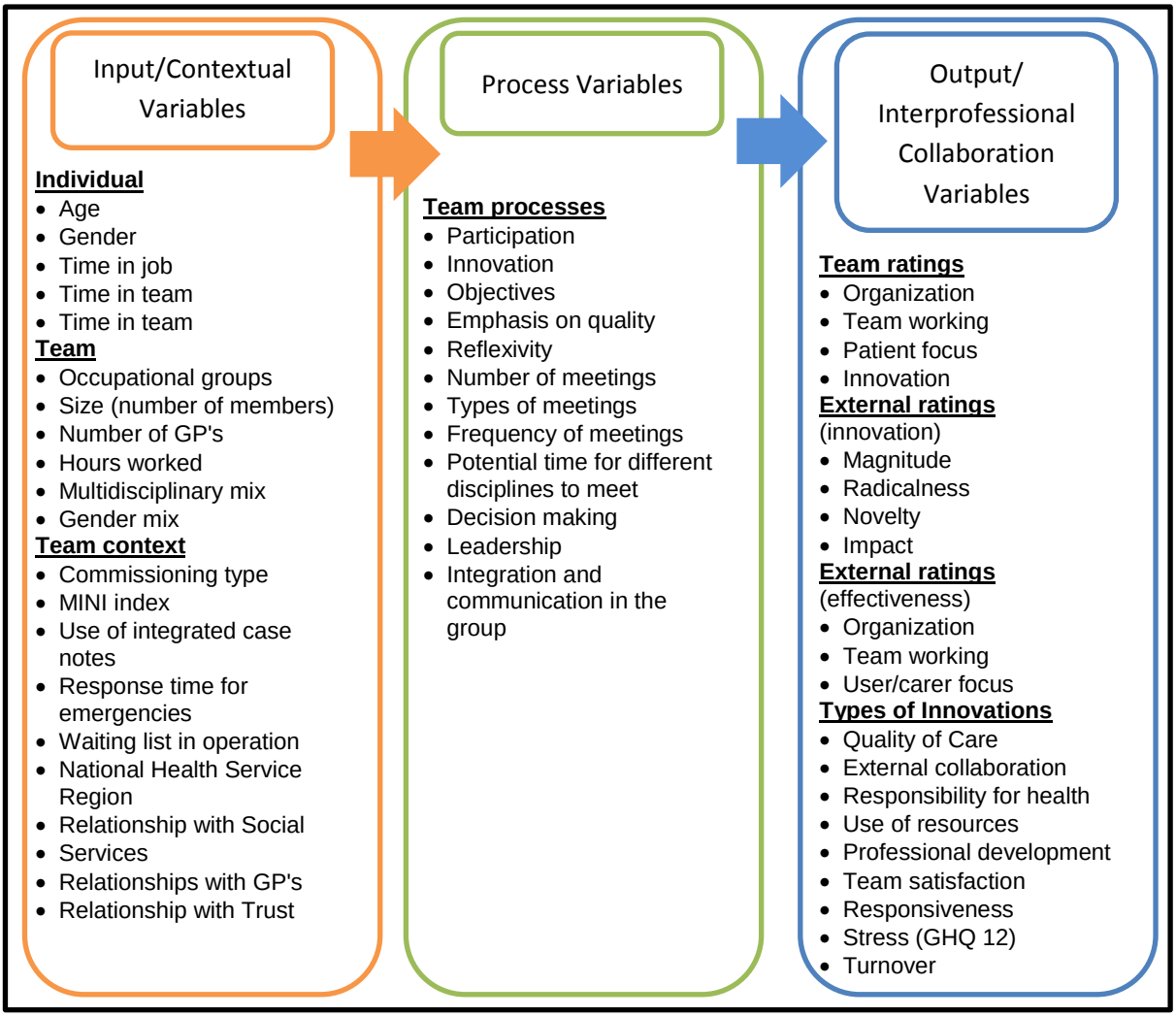
and process: both intermediate (such as improved interprofessional collaboration) as well as end results associated with health (such as improved health of an individual or a population). In Sicoute et al.'s use of the model, intermediate outcomes of interprofessional collaboration were separated into two aspects; 1) work group co-ordination, and 2) care sharing activities. Examples of care sharing activities include information sharing and collaborative decision making. The authors tested their model and found that the presence of conflicting values among members of the team could hinder the intensity of interprofessional collaboration, although differing beliefs about collaboration could both fuel and limit interprofessional collaboration (Sicoute et al, 2002).

Of particular interest to this research was the application of the input-process-outcome model by Borrill et al. (2000) within a community mental health setting. Their application of the model is shown in Figure 3. In their study, they examined the relationship between contextual factors (composition of the teams) and process factors (interprofessional team process), as well as the impact of these factors on the effectiveness of team performance. The input factors included team member's characteristics (such as a clinician's age, gender, and time in the job), characteristics of the team (such as occupational/professional group, number of General Practitioners (GPs), and team size), and information regarding team context (such as their relationship with social services). Process factors included factors such as participation, decision making, communication and leadership. The output factors focused on the nature and quality of interprofessional collaboration, acquired through both team and external ratings. Additionally, they assessed the innovativeness of their teams, including the innovations that were actually implemented by the team.

In their study, a total of 1443 team members (from 113 teams within 45 organizations) participated. Results showed that team members who reported their interprofessional team

process positively had more effective teams. In contrast, team members' negative perceptions about their interprofessional team process were associated with higher levels of stress.

Figure 3: The Input – Process – Outcome Model for Studying the Effectiveness of Community Mental Health Teams in the United Kingdom (Borrill et al., 2000)

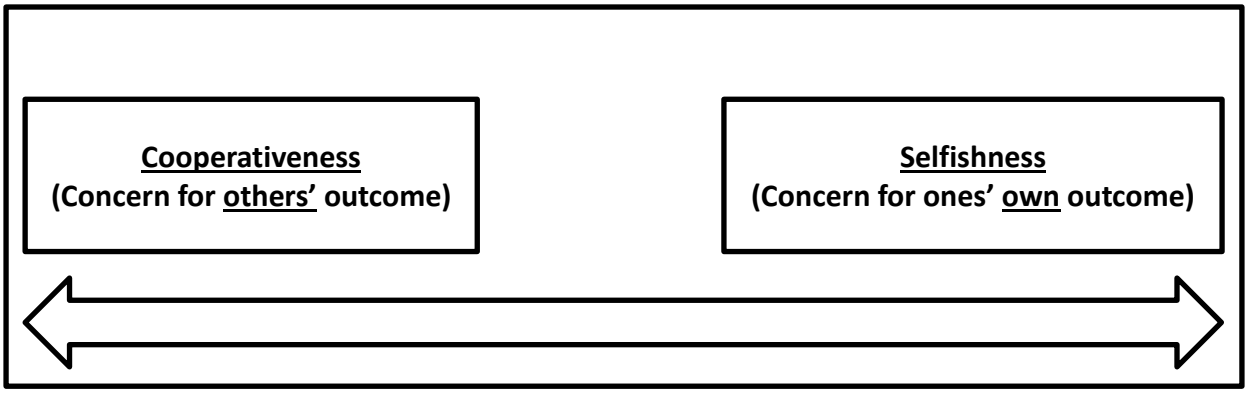


Dual Concern Model

The third framework that informed this dissertation research was the Dual Concern Model, also called the Two-Dimensional Model. The model was originally developed and introduced by Blake and Mouton in 1964 and later reinterpreted by Hall in 1969 and by Lawrence and Lorsch in 1967. Later modification also occurred by Thomas and Kilmann in 1974,

