

DOCTOR OF PHILOSOPHY

Team effectiveness: a test of in-put
process-output

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CHAPTER 7

CULTURAL ADAPTATION FOR THE RESEARCH MEASURES

7.1 Chapter Overview

This chapter presents the cultural adaptation for the ATPI and LR measures before applying it to healthcare teams in Jordanian hospitals. It includes procedures for translating the two measures into the Arabic Language and translating back in order to produce instruments that are culturally appropriate for the different team members and leaders in the selected language.

7.2 Cultural Adaptation for the Research Measures

The ATPI and LR measures were translated from their original English language into Arabic (Appendix 3) so they would be best understood by the study sample. The measures were translated and modified according to Brislin's (1970) back-translation suggestions and Sears's (1961) advice on conceptual equivalence. Today, most general-population sample surveys require translation into at least one language. However, cross-cultural research is threatened by the failure to produce culturally and linguistically appropriate survey instruments (Weech-Maldonado, Weidmer, Morales & Hays, 2001). Arabic was the language of choice for the purpose of this research.

It is recognized that the ATPI and Leader Ratings measures need to be translated into the Arabic language, the native language in Jordan, to enable its users to adequately collect data on their performance. The principal goal of the

translation process of the measures is to produce instruments that are culturally appropriate for the different team members in the selected language. The main challenge is to produce such instruments while maintaining equivalency with the English-language version.

In translating, it is important to distinguish between technical equivalence, conceptual equivalence, cultural competence, and linguistic appropriateness for the target population (Weech-Maldonado et al, 2001). Technical equivalence refers to equivalence in grammar and syntax, while conceptual equivalence refers to the absence of differences in meaning and content between two versions of an instrument. Cultural competence refers to the requirement that the translated instrument adequately reflects the cultural assumptions, norms, values, and expectations of the target population (Marin and Marin, 1991). Linguistic appropriateness refers to the language readability and comprehension of the translated instrument. The goal is to develop instruments using wording at a level easily understood by the majority of potential respondents (Weech-Maldonado et al, 2001).

In order to cross-culturally adapt ATPI and leader ratings measures, recent advances in the quality of survey development focused on increasing the reliability and validity of measures, and decreasing bias and measurement error (Mayer, 1999). Pretests are a useful method for addressing these issues. Pretests in survey research focus on examining the validity of question items and identifying, and controlling the root cause of the response errors (Desimone and Le Floch, 2004). There are a variety of pretests used to improve the design

of surveys and questionnaires. These include, for example, focus group and usability testing (Jobe, 2003; Battleson et al, 2001). These methods are useful ways of finding particular item problems, but their value is often limited because they do not allow each item to be examined individually in an in-depth way that reveals the thought process of the respondent (Desimone & Le Floch, 2004). Cognitive interview is a method that allows for in-depth analysis of individual items and has been used for a number of years by survey methodologists and cognitive psychologists to better understand response problems in social surveys and to improve the quality of data collected (Murtagh et al., 2007).

A review of the literature indicates that the most accepted approach for translation is one in which a variety of techniques is used to ensure the reliability and validity of the translated survey instrument (Bullinger et al., 1998). Cognitive interviews are often used in the process of questionnaire development to investigate, assess, and refine survey instruments (Weech-Maldonado et al, 2001). Cognitive testing can detect and minimize some sources of measurement error by identifying question items or terms that are difficult to comprehend, questions that are misinterpreted by the respondent and response options that are inappropriate for the question or that fail to capture a respondent's experience (Jobe and Mingay, 2006). It also provides an excellent methodology for examining the extent to which tools of inquiry validly and reliably capture respondents' experiences (Desimone & Le Floch, 2004). Cognitive interviews serve an exploratory function by revealing reasons for the responses, identifying which questions on the survey may omit critical

constructs or represent an incomplete or misleading view of the topic under question (Desimone & Le Floch, 2004).

This research focuses specifically on the use of cognitive interviews and one-to-one cognitive interviews were carried out through "think-aloud" interviews. The primary objectives of the cognitive interviews were to assess whether respondents understood the ATPI and leader ratings questionnaires, and to explore whether key words and concepts worked equally well in Arabic and English. Ethical approval was granted by the participants in the cognitive interview prior to beginning the study. The participants were assured that all the information they give will be treated with confidentiality (Westat, 2002).

