

Interprofessional Collaboration's Impact On Job Satisfaction And Organizational Commitment: An Empirical Study Of Healthcare Professionals In Morocco

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Abstract

For decades, healthcare systems have undergone many changes (financial, structural, organizational, human, etc.). To meet these challenges, interprofessional collaboration is now essential. It is seen as an effective, efficient, and satisfying way to deliver healthcare. The purpose of this study is to contribute to the study of the potential effects of interprofessional collaboration on organizational commitment and job satisfaction of healthcare professionals in Morocco. The analysis of data collected by questionnaire administered by direct interview with 51 healthcare professionals (doctors and nurses) working in a public hospital in Morocco reveals that the intensity of interprofessional collaboration has a positive and statistically significant effect on job satisfaction of healthcare professionals. However, the intensity of interprofessional collaboration has no effect on organizational commitment.

Keywords: *Healthcare Professionals, Interprofessional collaboration, Job satisfaction, Morocco, Organizational commitment.*

1. Introduction

The complexity and multidimensional nature of health problems in recent decades have led researchers and health policy makers to reflect on how to achieve better integration and coordination of all actors. For many, interprofessional collaboration is one of the most promising solutions (WHO, 2010). It is an innovative approach to traditional work organization (Asmar and Wacheux, 2007) and essential for the re-modelling of work processes in the health sector (D'Amour and al., 1999).

The World Health Organization states that interprofessional collaboration improves access to and coordination of health services (WHO, 2010), the appropriate use of resources, the care of people with chronic conditions, patient satisfaction, and adherence to treatment. It also estimates that this practice can reduce tensions and conflicts between stakeholders, staff turnover, number of medical complications, length of stay, and number of hospital admissions, as well as the mortality rate. D'Amour and al. (2005) also specify that patients are not the only beneficiaries of interprofessional collaboration' positive effects, as it should affect all parties involved in the process: patients, professionals, organizations, and health systems.

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However, even though the positive influence of interprofessional collaboration on healthcare professionals is constantly emphasized in the literature, this influence is not yet clearly demonstrated (Zwarenstein and al., 2005). The search for this evidence is essential, given the increasing pressure on healthcare systems, particularly hospitals, a central element of these systems, and the need to improve their performance. In addition, the work on interprofessional collaboration's impact has been conducted, in particular, in developed countries such as the United States of America (DeLoach, 2018; Henneman and al., 2002), England (Reeves and al. 2017; Borril and al. 2000), Canada (Lackie and Murphy, 2020; Bordeleau and Leblanc, 2017; D'Amour and Oandasan, 2005), France (Eckenschwiller and al. 2022), Switzerland (Staffoni and al., 2017), Singapore (Foo and al., 2023), etc. To our knowledge, no study has been conducted in the Moroccan hospital context.

Given the importance of interprofessional collaboration in healthcare, this work attempts to answer the following question: What are the effects of interprofessional collaboration on satisfaction and commitment of healthcare professionals?

To answer this question, we will first present a literature review related to our research question, then we will discuss our methodological choices, and finally, we will present the results of our survey.

2. Literature review

2.1. Interprofessional collaboration

Interprofessional collaboration is a complex phenomenon (Lapierre and al. 2017). It has been the subject of several definitions in the literature. However, no consensus conceptualization has truly emerged within the scientific community. In addition, the analysis of the literature on interprofessional collaboration in healthcare reveals several terminologies used, such as: interdisciplinary collaboration, interdisciplinary team, multidisciplinary collaboration, interdisciplinary teamwork, interdisciplinary practice, teamwork, etc. These terms are used as synonyms or to designate related concepts whose definition is often imprecise (Henneman and al. 1995; McCallin, 2001).