and Rahim in 1983 (Cai & Fink, 2002; Rahim, 1983). The initial model focused on classifying conflict management styles as a single dimension (Morris et al., 1998). It was originally developed by researchers in organizational behavior and social psychology to help managers and negotiators understand challenging interactions when differing perspectives occurred among team members. As shown in Figure 4, this early single dimension model included two concepts: cooperativeness (concern for others' outcome) and selfishness (concern for ones' own outcome). However, researchers found that this single model was not comprehensive enough to understand people who have a high concern for both self and others, or a low concern for both self and others (Morris et al., 1998).

Figure 4: Single Dimensional Model of Strategy in Conflict

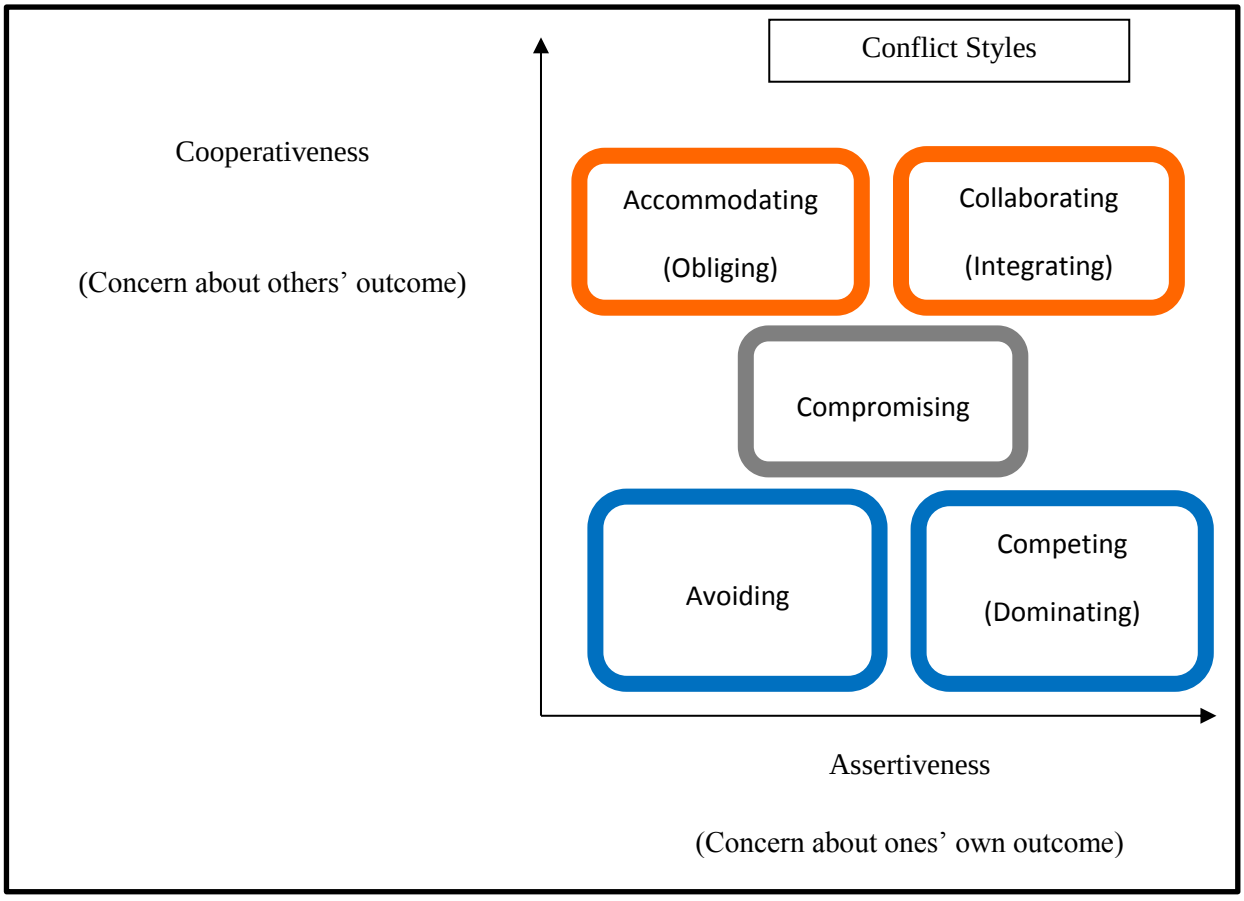


In order to address the limitations of the single dimensional model, Blake and Mouton (1964) introduced the dual concern model (Cai & Fink, 2002; Morris et al., 1998). This model consisted of five styles of dealing with interpersonal conflicts: forcing, withdrawing, smoothing, compromising, and confrontation.

However, other researchers such as Thomas and Kilmann (1978) and Rahim (1983), reinterpreted and refined the model yet again. Their version is still widely used for classifying conflict management styles (Cai & Fink, 2002; Rahim & Magner, 1995). In this final model, the dimensions of dual concern are labeled as assertiveness (defined as the degree to which an

individual shows concern for their own outcome) and cooperativeness (defined as the degree to which an individual shows concern for the outcome of others) (Rahim, 1983; Thomas & Kilmann, 2009). Various interactions between assertiveness and cooperativeness were the identified, yielding five styles for dealing with interpersonal conflicts. Thomas and Kilmann (2009) categorized these styles as accommodating, competing, avoiding, collaborating, and compromising; Rahim has described these same styles, using slightly different terms: obliging, dominating, avoiding, integrating and compromising. The styles are shown in Figure 5.

Figure 5: Dual Concern Model Values (Rahim, 1983; Thomas & Kilmann, 2009)



One of the major strengths of the dual concern model is its clear explanation of various ways in which people manage their interactions, especially when differing perspectives occur. This model has also conquered the limitations of the single dimensional model, recognizing that

people can be simultaneously concerned both for themselves and for others (collaborating) or could potentially care little about outcomes for either party (avoiding).

Thomas and Kilmann (2001) propose that individuals have a tendency to use some of these styles more often than the other styles, although they may use all styles interchangeably, depending on the situation or the relationship with the other person. These scholars emphasized that none of the styles are superior to the others because each style may be more suitable for particular situations.