7.3 Translation Procedures

7.3.1 Participants

Study participants were identified from the medical, academic and professional fields in Amman. Six volunteers, fluent in both Arabic and English languages, were invited to undertake cognitive interviewing. Table 15 shows the data related to the participants in the cognitive interview.

TABLE 15
Demographic of Participants in Translating

Job Title	Participants	Age	Gender
Doctor /General Manager	1	55	M
University Professor	2	60	M
Doctor/ Gynecology & Obstetrics	3	63	M
Matron / Nurse	4	56	F
Public relations	5	43	M
Manager	6	52	M

7.3.2 Translating the Measures from English into Arabic

Cognitive interviews were then undertaken with each volunteer/participant using the two measures during December 2007- January 2008. The purpose of

the cognitive interview was to investigate the comprehension of the Arabic translation of the ATPI and leader ratings measures. Specifically, do participants understand the questions? What phrases are most problematic? And what terms are confusing or unfamiliar?

The interview was designed to test every question in the two measures. At the beginning of the interview, the participants were shown the measures for the first time. They were then asked to complete it as normal, but to also 'read aloud' each question and to 'think aloud' their thoughts as they wrote their answer. This was explained and demonstrated by the researcher to ensure that each participant was comfortable with the process and understood what was required. During the interview, as well as these 'read-aloud' and 'think-aloud' techniques, concurrent and spontaneous verbal probing by the researcher was also undertaken to explore any unexpected verbal or non-verbal behavior such as hesitations, confusion or uncertainty, and to seek specific information. The researcher took notes on problems identified in the interviews and used them to write the report.

7.3.3 Back-Translation

Once the two measures were translated into Arabic they went through a process of back translation. In this process, the translated measures were given to three independent certified translators to translate them back into English. The translators had no access to the original English language versions of the measures. Appendix 6 shows examples of words that were used by the independent translators that were different from the original English version after back-translation but had the same meaning (e.g. opinion versus idea).

7.3.4 Independent Review and Comparison for Back Translation

The researcher, assisted by a bilingual reviewer, revised and compared the original English and the back translated versions of the measures. Appendix 6 shows examples of the alternative wordings and terms that were problematic because they were not conceptually equivalent, were too sophisticated for the target population, or too-infrequently used by most Arabic speakers. The alternative wording in the final version comes closer to the conceptual meaning in the English version, fits better in the local environment and is easier for the respondents to understand.

7.4 Testing the Arabic Version

Cognitive interviews were also conducted with ten different participants very similar to the target group in the population study (six for the ATPPI instrument and four for the leader ratings instrument). To cognitively test the Arabic version, the interview was designed to answer every question in the measure and the participants were shown the measure for the first time.

The researcher read each question aloud to the interviewees and asked them to complete the instrument as normal. The researcher informed them that she would clarify any question if it was vague or unclear. When the participants completed the instrument the researcher asked them to give a general statement about the instrument. Their observations and comments (Appendix 5) are included in the results. Table 16 shows data related to participants in the cognitive interviews to test the Arabic version.

TABLE 16
Demographic of Participants in Testing the Arabic Version

Job Title	Participants	Age	Gender
Chief resident doctor	1	45	M
Operating room supervisor	2	55	M
Doctor/ house resident	3	45	M
Nurse	4	28	F
ICU nurse	5	36	M
Nurse	6	25	M
Medical team member	7	44	M
Doctor	8	39	M
Anesthesiologist	9	48	M
Operating room supervisor	10	45	M

After the cognitive interviews were conducted, the researcher received similar comments from the interviewees. Most comments were suggestions to change some of the wording not so familiar to Jordanian culture, to clarify ambiguous words, and to revise some items as detailed below. In the ATPI instrument the cognitive interview respondents agreed that all the instrument items were very clear, easy to follow and well understood. Only two comments were raised by the participants namely: to change the word 'organization' to 'hospital' to fit in with the study which will be conducted in hospitals in Amman, and to change the word 'customer' to 'patient'.