The literature review allowed us to identify several characteristics inherent to the concept of interprofessional collaboration. These elements are presented in the table below:

Table 1. Characteristics of Interprofessional Collaboration

Authors	Terminology	Characteristics
Reeves and al. 2010	Interprofessional collaboration	More than two people working together to achieve a common goal
Barr and al. 2005	Collaboration	Problem-solving process
D'Amour and al. 2005	Interprofessional collaboration	Shared decision-making
McCallin, 2001	Interdisciplinary practice	Sharing the same values and vision
Henneman, 1995	Collaboration	Collegial relationships (non-hierarchical)
Xyrichis and Ream, 2008	Teamwork	Interdependence
Orchard and al. 2010	Interprofessional collaboration	Open and respectful communication
D'Amour and Oandasan, 2005	Interprofessionality	Knowledge of roles and responsibilities
Petri, 2010	Interdisciplinary collaboration	Common intervention objectives

Source : authors.

According to the authors, some of the elements mentioned above can be considered as attributes of interprofessional collaboration or as factors that positively or negatively affect this practice (Petri, 2010). This confusion surrounding interprofessional collaboration is one of its main characteristics (Nolan, 1995).

In this work, the definition of D'Amour (1997) is used. Interprofessional collaboration implies "the structuring of collective action through information sharing and decision making in clinical processes" (D'Amour, 1997, p. 104). Based on this definition, interprofessional collaboration is conceptualized according to four dimensions (D'Amour, 1997): 1) finalization, which expresses the degree of integration of collaboration's objectives and results by professionals; 2) internalization, which refers to the feeling of belonging to the team; 3) delegation, which relates to the team's ability to make decisions in matters that concern them; and 4) formalization, which refers to the rules that formally define the relationships between the different professionals.

These four dimensions interact in any collective action according to an intensity that varies depending on situations and contexts (D'Amour et al. 1999). The intensity of collaboration as an intermediate outcome of the collaboration process was developed by Sicotte and al. (2002). For these authors, the intensity of collaboration is measured by the level of coordination and the level of sharing of decision-making.

2.2. Effects of interprofessional collaboration on professionals

In general, studies that have examined the interprofessional collaboration's impact reveal positive results for all parties involved in the process: patients, professionals, organizations, and health systems (D'Amour and al. 2005; Zwarenstein and al. 2005). As for the effect of interprofessional collaboration on health professionals, several authors indicate that it has helped to correct negative attitudes and perceptions, address problems of trust and communication, develop collaborative practices between professionals, promote motivation and job satisfaction, and finally reduce stress (Borril and al., 2000; D'Amour and Oandasan, 2005; Henneman, 1995; Sullivan, 1998). The purpose of our work is to verify the interprofessional collaboration's impact on satisfaction and organizational commitment of health professionals in the Moroccan context. It is therefore important to clarify the relationship that could exist between these concepts.

➤ Job satisfaction

Job satisfaction is the most studied variable in organizational literature (Spector, 1997). According to Taylor (2007, p. 939), "most efforts to explain job satisfaction are based on the person-environment fit paradigm. Simply put, workers with higher satisfaction levels are those who have developed a better psychological fit between their personal needs or values and the characteristics of their jobs (...) Employees who are satisfied with their jobs will perceive that their job fulfills, or allows for the fulfillment of, values that are important to them." It is widely defined as a positive emotional state resulting from a process of evaluating work or work experiences (Agho and al. 1993). Studies on interprofessional collaboration effects in the healthcare field have shown a positive impact on job satisfaction (Borrill and al. 2000; Song and al. 2017; Sullivan, 1998). These results are mainly explained by the influence of certain interprofessional interaction factors such as type of relationship and communication (Blegen, 1993; Lu, While and Barribal, 2005), which are inherent elements of the interprofessional collaboration process (D'Amour et al. 1999).

Other personal and environmental factors may also influence job satisfaction. Among these factors, age, training, professional experience (Agho, 1993; Bhatnagar, 2014; Ingersoll and al., 2002), working conditions (Wibowo and al. 2022; Lu, While & Barribal, 2005) and management style are positively related to job satisfaction (Morrison and al. 1997).