A collaborating style is useful when the concerns of both parties are important. It is also beneficial when an individual possesses the objective to learn by understanding the other person's perspectives. Collaboration can be valuable when an individual needs to gain commitment by incorporating the other party's concern(s) into a consensual decision. It also helps an individual to work through "hard feelings" that interferes with his/her interpersonal relationship. Examples of collaboration include: willingly and openly exchanging information, discussing the issue, addressing differences constructively and digging into the issue to better understand the underlying needs of both parties. In the health care workforce, a collaborating clinician may be interested in learning a different perspective from other health care professionals. The collaborative approach in practice involves a willingness to find a solution that is mutually acceptable for both parties. There is an attempt to exchange information, examine differences, test one's assumptions or understand the views of others. The collaborative individual typically looks for a win-win solution for both parties (Rahim, 1983; Thomas & Kilmann, 2001).

The opposite of a collaborating style is avoiding, also known as withdrawing. This is a non-confrontational, unassertive, and uncooperative style (Rahim 1983; Thomas & Kilmann,

2001). Someone with this style has a low concern for one's own, as well as others' outcomes. In this style, an individual tends not to deal with conflict and sometimes wishes that the conflict would simply go away.

An avoiding style may be useful when dealing with a trivial issue or when a more important issue is pressing. It is suitable when the potential damage caused by confronting the issue outweighs the benefit a solution. It is also beneficial when an individual is facing an issue that is not easily changed, and he/she sees no chance of satisfying his/her concern(s) (i.e. dealing with national policies or a personality issue with the other party). Avoidance is also useful for cooling people down and thereby reducing tensions, so they can regain composure and productive perspectives. It can also be applied when other people are capable of resolving the issue more effectively, or when the issue seems to be tangential. Examples of avoiding are withdrawing from a harmful or threatening situation, "sidestepping" an issue, "passing-the-buck", postponing an issue and "seeing, hearing & speaking no evil". In the health care workforce, a nurse may use this style when she postpones discussing an issue of concern with a physician because they need to address an emergency situation.

An accommodating style, also defined as an obliging or yielding style, is a non-confrontational, unassertive and cooperative style, wherein an individual has a low concern for their own outcome and a high concern for the outcome of others (Rahim, 1983; Thomas & Kilmann, 2001). An accommodating/obliging individual tends to emphasize commonalities and play down the differences in order to satisfy the concerns of the other person. However, because one's own concerns are not addressed, this individual may feel that his/her concern or idea is not receiving adequate attention (Rahim & Magner, 1995).

This style may be appropriate when an individual realizes that he/she is wrong and needs to learn from others or show that he/she is reasonable. It may also be applied when an issue is not

very significant to him/her, but very important for the other party. It is also beneficial when an individual needs to build up social credits for an important issue that will be handled later. Accommodation has also proved to be useful when an individual recognizes s/he is outmatched in the situation and competing could be damaging to him/her in some way. An individual may use this style when attempting to preserve harmony in the relationship or when allowing the other person to experiment and learn from his/her own mistake. Examples of accommodation are giving up one's own concerns in order to give in to the other party's needs. This can be seen in the health care workforce when a nurse decides not to express a differing opinion and performs a physician's order without discussion.

The complete opposite of this style is competing (Thomas & Kilmann, 2001), also known as a dominating style (Rahim, 1983). An individual who dominates/competes has a high concern for their own outcome and a low concern for the outcome of other people. This is the most confrontational, assertive, and uncooperative style, in which an individual tends to use forceful strategies such as threats. This style is power-oriented, with the individual focusing on defeating the other party, ending in one party losing and the other winning.

A competing style could be suitable when quick and decisive action is vital, such as in emergencies. It could also be useful in a situation where an unpopular course of action needs to be implemented (i.e. budget cut or discipline). However, a competing/dominating person may find his/her subordinates being afraid to admit uncertainties or lack of knowledge. In this climate, an individual is less able to ask for advice or information; therefore, she/he is less able to learn. This may be seen in the health care workforce as well if a health care team has a judgmental or hierarchical climate/environment.

The last style is compromising (Rahim, 1983; Thomas & Kilmann, 2001), in which an individual has moderate concerns about both their own and others' outcomes. This style is

moderately confrontational, moderately assertive, and moderately cooperative. An individual might use this style when looking for a mutually acceptable and expedient solution that is partially satisfactory for themselves and for the other person. Compromise takes a middle position between competing and accommodating, and an individual using this style gives up their own needs less than the people using the accommodating style, but more so than the people using a competing style. The style is a middle point between avoiding and collaborating, where an individual addresses the issue more directly than the people using an avoiding style, but does not explore it as deeply as the people using collaboration.

It has been proposed that a compromising person concentrates heavily upon the tactics and practicalities of issues but may lose focus on the large picture, or the organization's welfare. Compromise may be beneficial when a temporary settlement is required to resolve a complex matter. It is also useful to find an expedient solution under time pressure and can be used as a backup solution when competing or collaborating does not work. Compromise may also be beneficial when prolonging the conflict could lead to significant damage (i.e. high cost). Examples of compromise are finding a quick middle-ground solution, and exchanging concessions. For example, a nurse may temporally work overtime and receive additional payment in order to help the hospital with a nursing shortage that could negatively affect patient care.

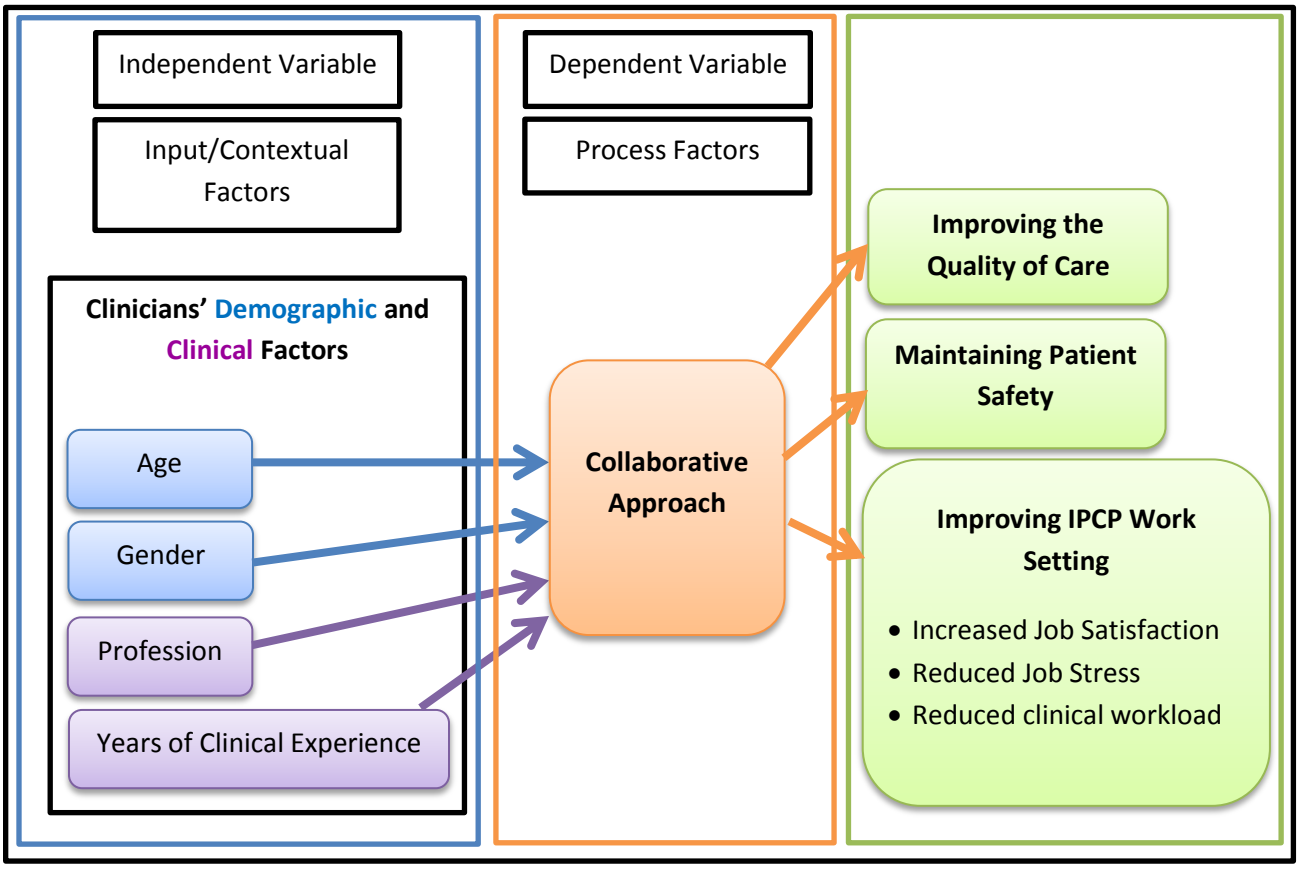
The Specific Framework Guiding this Research