All interviewees translated the original English instrument into Arabic so that it conveyed the same meaning as the original English version. They all commented that the instrument was clear and that it would be easy for team members to complete. However there were some comments by all four interviewees when it came to the leader ratings instrument. One was concerning the term 'Primary Health Care Charter' which is not understood by people working in the Jordanian health sector and proposed that the term 'Public Health Law' should replace it. Thus wording should be created in the target language that is functionally equivalent to the source language: Public Health Law is listed

under rules and regulations of the Ministry of Health (MOH, 2006). According to this Public Health Law, the Ministry is responsible for all health affairs in Jordan which include: Preserving public health by providing health, preventive and curative services; organizing and supervising health services provided by public and private sectors, and providing health insurance to all citizens within the means available.

The other comment made by the interviewees was to clarify the ambiguity raised by the term 'Health of the Nation Targets' and to change it to its equivalence in the Jordanian settings "Health for All/Comprehensive Health Insurance". Four participants stressed the fact that the term focuses on achieving the required health goals of "Health for All/Comprehensive Health Insurance". Hence, a top priority for all those involved in the medical sector is to promote the health sector and to overcome all obstacles that stand in the way of delivering good healthcare to all citizens. This means that the vision of the MOH focuses on the necessity of providing good quality healthcare to all Jordanians and on ensuring that all Jordanians have health insurance (MOH, 2008). Noting that private and public hospitals in Jordan total 101 with 11,200 beds, the government allocates nearly 1.3 billion dollars to the MOH every year, which is 7.4% of the total governmental budget. Approximately 60% of Jordanians have health insurance: the government is working towards including the remaining 40% through its comprehensive health insurance strategy (MOH, 2008).

Taking into consideration the participants' remarks some words and items in the ATPI and the leader ratings instruments were revised. Appendix 5 shows a summary of comments identified during the cognitive testing. Appendix

6 shows examples of words that were used by the independent translators that were different from the original English version after back-translation but had the same meaning (e.g. opinion versus idea). It may not always be possible to have a translator who is trained in this type of instrument and who is also bilingual.

As for the Arabic Version test, the translation was found to be consistent with both the basic principles of the instrument design, and with the research objectives. The test showed that the instrument measured the same thing in the target language as in the source language by assessing its translations' functional equivalence. The interview was conducted in a quiet and a relaxed atmosphere and the body language of the participants reflected that they were comfortable with completing the instrument. They were not hesitant at any time which the researcher interpreted to imply that the instrument was easy, clear, simple and specific.

The participants noted at the end of the instrument that the items were comprehensive and objective. They mentioned that the terms consistently conveyed the intended construct to investigate team effectiveness in hospitals and the majority remarked that they felt that there was similarity between some questions namely: Q5/Q16, Q7/Q17, Q12/Q23, Q6/Q27, Q3/Q38/Q42, Q10/Q31, Q41/Q49, Q21/Q32, Q57/Q61, Q67/Q72, and Q83/Q91 but they unanimously agreed that the questions were easy to follow, to the point, and very clear.

7.5 Conclusion

The chapter presents the cultural adaptation for the research measures in the Jordanian setting. The measures were translated into the Arabic language

according to the formal scientific procedures. As a result, the Para-final Arabic version of the ATPI measure (Appendix 3), which contains 100 items was attained. It will be used to measure team functioning from team members' point of view in the Jordanian healthcare teams. In the following chapter, the measure will be tested on a pilot sample to ensure that the translated measure is adapted to the Jordanian environment culturally, socially and behaviourally.

CHAPTER 8

STUDY II: THE ATPI AND SERVICES QUALITY

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8.1 Chapter Overview

This chapter presents a pilot study of the ATPI which has been translated into the Arabic language to ensure that the translated measure is adapted to the Jordanian environment culturally, socially and behaviourally. This pilot study also seeks to provide information that will be of value to Jordanian healthcare professionals by assessing the quality of care given to Iraqi patients in Jordan.