This leads us to formulate the following hypothesis:

H1: The intensity of interprofessional collaboration would positively and significantly affect job satisfaction of healthcare professionals.

➤ **Organizational commitment**

Over the past fifty years, organizational commitment has been conceptualized and measured in a variety of ways. Porter and al. (1974) define this concept as the strength with which an individual identifies with and is involved in an organization. According to Meyer and Allen (1997), three dimensions of organizational commitment can be identified: affective, continuance, and normative commitment. The affective dimension refers to the employee's affective attachment, identification, and commitment to the goals and values of their organization. The continuance dimension refers to the consideration of the costs associated with leaving the organization. The normative dimension refers to a sense of moral obligation felt by the employee towards their organization. These three dimensions are distinct, but not mutually exclusive, as an individual can experience each of the three types of commitment at different levels at the same time.

Several authors have affirmed the impact of certain elements inherent to the collaboration process on organizational commitment (Meyer and al. 2002). Among these elements, participation in decision-making, interaction and social participation, perception of task interdependence, and opportunities for feedback are positively linked to organizational commitment (Mowday and al. 1982; Steers, 1977).

Similar to job satisfaction, the level of organizational commitment is influenced by individual and organizational factors. Several studies conducted in the healthcare field indicate a positive influence of certain individual characteristics such as professionals' age and training on organizational commitment (Ingersoll and al. 2002). Regarding organizational characteristics, the work done in this context shows that organizational culture and leadership style affect positively organizational commitment (Jallow, 2004).

Thus, we formulate the following hypothesis:

H2: The intensity of interprofessional collaboration would positively and significantly affect organizational commitment of healthcare professionals.

3. Methodology

3.1. Data collection and sample characteristics

To verify our research hypotheses, a quantitative survey was conducted among healthcare professionals working at a Moroccan public hospital. Two criteria were used to select our sample: being a member of one of the four working teams chosen in this study (namely: emergency, traumatology, neurology, and endocrinology), for at least 1 year.

Of the 60 professionals working in the four teams, 51 (including 19 doctors and 32 nurses) agreed to participate in the study and answered our questionnaire in a direct interview, for a response rate of 85%. Two doctors and seven nurses refrained from answering the questionnaire.

3.2. Operationalization of variables

➤ **Independent variable**

In this study, two dimensions from the work of Sicotte and al. (2002) were adopted to measure the independent variable "intensity of interprofessional collaboration", namely: the level of coordination between team members and the level of sharing of clinical activities. The measurement instrument consists of 18 items (7 items measure coordination and 11 items measure sharing of clinical activities) evaluated on a five-point Likert scale. The measurement instrument selected has very good psychometric quality with an excellent

Cronbach's alpha (0,82 for the dimension "coordination between team members" and 0,87 for the dimension "level of sharing of clinical activities").

➤ **Dependent variables**

Job satisfaction: To measure the variable "job satisfaction", we used the Font Roja questionnaire (Aranaz and Mira, 1988). This measurement scale is adapted to the context of healthcare professionals in a hospital setting and consists of 27 items and 9 dimensions: job position, job content, workload, work-related stress, professional competence, promotion, professional autonomy, interpersonal relationships with other professionals, and interpersonal relationships with superiors. The choice of this measure is justified by its well-established psychometric qualities.

Organizational commitment: To measure our second dependent variable "organizational commitment", we were inspired by the measurement scale developed by Allen and Meyer (1990). Thus, three dimensions of organizational commitment were retained, namely affective commitment, calculated commitment, and normative commitment. The measurement scale consists of six items for each of the three dimensions. It has an excellent Cronbach's alpha (0,85 for the affective commitment dimension, 0,79 for the calculated commitment dimension, and 0,73 for the normative commitment dimension) and good temporal stability (Pearson correlation coefficients calculated in many studies vary between 0,61 and 0,94).