The framework informing this study integrates aspects of the input-process-outcome model and the dual concern model, incorporating factors that have been identified as influencing collaborative practice in previous research. As noted earlier, previous studies have reported that a collaborative approach is beneficial for maintaining patient safety, improving the quality of care

and reducing clinical workload (Canadian Health Services Research Foundation, 2006). Collaboration is also related to reduced stress and increased job satisfaction (Wright, 2011). The Dual Concern Model indicates that, in general, collaboration is an effective style for managing potentially different perspectives and negotiating role responsibilities in the work environment. The input-process-outcome model emphasizes the importance of individual characteristics such as age, gender and time on the job as determinants (input) that can influence whether interprofessional, collaborative practice occurs in the work environment. The research reviewed in Chapter 2 supports this framework, suggesting that gender (Curran et al., 2007; Falk, Hammar & Nystrm, 2015; Hertweck et al. 2012; Reynolds, 2003; Wilhelmsson et al., 2011), one's profession (Chong et al., 2013; Curran et al., 2007; Falk et al, 2015; Hendel et al., 2007; Hood et al., 2014; Hughes & Fitzpatrick, 2010; Lindh et al., 2015; Wilhelmsson et al., 2011), the extent of clinical experience (Freeman et al, 2007; Hood et al., 2014; Veerapen and Purkis (2014), and a clinician's age (Jones, 1994; Pollard et al, 2005) may influence perceptions of collaborative practice.

Building on these theories and previous research, the following conceptual framework (Figure 6) was created for this dissertation research. Only the input and process components of the framework were examined in this study, but the framework shows the potential impact of these components on health care outcomes. As shown in Figure 6, age, gender, profession, and years of clinical experience are proposed to influence perceptions of collaborative practice in the work environment.

Figure 6: A framework for understanding the impact of demographic and clinical factors on clinicians' perceptions on their IPCP



CHAPTER Ⅳ: Methods

Study Design

This is a secondary analysis of data from a cross-sectional study on interprofessional collaboration conducted by Tomizawa (2016). The purpose of that study was to revise and test a measure of collaborative practice for use by mental health professionals.

Sample and Procedures

Health care professionals employed at the psychiatric units in two hospitals in San Francisco participated in this study. These participants had various professional titles including psychiatrist, nurse, psychologist, social worker, pharmacist, and occupational therapist. A demographic form and collaborative practice questionnaire were distributed to these professionals. An information sheet was also provided explaining the purpose of the research, as well as the researcher's name and contact information. The information sheet stated that participation in the study was voluntary and confidentiality regarding the research data would be maintained. A link for the online version of the survey was provided for people who preferred completing the survey on line. The survey was anonymous and no personal identifiers were associated with the information obtained. Completion of the survey was considered evidence of consent by the UCSF Committee on Human Research. A ten dollar gift card was attached to each survey packet as an incentive.

At one hospital, one hundred fifty survey packets were distributed. The Principal Investigator explained the study and elicited participation in the research at team meetings that all professionals were required to attend. Boxes were placed in staff rooms at the units to collect survey responses. At the other hospital, an online survey link was sent by email from a medical

director to the health care professionals employed at the hospital. A total of 86 surveys were returned from the two sites.

Measures

Demographic and Clinical Factors. Information about demographic factors (age and gender) as well as clinical factors (profession and years of clinical experience) was acquired with a self-reported demographic form. Descriptive information was also collected about the types of units on which participants worked and the professional groups represented among their co-workers. Participants were allowed to choose more than one type of unit on the demographic form. These included psychiatry, inpatient, acute, emergency, outpatient, forensic, psychiatric units for specific age groups, and non-psychiatric settings. Participants were also allowed to choose multiple professional groups with whom they worked. These professional groups included psychiatrist, nurse, psychologist, social worker, occupational therapist, and other profession. Because of the focus of hypothesis 2, psychologist, social worker, occupational therapist, psychology fellow, clinical intern, pharmacist, medical student, unit clerk, psych tech, and rehabilitation therapist were all combined into one category called other for purpose of the analysis.

Perceived Collaborative Practice. The Collaborative Practice Assessment Tool- revised (CPAT-r) was used to measure perceived collaborative practice in the psychiatric work environment. The CPAT-r is a 21 item self-report measure, with each item on a seven point scale ranging from strongly disagree to strongly agree (Tomizawa et al., 2014; Tomizawa et al. 2016). Items are allocated to the following five domains: Role Clarification (4 items), Patient/Community centered care (6 items), Collaborative communication (4 items), Interprofessional conflict resolution (4 items), and Environment (3 items). Four of the 21 items

use reverse scoring (item 15, 16, 17 and 18). Scores for each item are added to obtain a total score or a subscale score for each domain.

The CPAT-r was adapted from the Collaborative Practice Assessment Tool, a widely used 56 item measure developed by Schroder et al. (2011). That instrument underwent its initial pilot testing in Canada, including factor analysis and internal reliability testing with a variety of health care workers in physical health care settings. The CPAT-r was developed to specifically target the professions in psychiatric mental health settings. It was developed between 2013 and 2014 by Japanese researchers who collected data in both the U.S. and Japan; hence both English and Japanese versions of CPAT-r exist. Only the English version of the CPAT-r is discussed and used for this present study.