This part of the study was published in the *American Journal of Economics and Business Administration* under the title “Quality of Health Services Provided to Iraqis at Jordan Red Crescent (JRC) Health Centers” which reflected one of the main roles offered by JRC in collaboration with International humanitarian organizations.

The chapter therefore assesses the ATPI and seeks to test a measure of service quality in a Jordanian healthcare context to determine the quality of healthcare given to Iraqi patients in Jordan. Consequently, the current study applied a pilot test of the ATPI in five health centers to measure team functioning and in parallel it applied the quality of health service measure to patients in these centers. The results were approximately the same using both measures.

8.2 Introduction

The first study of this research presented statistical evidence that the ATPI measure demonstrated acceptable psychometric properties. It was then translated into the Arabic language which made it possible to conduct a pilot study to ensure that the translated measure was adapted to the Jordanian environment culturally, socially and behaviourally, and to examine the reliability and accuracy of the measure in assessing team effectiveness. It was important even in a pilot study to try to generate information that would be of value to the Jordanian health system so the study sought to assess quality of care given to Iraqi patients from war-torn Iraq. The aims of this study were to pilot test the ATPI, to test a measure of service quality in a Jordanian healthcare context, and to determine the quality of healthcare given to the Iraqi patients in Jordan.

8.3 Pilot Test of the ATPI

The pilot test of the ATPI was conducted in March 2008 prior to distributing the instrument to teams participating in the main study. A sample of five teams comprising 3-6 members each was randomly selected from the JRC health centers in Amman. A total of 26 participants responded to the pilot test. There were 18 females respondents representing 69.2% of the sample and 8 males representing 30.8%. The researcher informed each team member that their answers would be treated confidentially and that their participation would enable the researcher to better understand the effectiveness of teamwork. Each team-member was also informed that s/he was under no obligation to participate

in the study and that they could withdraw from the study at any time. Participants confirmed their willingness to participate in the study and all five randomly selected teams completed the questionnaire. Reliability analysis was conducted to test the level of internal consistency of the pilot study sample. The outputs of this analysis are reported in Table 17 below.

TABLE 17
Reliability Analysis for the ATPI Dimensions

ATPI Variables	Dimensions	Coefficient Alpha	No. of Items
Inputs	Task design	0.84	11
	Team effort and skills	0.81	8
	Organizational support	0.83	11
	Resources	0.77	4
Processes	Objectives	0.68	3
	Reflexivity	0.93	4
	Participation	0.88	7
	Task focus	0.86	6
	Team conflict	0.64	5
Leadership Processes	Creativity and innovation	0.71	3
	Leading	0.94	4
	Managing	0.94	8
Outputs	Coaching	0.94	5
	Team member satisfaction	0.82	6
	Attachment	0.88	3
	Team effectiveness	0.59	3
	Inter-team relationship	0.58	5
	Team innovation	0.86	2

The results shown in Table 17 above indicate that the Cronbach Alpha levels of all the dimensions exceeded the value of 0.70 suggested as acceptable by West et al. (2005) with the exception of the objectives dimension ($\alpha=0.68$), team conflict dimension ($\alpha=0.64$), team effectiveness dimension ($\alpha=0.59$) and the inter-team relationship dimension ($\alpha= 0.58$).

8.4 Measuring Service Quality in a Jordanian Healthcare Context.

It is worth recalling that the ATPI measure was applied to team members whereas the LR measure was applied to team leaders in order to assess team effectiveness from the leaders' point of view in the healthcare context. However the present study measured the quality of health services from the patients' point of view. So the compatibility between the level of team effectiveness measured by the ATPI and the level of the quality of services measured by SERVQUAL confirms the objectivity of these measures.

In order to achieve the second and third aims of this study which is related to testing a measure of service quality in a Jordanian healthcare context and to determine the quality of healthcare given to the Iraqi patients in Jordan, this study was applied to a number of healthcare centers at JRC where the ATPI and LR measures had previously been applied. The following section presents the study:

8.4.1 Study Background

As a member of the International Movement of the Red Cross and the Red Crescent, the JRC Society has, since its establishment in 1947, been committed to achieving its mission "to alleviate the suffering of the victims and the vulnerable of natural disasters and armed conflicts and to protect their dignity and rights in a manner that preserves their lives, safety, security and well-being" since its establishment in 1947. In addition JRC is committed to the goals of the movement and its fundamental principles; humanity, neutrality, independence, unity, voluntary services, impartiality and universality (Crescent, 1969). It also supports Strategy 2010 of the International Federation of Red Cross and Red

Crescent Societies and its vision for the future of the movement (Crescent, 2008).