4. Data analysis

The data from the study were analyzed using R software version 4.2.2 (2022-10-31 ucrt) -. Two types of analyses were conducted: first, a descriptive analysis was performed by measuring the mean and the standard deviation of the variables studied, then, and to test our research hypotheses, we conducted a multiple linear regression analysis.

The normality distribution of the variables was analyzed using the Shapiro-Wilk test, and internal consistency was measured using the Cronbach's alpha coefficient.

5. Results

➤ **Measure of internal consistency**

Cronbach's alpha coefficient is the most commonly used indicator to measure the internal consistency of a scale. This coefficient allows us to verify whether all the items refer to common concepts, in other words, if each item presents a coherence with the set of the other items on the scale. The coefficients obtained in our study are:

- 0,886 for the scale of the intensity of interprofessional collaboration (Sicotte and al. 2002)
- 0,706 for the scale of organizational commitment (Allen and Meyer, 1990)
- 0,811 for the scale of job satisfaction (Aranaz and Mira, 1988).

The score of Cronbach's alpha for the three scales used is very satisfying and therefore reflects an excellent degree of internal consistency.

➤ **Description of study variables**

Descriptive characteristics of the research variables

Variables	X	Sd	min	max
Intensity of interprofessional collaboration	3,022	0,643	2,056	4,722
Organizational commitment	3,119	0,359	2,44	3,833

Job satisfaction	3,087	0,413	2,375	4,083
Age	42,686	9,543	27	59
Team tenure	7,796	5,617	1,5	24

To identify the links that may exist between the research variables and the personal factors (age and seniority in the team), we conducted two types of tests: Pearson and Spearman. The analyses performed reveal a significant relationship between all the research variables at a significance level of 0,05. Table 3 presents the results of these tests:

Table 3. Bivariate Test Results

	Test	Interprofessional collaboration	Organizational commitment	Job satisfaction
Age	Pearson	R=0,62	R=0,33	R=0,63
		P-value<0,001	P-value=0,033	P-value < 0,001
Team tenure	Spearman	R =0,73	R =0,58	R =0,74
		P-value<0,001	P-value<0,001	P-value < 0,001
Interprofessional collaboration	Pearson*	.....	R=0,33	R = 0,71
		.....	P-value=0,033	P-value < 0,001
Organizational commitment	Pearson*	.....	.....	R=0,54
		.....	.....	P-value<0,001

*Two-tailed test

➤ Normality of the distributions

As for the normality of the distributions, the Shapiro-Wilk test confirms the null hypothesis of a normal distribution for all three variables (Interprofessional collaboration: $p = 0,083$; Organizational commitment: $p=0,398$; Job satisfaction: $p = 0,071$).

➤ Multiple linear regression analyses

To test our research hypotheses, we established a model for each of the study's dependent variables: job satisfaction and organizational commitment. In both models, we introduced two confounding variables: professional experience and professional category (coded 1 for doctors and 0 for nurses). Age was not included because it is strongly correlated with professional experience ($r = 0,69$; $p < 0,001$).

The table below presents the results of the multiple linear regression of the first model.

Table 4. General Linear Regression Model. Dependent Variable : Job Satisfaction

Predictors	B	Standard Deviation for B	T	Sig.	95% CI for B
Constant	2,96	0,207	10,096	< 0,001	[1,678 ; 2,514]
Interprofessional collaboration	0,254	0,084	3,001	= 0,004	[0,084 ; 0,424]
Professional category	-0,117	0,076	-1,540	= 0,130	[-0,271 ; 0,036]
Team tenure	0,034	0,009	3,584	= 0,001	[0,015 ; 0,054]

F-test [5; 45] = 26,6 ; Sig. < 0.001 ; R = 0,793 ; R squared = 0,63 ; Adjusted R squared = 0,61

The results of the multiple linear regression show that the intensity of interprofessional collaboration ($p = 0,004$) and professional experience ($p = 0,001$) significantly contribute to explaining the variance of job satisfaction. On the other hand, professional category doesn't have a statistically significant effect on job satisfaction ($p = 0,130$). This model explains 61% of the variance of job satisfaction ($R^2_{\text{Adjusted}} = 61$).