During development of the CPAT-r, the researchers added 12 items that are unique to psychiatric settings. A total of four mental health professionals (including clinicians from various professional backgrounds) and a researcher specialized in IPCP reviewed all 56 items of the original CPAT and the new 12 items to identify their internal validity for the mental health environment. As a result, the researchers eliminated two items and made changes in six other items. Hence, a total of 66 items remained for pilot testing. Pilot testing involved exploratory factor analyses that identified five domains in the revised CPAT-r, consisting of 21 items. Cronbach alphas for the domains ranged from .75 to .91. Predictive validity was evidenced by a strong correlation between the CPAT-r total score and a Visual Analogue Scale that measured job satisfaction of respondents in their interprofessional work environment ($r=0.77$, $p<0.01$).

Statistical Analysis

Statistical analyses were conducted using IBM SPSS statistics for Windows, version 23. Initially, each hypothesis was tested separately. The t-test was used to test for gender differences

in perceptions of collaborative practice. One-way ANOVA was used to test for differences in perceptions of collaborative practice among the three professional groups. Bonferroni corrections were used to adjust for post-hoc contrasts. Pearson correlation was used to examine the relationship of collaborative practice perceptions with age and years of clinical experience. Multiple linear regression procedures were then used to investigate the combined relationships of all independent variables (gender, profession, age, years of experience) with the dependent variable (perceptions of collaborative practice). All analyses examined individual domain scores as well as the total score for perceptions of collaborative practice.

CHAPTER Ⅴ: Results

Study Participants

A total of 86 surveys were returned from the two study sites. Table 1 shows the demographic backgrounds of the study participants. These participants consisted of psychiatric nurses (n=39), psychiatrists (n=17) and other professionals including occupational therapists (n=7), social workers (n=7), rehabilitation therapists (n=3), pharmacists (n=2), unit clerks (n=2), a medical student (n=1), a psychologist (n=1), a psychiatric technician (n=1), a psychology fellow/clinical intern (n=1), and one unknown. The majority of participants were between 30 and 59 years old (80.7%) and female (66.3%). The mean years of their clinical experience was 13.5.

Initial Hypothesis Testing

Hypothesis 1 proposed that females will view their interprofessional teams as more collaborative than will males. For the total score, there was no statistically significant difference in the mean of the total CPAT-r score between males (110.43 ± 19.5) and females (111.55 ± 18.5), t (81) = -.256, p = .799. Similarly, there were no gender differences in the means of any subscale scores (see Table 2).

Hypothesis 2 stated that nurses will view their interprofessional teams as more collaborative than will psychiatrists, but nurses' views will be similar to those of other mental health professionals. The mean and standard deviation of the CPAT-r scores for the three professional groups are presented in Table 3. There was a statistically significant difference among the three professional groups in the mean of the total CPAT-r score ($F_{(2,79)} = 5.106$, p = .008). Bonferroni corrected post hoc tests revealed that the mean total CPAT-r score was significantly higher (p = .007) for psychiatrists compared to nurses (95% CI: 3.44 to 28.06).

There was no statistically significant difference between nurses and other professionals (p = .281) nor was there a significant difference between psychiatrists and other professionals (p = .383).

There was a statistically significant difference between the three professional groups in the following sub-scale scores: Patient Community Centered Care (F(2,79) = 4.176, P=.019), Collaborative Communication (F(2,79) = 4.206, P=.018), and Interprofessional Conflict Resolution (F(2,79) = 7.772, P=.001). Post hoc tests revealed that psychiatrists scored significantly higher than nurses for all of these subscales. The mean Patient Community Centered Care Subscale score was significantly higher (p = .024) for psychiatrists compared to nurses (95% CI: 0.48 to 8.89). The mean Collaborative Communication Subscale score was significantly higher (p = .020) for psychiatrists compared to nurses (95% CI: 0.37 to 5.80). The mean Interprofessional Conflict Resolution Subscale score was significantly higher (p = .001) for psychiatrists compared to nurses (95% CI: 2.44 to 10.48). This latter subscale score was also significantly higher (p = .020) for psychiatrists compared to other professionals (95% CI: 0.61 to 9.23). There was no difference between nurses and other professionals nor was there a significant difference between psychiatrists and other professionals in the other subscales.

Hypothesis 3 proposed that clinicians who are older will view their interprofessional teams as more collaborative than will clinicians who are younger. Table 4 shows the Pearson correlation coefficients between age and the CPAT-r total and subscale scores. There was no significant correlation between age and the total CPAT-r score (r = -.139, p = .211). However, there was a statistically significant negative correlation between the Interprofessional Conflict Resolution Subscale Score and age (r = -.249, p = .023). There were no significant correlations between age and the other subscale scores.

Hypothesis 4 proposed that clinicians with more years of clinical experience will view their interprofessional teams as more collaborative than will clinicians with fewer years of experience. As shown in Table 4, there were no significant correlations between years of clinical experience and the total CPAT-r score ($r = -.032$, $p = .780$) or between years of clinical experience and the CPAT-r subscale scores.

Multiple Linear Regression Analyses

Table 5 presents results from testing the integrated model of factors that predict perceptions of collaborative practice. The overall R^2 was .134 ($F_{5,71} = 2.201$, $p = .064$). Only one variable - professional group - made a significant contribution to the model (R^2 change = .110, $F_{2,71} = 4.490$, $p = .015$) after controlling for age, gender, and years of clinical experience. Professional group accounted for 11% of the variance. As was found in the univariate analysis, the psychiatrists scored higher than the psychiatric nurses (B= 17.321, p=.004, 95% CI: 5.686 to 28.955).

Results for regression models of each subscale were mixed. Models for four of the subscales (role clarification, patient community centered care, collaborative communication, and environment) were not significant. Findings for the subscales were as follows: Role clarification ($F = .818$, $p = .541$, R^2 change = .110), Patient community centered care ($F = 1.719$, $p = .141$, R^2 change = .087), Collaborative communication ($F = 1.737$, $p = .137$, R^2 change = .090), and Environment ($F = .548$, $p = .739$, R^2 change = .005). In contrast, the regression model for the subscale on interprofessional conflict resolution was significant (see Table 6). The overall R^2 for this subscale was .296 ($F_{5,71} = 5.974$, $p < .001$). Three of the predictor variables contributed to the variance in conflict resolution. Age (R^2 change = .065, $F_{1,71} = 6.503$, $p = .013$), years of clinical experience (R^2 change = .069, $F_{1,71} = 6.948$, $p = .010$), and professional group (R^2 change = .142,

$F_{2,71}$7.163, p = .001) each made significant unique contributions to the model. As was found in the univariate analysis, psychiatrists scored higher than the nurses (B= 6.417, p <.001, 95% CI: 3.036 to 9.798). Psychiatric nurses, older individuals, and clinicians with less clinical experience perceived there to be less effective resolution of interprofessional conflicts in their work environment while psychiatrists, younger individuals and clinicians with more experience saw interprofessional conflicts as being more effectively managed. Gender did not make a significant unique contribution to perceptions of interprofessional conflict.