As a result of the war on Iraq in 2003, many Iraqis fled to neighbouring countries. As host to Iraqis, these countries now bear the burden of providing basic and essential services for those who have been displaced. In Jordan and Syria in particular the burden is greater than the available capabilities. Regional consultations hosted by the World Health Organization highlighted the problems faced by many migrants, including the lack of access to healthcare services in the host countries. The Jordanian government reported that Iraqis in Jordan benefit from the same medical services that benefit Jordanians who do not have health insurance. Iraqis bear the same costs as a Jordanian citizen, or any other foreign resident of the Kingdom (Crescent, 2008).

In order to meet its mission the JRC co-operated with International humanitarian organizations to provide assistance to displaced Iraqis in Jordan by establishing five well equipped primary health centers stocked with necessary medicines. These centers are: Al-Hashemi Center (providing services to approximately 24684 patients and established on 1/3/2006 in cooperation with the French Red Cross); Ashrafieh Center (providing services to approximately 19661 patients, established on 1/7/2007 in collaboration with the Office of the High Commissioner for Refugees); Al-Taj Center (providing services to approximately 15329 patients, plus 1867 from IMC, and established on 15/9/2007 in collaboration with the International Federation of Red Cross and Red Crescent Societies and with partial support from the International Medical Corps from 29/06/2008); Marqa Center (providing services to about 9797

patients and established on 1/12/2007 in cooperation with the German Red Cross) and Al-Hussein Center (1814 patients, established on 19/7/2008 in cooperation with the International Federation of Red Cross and Red Crescent societies).

Thus the total of 53,491 patients were provided with health services from 2007-2008 (Crescent, 2008). The beneficiaries of these centers are predominantly Iraqis living in Jordan and only a small percentage of needy Jordanian. The services provided included the provision of free primary healthcare, medicines for people who suffer from chronic diseases such as high blood pressure, diabetes, dental care, psychological support and social development services, ante-and post-natal care and support to women and finally weekly transferals of patients whose condition requires specialist consultants and additional required tests (Crescent, 2008).

The JRC undertakes the provision of doctors, nurses and social workers for the health centers provided that financial support is pledged by the international humanitarian organizations. The continued sustainability of these services maintaining high quality provision for Iraqis is reliant on this financial support. So, on the one hand the JRC achieves its ultimate mission effectively, while on the other hand it provides a partner to the international organizations for a worthwhile financial investment.

Therefore, the JRC considers that the best evidence comes from the recipients of the services themselves in order to achieve objectivity and transparency in the measurement of the quality of health services provided to them. The patients' observations on the quality of healthcare are very important

in the organization of specialist healthcare because the patient observations indicate the level of patient satisfaction and therefore achievement of the health centers' goals. Previous studies showed that the quality of health service has a major influence on patient behavior, such as honesty and the reputation of the health organization (Andaleeb, 2001). In addition, understanding the concept of quality service can help healthcare providers to identify the health services that need improvement and development. With the achievement of patient satisfaction health organizations will save time, effort and money spent on dealing with patient complaints (Pakdil and Harwook, 2005).

Thus, the provision of high quality health services and improving patient satisfaction are considered as essential successful strategies for healthcare in the long term (Gilbert, Lumpkin & Dant, 1992). The accelerating changes in the healthcare environment-such as alternative service delivery systems, competitive health plans, physical capability of the patients and the increasing costs of health services-have led to the identification of a more accurate and better understanding of the quality of services provided to patients (Fowdar and Roshnee, 2008).