The table below presents the results of the multiple linear regression of the second model.

Table 5. General Linear Regression Model. Dependent Variable: Organizational Commitment

Predictors	B	Standard Deviation for B	T	Sig.	95% CI for B
Constant	3,070	0,226	13,548	<0,001	[2,614 ; 3,526]
Interprofessional collaboration	-0,078	0,092	-0,855	0,396	[-0,265 ; 0,107]
Professional category	-0,183	0,083	2,193	0,03	[-0,351 ; -0,015]
Team tenure	0,045	0,010	4,362	<0,001	[0,025 ; 0,066]

F-test [3 ; 47] = 11,23 ; Sig. = 0,001 ; R = 0,64 ; R squared = 0,41 ; Adjusted R squared = 0,38

The results of the multiple linear regression show that the type of profession ($p = 0,03$) and professional experience ($p < 0,001$) significantly contribute to explaining the variance of organizational commitment. On the other hand, interprofessional collaboration doesn't have a statistically significant effect on organizational commitment ($p = 0,396$). The analyses also reveal that this model explains 38% of the variance of organizational commitment ($R^2_{\text{Adjusted}} = 38$) and that nurses are more committed to the organization than doctors ($B = -0,183$; Sig. = 0,03).

6. Discussion

Concerning the first hypothesis, the positive and statistically significant effect of interprofessional collaboration on job satisfaction can be explained by the influence of certain characteristics inherent to the collaboration process, such as: recognition of a common identity and sharing of the same values, open and respectful communication, good knowledge of roles and responsibilities, adoption of common intervention objectives, as well as shared decision-making. These characteristics create a positive and stimulating work environment, which contributes to improving the level of satisfaction among healthcare professionals because they feel valued and respected. The results of this study are therefore in agreement with those of Borrill and al. (2000), Song and al. (2017), and Sullivan (1998).

In addition, one of the two confounding variables introduced into the model had a positive and statistically significant impact on job satisfaction. Indeed, the analyses showed that job satisfaction increases with the number of years of seniority in the team ($b = 0,034$). This result can be explained by the fact that professional experience allows employees to better understand their work, develop their skills, and be recognized and respected by their colleagues and superiors, which contributes to their job satisfaction. In contrast, the study did not reveal an influence of the type of profession on job satisfaction ($p = 0,130$).

As for the second hypothesis, despite the absence of a significant effect of interprofessional collaboration on organizational commitment, it is not possible to completely rule out this relationship. Indeed, previous studies have shown that certain elements inherent to the collaboration process, such as satisfaction with the work team (Riketta and Van Dick,

2005), shared decision-making (Mowday and al. 1982), social interaction and participation, and feedback opportunities (Steers 1977) exert an influence on organizational commitment. It is also worth noting that interprofessional collaboration represents a local phenomenon that depends on a specific work environment, while organizational commitment is a more general phenomenon that depends more on organizational characteristics than on specific aspects of local work (Porter and al. 1974). It is therefore possible that a local phenomenon such as interprofessional collaboration, influences more a less general type of commitment than organizational commitment, such as commitment to the team. This one may play an important role in the relationship between interprofessional collaboration and organizational commitment.

Conclusions

Through this work, we wanted to contribute to understanding interprofessional collaboration effects on job satisfaction and organizational commitment of healthcare professionals. The results of this research corroborate one of the study's hypotheses: the intensity of interprofessional collaboration has a positive and significant impact on job satisfaction of healthcare professionals (H1). In contrast, the results did not confirm the existence of a positive and statistically significant effect of the intensity of interprofessional collaboration on the organizational commitment of healthcare professionals (H2).

Given the importance of collaboration between healthcare professionals, it is essential to conduct comparative studies and use a mixed approach (quantitative and qualitative) to understand, not only the effects of interprofessional collaboration, but also the mechanisms that allow collaboration to produce its effects.

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