CHAPTER Ⅵ: Discussions

Summary of Key Findings

For overall perceptions of collaborative practice, hypotheses related to gender, age and clinical experience were not supported. No significant differences were found in clinicians' perceptions based on their gender, age, or length of clinical experience. However, a significant difference was found for perceptions of collaborative practice among professional groups. But the hypothesis that psychiatric nurses would view their teams as more collaborative than psychiatrists was not supported. In fact, psychiatrists perceived more collaborative practice in their work environment than nurses, after controlling for age, gender, and years of clinical experience. This difference accounted for 11% of the variance in perceptions of collaborative practice among mental health clinicians. No significant professional difference was found between psychiatric nurses and other professionals; neither was there a difference between psychiatrists and other professionals in their perceptions of collaborative practice in the work environment.

When examining specific dimensions of collaborative practice, there were significant results related to interprofessional conflict resolution. Three factors were significantly associated with perceptions of conflict resolution. Psychiatric nurses and other mental health professionals perceived less effective resolution of interprofessional conflict in their work environment than psychiatrists did. There was no difference between psychiatric nurses and other professionals in their views of conflict resolution. Additionally, older individuals with less clinical experience perceived there to be less effective resolution of interprofessional conflict than younger individuals with more clinical experience. There were no significant findings for other dimensions of collaborative practice.

Relationship of the Findings to Previous Research

Unlike some previous studies that found gender differences in perceptions of collaboration (Falk, Hammar & Nystrm, 2015; Hertweck et al., 2012; Reynolds, 2003; Wilhelmsson, Ponzer, Dahlgren, Timpka, Faresj, 2011; Curran et al., 2007), this study didn't find any impact of gender on the clinicians' perceptions of IPCP. In addition, although professional group differences were found in this study, they were not consistent with previous research indicating higher scores for collaborative practice among nurses than physicians (Curran et al., 2007; Falk et al., 2015; Hendel et al., 2007, Hood et al., 2014; Hughes & Fitzpatrick, 2010; Lindh et al., 2015; Wilhelmsson et al., 2011). The findings regarding years of clinical experience were somewhat consistent with a previous study (Hood et al., 2014), suggesting that clinicians with longer years of experience view their interprofessional practice more collaboratively. However, this impact was found only for interprofessional conflict resolution, not for perceptions of collaborative practice overall. Findings in this study for the impact of age were also found only for one dimension of collaborative practice (interprofessional conflict resolution) and differed from the finding of a previous study which reported that older healthcare students had more positive attitudes toward IPE than younger students did (Pollard et al., 2005).

It is important to note that previous research regarding factors predicting perceptions of collaborative practice has been very limited. As a result, study hypotheses were established based in some cases on research that involved students rather than practicing clinicians. Also, many of these studies investigated the students' perceptions or attitudes regarding IPE, rather than clinicians' perceptions regarding the work environment. In addition, hypotheses were based on studies conducted outside of the mental health field. Psychiatry has its own unique structure,

responsibilities, and types of interprofessional relationships, all of which could dramatically influence results.

Perhaps most importantly, previous research has focused primarily on attitudes about interprofessional collaborative practice rather than perceptions of the actual climate for collaborative practice in the clinician's work environment. This study assessed how clinicians viewed the presence of interprofessional collaboration in their practice environment. This difference between ideal and actual perceptions could be the most salient explanation for results of this study diverging from those of previous research.

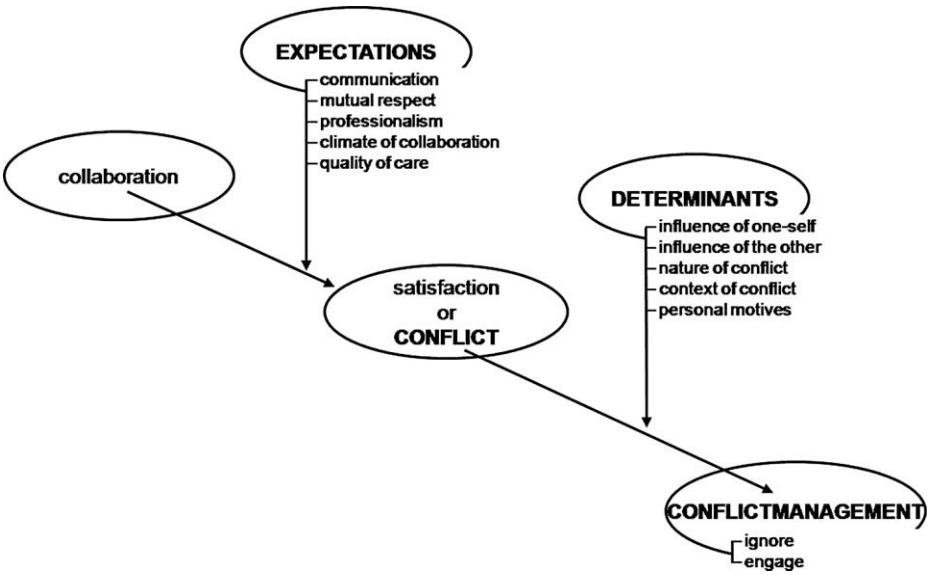
Meaning of the Findings

Professional Group Differences. As mentioned above, only a clinician's professional group was significantly associated with perceptions of collaborative practice; psychiatrists perceived their interprofessional practice as more collaborative than did psychiatric nurses. A possible reason for this finding could be the difference in attitudes or expectations of nurses and physicians about what should ideally be occurring within interprofessional practice. Previous studies show that nurses have more positive attitudes toward IPCP and are more collaborative when compared to physicians (Hendel et al., 2007; Hughes & Fitzpatrick, 2010). Psychiatrists in the current study may have had lower expectations for the amount of collaboration that should be occurring in practice, resulting in more positive perceptions of the degree of collaboration that was actually taking place. Psychiatrists may not recognize when collaboration is not as effective as it could be, or the need for their interprofessional teams to become more collaborative. Study findings also indicate differences in perceptions between psychiatrists and all other mental health clinicians in the area of conflict resolution. These differences may also be explained by differential expectations for the amount of collaboration that should occur among professional

groups. In contrast to other professionals, the psychiatrist may view his/her role as making the ultimate decision if conflicts emerge, rather than considering the opinions of other team members and negotiating a more collaborative resolution. This view is congruent with the traditional medical model, in which physicians (or psychiatrists) function as a team leader and view nurses or other team members as extenders or helpers under the authority of their leadership (Campbell-Heider, 1987). Although the value of flexible leadership in health care has been noted, many psychiatrists may still abide by the medical model, finding it easier to use their authority to lead interprofessional teams and request cooperation from other professionals.

Leever et al. (2010) found that expectations regarding collaboration were a significant factor, causing increased conflict when they are not met. These authors identified key elements in expectations about collaboration (communication, mutual respect, professionalism, climate of collaboration, and quality of care) and noticed that the importance of these elements differs from one person to another. They explained that an individual perceives a situation as a conflict "if there is a lack of compliance between expectations and reality". Figure 7 presents the framework they introduced to understand this concept. Psychiatric nurses and other mental health professionals in the study may have had lower scores in their assessment of effective conflict resolution because of the greater discrepancy between their expectations and reality, as compared to any discrepancy between psychiatrists' expectations and reality.