The meaning of quality service is the capability of the service to provide greater satisfaction to the service recipients compared with the other alternatives available (Bojanic, 1991), where the quality of the service represents the level of service received by the individual and the level of their expectations. Service quality accordingly comes within the three possibilities:

- Negative assurance (the performance is lower than the expectation)
- Positive assurance (the performance is above with the expectation)

- Assurance (the performance is equal to the expectation) (Prakash, 1984)

In the healthcare environment, the patient's perception is an assessment of the specific characteristics of the health service provided compared with their expectations (Carman, 1990). Service quality also means "the quality of health services provided whether it's perceived or expected". This means, what the customer expects or perceives in reality: The determining factor for providing quality of health service is patient satisfaction or dissatisfaction (Babakus and Boller, 1992)".

Service quality is measured by giving service providers the freedom to act in the workplace to achieve satisfaction and promote the happiness of the service recipients, developing standard measures for the level of service provided and following up and monitoring their work on an ongoing basis as well as giving employees feedback on the extent to which they achieve the standard of quality service (Cronin and Taylor, 1992).

Measuring the quality of health service at JRC health centers is useful for health center managers to understand the patients' perceptions about the quality service received by the patient. The SERVQUAL scale has been used as a measure to achieve this purpose and was developed to measure quality service within the five dimensions (tangibles, reliability, responsiveness, assurance and empathy) (Parasuraman, Zeithaml & Berry, 1985). This measure is based on a comparison of the expectations of patients and their perception of the service actually provided to them. Therefore the level of quality service is detected through the extent to which the patient expectations of the service resemble the actual performance they received. So the quality service

represents the gap between expectation and perception and may be the gap between patient expectations for quality service and management perceptions of these expectations. It can also be the gap between service standards actually provided and between the management perceptions of customers' expectations, or the gap between management perceptions and the standards of quality and the service actually provided. The so-called 'performance gap' results from the imbalance in the credibility of the organization, through communication with customers, which differs from the level of service and its actual standards or the gap between the received and the expected service. Thus the quality of service is the achievement of patient satisfaction (Murfin, Schlegelmilch & Diamantopoulos, 1995). Accordingly, the basic goal of the SERVQUAL scale is to clarify a series of gaps affected by patient perception of the quality of health services and make it desirable. Therefore this study has been designed to detect the level of the quality of health services provided to the Iraqis at the JRC health centers.

8.4.2 Problem of the Study

The JRC sought to provide humanitarian services to Iraqi patients in Jordan because of the circumstances of the war in Iraq, through its privileged relations with global and local humanitarian organizations. The JRC humanitarian initiative has been to provide health services to Iraqis: On the one hand providing the requirements for establishing health centers, to deal with the services for the Iraqis including, buildings, doctors, nurses, social workers and others; on the other hand, gaining financial support to establish these centers

through special investment relationships with a number of humanitarian organizations.

The JRC seeks to stimulate other humanitarian organizations to support its humanitarian policy and at the same time to provide clear and realistic evidence about the level of services provided to Iraqis to the humanitarian organizations which support these centers. They must prove that the financial support has been invested in the best way and encourage them to continue supporting this humanitarian policy. Finally, in order for the JRC to maintain its credibility, it must show the results of this humanitarian policy to the global humanitarian societies in particular and to the international organizations in general. This study aims to evaluate the quality of health services provided to Iraqis at the Jordan Red Crescent health centers. The study problem lies in answering the following questions:

- What is the quality level of health services provided to the Iraqis at JRC health centers?
- Does the quality of health services provided to Iraqis at JRC health centers, differ according to the specific health center (Al-Ashrafieh and Al-Hashemi, Marka, Al-Taj and Hussein)?
- Does the quality of health services provided to Iraqis at JRC health centers differ according to demographic factors (gender, period of dealing with the health centre, marital status)?

8.4.3 Importance of the Study

The theoretical importance of this study arises from the fact that it clarifies the quality of health service concept and how it is measured. With regard to the

practical importance of this study, it provides a scale for the quality of health services at JRC health centers with the accepted reliability and validity indicators and it also reveals the level of quality of health services provided to Iraqis in these centers which can be considered a realistic indication of the success of the humanitarian policy adopted by JRC and which may be a vital indicator for the JRC and the global humanitarian organizations supporting this policy. Through the recommendations it will offer, based upon its findings, this study will provide guidance for those involved in these health centers in order to enhance the quality of services provided to users.

8.4.4 Objectives of the Study

The objectives of this study were to assess the quality of health services provided to the Iraqis at JRC health centers, through the achievement of the following sub-goals:

- To show the concept of the quality of health services; its importance, dimensions and measurement methods.
- To provide a scale to measure the quality of health services at JRC Health Centers with the accepted reliability and validity indicators.
- To identify the level of quality of health service provided to the Iraqis at JRC health centers.
- To assess the different levels of quality of health service provided to Iraqis at JRC health centers, according to the type of health center (Al-Hilal, Al-Hashemi, Marka, Al-Taj and Hussein).

- To assess the different level of quality of health service provided to Iraqis at JRC health centers, according to demographic factors (gender, period visiting the health centers and marital status).
- To provide a set of conclusions and recommendations to enhance the level of quality of health service provided to the Iraqis at JRC health centers

8.4.5 Study Concepts

In respect to the quality of health services, the expected or perceived quality of services provided to Iraqis at JRC health centers can be assessed in four dimensions (Parasuraman et al., 1985):

- **Tangibles:** This includes the physical elements of the service provided (seats, offices, outdoor space, facilities, lights, chairs, appliances, appearance of personnel and equipment).
- **Responsiveness:** The speed of delivery and level of assistance provided to service recipients.
- **Assurance:** mean knowledge and ability to care for the service recipients; this demands providing skills and knowledge to the service provider.
- **Empathy:** the degree of care and attention to the service recipients and their problems and work to find solutions to them in a refined humanitarian, easy and accessible way.

Limitations

This study was applied to Iraqi patients at JRC health centers from 1/2/2008-28/2/2008 and the results of this study were determined by the validity and reliability of the study instrument.

8.4.6 Methods

This study relied on a descriptive approach by reviewing the theoretical literature relevant to quality of service and relevant previous studies, in addition to the application of the study questionnaire to collect data and to achieve results which contributes to a set of recommendations.

8.4.7 Sample

The study population comprised all the Iraqi patients visiting the five health centers of the Ashrafieh Health Center, Al-Hashemi Health Center, Marka Health Center, Al-Taj Health Center and Al Hussein Health Center. It is difficult to succinctly define the study population, especially because some of the beneficiaries of these centers' services have left Jordan and also because of the continued flow of Iraqis to Jordan due to the nature of the situation in Iraq. 10 days were chosen randomly and then all the patients visiting the centers during this time were selected as members of the study sample, taking into account the non-selection of individuals who visited the center more than once during the period of gathering the study sample. The study sample consisted of 1652 service users. Table 18 shows the characteristics of the study sample.

TABLE 18
Characteristics of the Study Sample

Variable	Variable levels	Number	Percentage
Health Center	Al-Hilal Center	481	29.1
	Al-Hashemi Center	275	16.6
	Marka Center	229	13.9
	Al-Taj Center	439	26.6
	Al-Hussein	228	13.8
Gender	Male	793	48.0
	Female	859	52.0
Period Dealing with the Center	Less than 6 months	743	45.0
	From 6-12 month	449	27.2
	From 13-18 month	183	11.1
	More than 18 months	277	16.8
Marital Status	Single	435	26.3
	Married	953	57.7
	Divorced	114	6.9
	Widowed	150	9.1

Table 18 shows that 29% of beneficiaries were from the Al-Hilal Center and that there was an even gender distribution, namely 48% female and 52% male; 45% of beneficiaries received medical services over a period less than 6 months. Finally it was noticed that (57.7%) of beneficiaries were married.