Figure 7: Model for conflict management (Leever et al., 2010)



Differences Based on Clinical Experience and Age. In this study, individuals with less clinical experience reported less effective resolution of interprofessional conflict in their work environments than individuals with more clinical experience. This finding may be related to the individuals' communication competency. Wright (2011) reported that higher communication competency was related to an individual's collaborative conflict resolution. It is possible that individuals with more clinical experience had more sophisticated communication skills or more experience in successfully negotiating conflicts than clinicians with less experience. This could result in greater ability to express their views during conflicts and resolve them in a more collaborative, satisfying way.

In terms of age, older individuals identified less effective resolution of conflicts in their work environment than younger individuals. This finding may be influenced by age hierarchy or age superiority. Jones (1994) reported that older age physicians (from 51 to 72) were often less collaborative clinicians. This could be the result of being trained in the physician-centered traditional medical model and/ developing a less flexible practice style over time. This same

interpretation could apply to all mental health professionals who were educated and worked initially in environments that were based on the traditional medical model. Veerapen (2014) reported that senior nurses accepted the physician-nurse hierarchy more than junior nurses did.

It is interesting to note that age and experience had opposite effects on perceptions of collaborative practice. This finding supports the importance of considering these variables together in an integrated model. Results suggest that a clinician's age cannot be assumed to reflect amount of experience or vice versa. It is possible that increased experience working within an interprofessional context (including changing environments that involve expectations for greater team work and collaboration) can buffer the effects of age-related training or values that reflect a more traditional medical model.

Limitations of the Study

Since this was a secondary data analysis, multiple limitations exist. First, since the size of this sample was small, the power to detect effects was reduced. Next, although the data for testing of the CPAT-r was collected in two hospitals, both of these hospitals reside in one city (San Francisco). Hence the results of pilot testing for the CPAT-r may not be generalizable, especially for mental health professionals in different states, rural areas, or other countries. The reliability and validity of CPAT-r have been tested only in the U.S and Japan. Further studies are required to evaluate the psychometric properties of this scale in other countries as well. Test-retest reliability of this scale was evaluated only in Japan based on a small sample; therefore, further investigation of test-retest reliability in the U.S. with an adequate sample size is necessary. Additionally, the CPAT-r has had no concurrent or discriminant validity testing. Also, data was collected by using a self-reported questionnaire. To minimize social desirability of responses, the questionnaire was anonymous and no personal identifiers were associated with the information obtained. Lastly, hypotheses were limited by data available in the existing data set.

Recommendations for Future Research

Studies targeting clinicians who are actually practicing in an interprofessional health care setting, rather than health care students or educators, need to be conducted in future studies. Within psychiatry, there are many different contexts where this type of study is needed. Inpatient care, community clinics or private practices may have vastly different climates for interprofessional collaboration, with different factors influencing the process of collaboration. In addition, there would likely be a significant difference between Advanced Practice Psychiatric-Mental Health Nurses and generalist psychiatric nurses in the nature of their collaboration with psychiatrists. Psychiatric-Mental Health Nurse Practitioners often have identical responsibilities to those of psychiatrists for diagnosis, prescribing and medication management, psychotherapy, and overall case management whereas the role played by generalist nurses would be vastly different. As a result, the nature of educational preparation and the type of responsibilities held by clinicians should be assessed as potential moderators in future research. Additionally, unlike some of the previous studies discussed above, future studies need to collect data regarding both clinicians' age and years of experience and investigate how these factors directly impact perceptions of IPCP as well as interact to influence IPCP. For adequate power to assess these factors, a large sample size is needed.

Because differences in perceptions of collaborative practice (based on professional group, age, or clinical experience) may depend on baseline expectations for what an ideal interprofessional relationship should entail, future studies should assess these expectations and control for them when examining perceptions of the actual work environment. This discrepancy between clinicians' expectation and the reality of IPCP is an important area of future research.

In addition, the relationship between perceptions of the interprofessional climate and clinician's satisfaction at work needs to be examined. Tomizawa (2016) found a significant relationship between total CPAT-r scores and work satisfaction. Psychiatrists' perception of their interprofessional teams as more collaborative than those of psychiatric nurses could be associated with work satisfaction.

As noted earlier, the collaborative style in conflict resolution has been related to greater communication competence while avoiding and competing styles are related to less communication competence (Wright, 2011). It will be important to further investigate whether communication competency is a mediator in the relationship between clinical experience and perceptions of interprofessional conflict resolution that was found in this study.

Some studies have reported more complex findings regarding the impact of demographic and clinical factors on the perceptions of IPCP. For example, Veerapen and Purkis (2014) reported that medical residents' perceptions about nurses differed depending on the clinical experiences of the nurses. Freeman et al. (2007) also found that the dental students' perceptions about nurses differed depending on the clinical experience of the students. Jones (1994) also reported that the age ranges for a profile of less collaborative clinicians differed between physicians and nurses. These more complex analyses that considered interactions among clinical and demographic factors were not conducted in the current study due to the small sample size. However, findings of this study that age and clinical experience had very different effects on perceptions of interprofessional practice suggest that these types of interaction are important to understand.

The Intersectionality Framework (Choo & Ferree, 2010; Veenstra, 2011) provides a model for how these interactions may occur. It is proposed within this framework that factors

such as gender, race, social class, sexual orientation, age, citizenship status, national origin, religion, and disability are interconnected and multidimensional. The authors of the framework argue that power relationships with regards to these axes account for the multiple ways that women (or other groups) may interact or be treated. This framework could be helpful when conducting more complex analyses to understand how the relationships of clinicians' demographic and clinical factors impact their perceptions of IPCP.

Potential Implications for Practice

The CPAT-r allows us to evaluate the quality of IPCP in the mental health field and to identify the weakness and strength of an interprofessional team based on a clinician's perceptions. Use of this assessment could help organizational leaders better understand areas of interprofessional practice that need to be strengthened in order to improve the work environment and health care outcomes.

Findings related to discrepancies between the views of psychiatrists and psychiatric nurses indicate important areas of educational focus for both professional schools and health care organizations. In particular, improving skills for collaborative resolution of conflicts seems essential if goals for a truly collaborative, interprofessional practice are to be achieved. Findings suggest that training in collaborative conflict resolution also has relevance for less experienced clinicians who are just entering practice as well as for older clinicians who may have been had less clinical opportunities to experience interprofessional practice. Tailoring supportive educational programs for specific groups of clinicians could play a key role in improving the practice climate and health care outcomes.

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APPENDICES

Collaborative Practice Assessment Tool - revised

The following questions are about your ***current*** team to which you are more strongly related. Please complete each question ***during the last month*** to help us develop this scale using the Likert Scale (ranging from Strongly Disagree to Strongly Agree).

		Strongly Disagree	Mostly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Mostly Agree	Strongly Agree
Role Clarification	*1.* Team members recognize each other's strengths and limitations in skills, knowledge and abilities.							
	2. Team members acknowledge the aspects of care where members of my profession have more skills and expertise.							
	3. It is clear who is responsible for aspects of the patient/client care plan.							
	4. Patient/client care plans and treatment goals incorporate best practice guidelines from multiple professions.							
Patient/ community centered care	*5.* The patient's/client's family and supports are included in care planning, at the patient's request.							
	6. Information relevant to health care planning is shared with the patient/client in such a way that is understandable.							
	7. Patients/clients concerns are addressed effectively through regular team meetings and discussion.							
	8. Our team has established partnerships with community organizations to support better patient/client outcomes.							
	9. Our team has a process to optimize the coordination of patient/client care with community service agencies.							
	10. Team members meet face-to-face with patients/clients cared for by the team.							

		Strongly Disagree	Mostly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Mostly Agree	Strongly Agree
Collaborative communication	11. Our team's level of respect for each other enhances our ability to work together.							
	12. When team members disagree, all points of view are considered before deciding on a solution.							
	13. Team members use respectful language during any interprofessional conflict.							
	14. Team members care about one another's personal well being..							
Interprofessional conflict resolution	*15.* Disagreements among team members are ignored or avoided.							
	16. In our team, there are problems that regularly need to be solved by someone higher up.							
	17. Our team leader is out of touch with team members' concerns and perceptions.							
	18. Team members feel limited in the degree of autonomy in patient/client care that they can assume.							
Environment	*19.* Our team's mission and goals are supported by sufficient time.							
	20. Our organization has enough shared space (meeting rooms, break rooms, staff rooms, etc.) to work together effectively as a team.							
	21. There is support from the organization (affiliated departments, hospitals, etc.) for teamwork.							

Tables

Table 1: Sample Demographics

		Frequency	Valid Percent
Gender (n=83)	Male	28	33.7
	Female	55	66.3
Profession (n=82)	Psychiatrist	17	20.7
	Psychiatric Nurse	39	47.6
	All Others	26	31.7
Age (n=83)	20 to 29	10	12.0
	30 to 39	20	24.1
	40 to 49	19	22.9
	50 to 59	28	33.7
	60 or Older	6	7.2
Total Years of Clinical Experience (n=78)	Mean	13.5069	
	Std. Deviation	10.71000	
	Minimum	.00	
	Maximum	36.00	

			Frequency	Percent
Type of Unit (n=81)	Inpatient/acute	Yes	62	76.5
		No	19	23.5
	Emergency	Yes	4	4.9
		No	77	95.1
	Outpatient	Yes	3	3.7
		No	78	96.3
	Forensic	Yes	4	4.9
		No	77	95.1
	Psychiatric Units for Specific Age Groups	Yes	3	3.7
		No	78	96.3
	Non psychiatric Settings	Yes	5	6.1
		No	76	93.8

Types of Co-workers (n=81)			Frequency	Percent
	Psychiatrist	Yes	46	56.8
		No	35	43.2
	Psychiatric Nurse	Yes	62	76.5
		No	19	23.5
	Psychologist	Yes	28	34.6
		No	53	65.4
	Social Worker	Yes	39	48.1
		No	42	51.9
	Occupational Therapist	Yes	38	46.9
		No	43	53.1
	All others	Yes	17	21.0
		No	64	79.0

Table 2: Perceptions of Collaborative Practice: Total and Subscale Statistics by Gender

Subscale	Gender	n	Mean	SD	t	df	p	95% Confidence Interval
Total Score	Male	28	110.43	19.466	-.256	81	.799	-9.807 – 7.573
	Female	55	111.55	18.478				
Role Clarification	Male	28	22.71	3.770	-.013	81	.990	-1.972 – 1.946
	Female	55	22.73	4.457				
Patient Community Centered Care	Male	28	34.04	6.697	-.549	81	.584	- 3.784 – 2.146
	Female	55	34.85	6.276				
Collaborative Communication	Male	28	23.29	4.259	.522	81	.603	-1.417 – 2.425
	Female	55	22.78	4.108				
Interprofessional Conflict Resolution	Male	28	17.00	6.330	-1.035	81	.304	-4.304 – 1.359
	Female	55	18.47	6.027				
Environment	Male	28	13.39	4.677	.645	81	.521	-1.425 – 2.792
	Female	55	12.71	4.508				

Table 3: Perceptions of Collaborative Practice: Total and Subscale Statistics by Professional Group

CPAT-r Score	Profession	N	Mean	Std. Deviation
Total Score	Psychiatrist	17	122.24	14.091
	Psychiatric Nurse	39	106.49	18.509
	All Others	26	113.92	17.306
Role Clarification	Psychiatrist	17	24.47	2.427
	Psychiatric Nurse	39	22.15	4.510
	All Others	26	22.85	4.277
Patient Community Centered Care	Psychiatrist	17	37.76	3.945
	Psychiatric Nurse	39	33.08	7.106
	All Others	26	35.85	4.888
Collaborative Communication	Psychiatrist	17	25.06	3.172
	Psychiatric Nurse	39	21.97	4.145
	All Others	26	23.65	3.665
Interprofessional Conflict Resolution	Psychiatrist	17	22.76	3.113
	Psychiatric Nurse	39	16.31	5.736
	All Others	26	17.85	6.691
Environment	Psychiatrist	17	12.18	4.773
	Psychiatric Nurse	39	12.97	4.676
	All Others	26	13.73	4.153

Table 4: Pearson Correlations for Age and Years of Clinical Experience with the Total and Subscale Scores for Perception of Collaborative Practice

		CPAT-r Score					
		Total	Role Clarification	Patient Community Centered Care	Collaborative Communication	Interprofessional Conflict Resolution	Environment
Age	Pearson Correlation	-.139	-.069	-.109	-.121	-.249*	.091
	Sig. (2-tailed)	.211	.533	.326	.276	.023	.415
	N	83	83	83	83	83	83
Years of Clinical Experience	Pearson Correlation	-.032	-.068	-.027	-.054	-.064	.105
	Sig. (2-tailed)	.780	.554	.813	.640	.575	.362
	N	78	78	78	78	78	78

Table 5: Regression Analysis for Effects of Demographic and Clinical Factors on Perceptions of Collaborative Practice

	Overall R^2	beta	R^2-Change	p
Overall	.134			.064
Gender		.057	.003	.624
Age		-.106	.004	.562
Years of Clinical Experience		.191	.014	.283
Profession			.110	**.015**
Profession (Physician vs Nurse)		.389	.108	**.004**
Profession (Other Profession vs Nurse)		.181	.026	.148

Table 6: Regression Analysis for Effects of Demographic and Clinical Factors on Perceptions of Conflict Resolution

	Overall R^2	beta	R^2-Change	p
Overall	.296			**<.001**
Gender		.147	.019	.166
Age		-.417	.065	**.013**
Years of Clinical Experience		.418	.069	**.010**
Profession			.142	**.001**
Profession (Physician vs Nurse)		.447	.142	**<.001**
Profession (Other Profession vs Nurse)		.146	.017	.197

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