8.4.8 Measure

To achieve the purpose of this study a questionnaire was developed to measure the quality of health services based on a review of theoretical literature and the scale used in Babakus and Mangold's, (1992) study. The study questionnaire is comprised of eighteen items distributed across four dimensions of quality service. It relied on the Likert 5-point response format to determine the responses on the questionnaire items of the study sample. The response format ranges from 5-1: 5 = always, 4 = often, 3 = sometimes, 2 = rarely, 1 = never. Table 19 shows the distribution of the study questionnaire items:

TABLE 19
Distribution of the Study Questionnaire Items on the Quality of Health Service Dimensions

Dimension No.	Quality of Health Service Dimensions	Item No.
1	Tangibles	1-5
2	Responsiveness	6-9
3	Assurance	10-13
4	Empathy	14-18

8.4.10 Validity

To measure the validity of the study questionnaire, Exploratory Factor Analysis (EFA) was used to examine the factor structure for the quality of health services. Questionnaire items consist of 25 items which measure the four dimensions of quality service: tangibles, responsiveness/ reliability, assurance and empathy, to examine the items loadings on quality of health service dimensions. Table 20 shows the results of factor analysis.

TABLE 20
Factor Analysis for Quality of Health Service Items and Items Loading on Quality of Health Service Dimensions

Item No.	Tangibles Factor 1	Empathy Factor 2	Assurance Factor 3	Responsiveness Factor 4
Q3	0.71			
Q2	0.65			
Q5	0.65			
Q1	0.63			
Q4	0.63			
Q16		0.64		
Q17		0.64		
Q14		0.63		
Q15		0.62		
Q18		0.62		
Q13			0.66	
Q12			0.64	
Q10			0.56	
Q11			0.52	
Q7				0.62
Q8				0.57
Q9				0.55
Q6				0.52
Eigenvalue	10.94	0.63	0.45	0.24
Percentage of Variance	60.78	3.51	2.51	1.34
Cumulative Percentage of Variance	60.78	64.29	66.79	68.13

Table 20 shows that there are four factors where the questionnaire items loaded, 7 items were deleted as they did not show loading on these factors. These were all the reliability dimension items and thus it demands the deletion of this dimension from the study questionnaire, in addition to the deletion of two other items from the other dimensions. The four dimensions interpret 68.13% of the variation in the individuals' response in the study sample on the quality of health service questionnaire. Table 20 also shows that the interpreted variance percentage of the first factor was high at 60.78%. We can also see that the eigenvalue was relatively high at 10.94 compared with other factors whose eigenvalue were closer and smaller. As a whole these results indicate the possibility of the presence of a prevailing factor reflecting one dimension which is the quality services. We can also be noted that the items loadings of the quality of health service questionnaire on the 4 factors were high, as the correlation coefficient among the items of each factor and the factor that it represents is more than (0.40). This shows the high loading of the questionnaire items on the quality of health services dimensions.

Confirmatory factor analysis was also used to examine the quality of health service dimensions according to the study questionnaire items. Table 21 shows the results of the analysis.

TABLE 21
Overall Fit Indices for the Quality of Health Service Dimensions

CFI	0.984
TLI	0.981
RMSEA	0.043

The results in Table 21 indicate that the Compare Fit Index (CFI) value amounted to 0,984, a value being acceptable as greater than 0.90 and the value

of the Tucker-Lewis Coefficient (TLI) is 0.98 and is also acceptable as a value close to 0.90 and the value of Root Means Square Error of Approximation (RMSEA) as (0.043), is acceptable as it is less than 0.05. Based on these results it proved that the quality of health services consists of four factors.

8.4.11 Reliability

Using the Cronbach Alpha Coefficient, internal consistency of the quality of the health service dimensions were extracted, according to the individuals in the study sample, whose number is 1652. Table 22 shows the internal consistency values.

TABLE 22
Internal Consistency Values for Each Quality of Health Service Dimension

Dimension No.	Quality of Health Service Dimension	Cronbach Alpha Coefficient
1.	Tangibles	0.89
2.	Responsiveness	0.88
3.	Assurance	0.92
4.	Empathy	0.92

8.4.12 Statistical Methods

In order to answer the study questions, appropriate statistical methods- means, standard deviations, independent sample t-test, one way ANOVA and Scheffe tests-were used.

8.4.13 Results

"What is the quality level of health services provided to the Iraqis at JRC health centers?": In order to answer this question, means and standard deviations for perceptions of the study sample of the quality of health services provided by JRC health centers were calculated for each of its dimensions by dividing the difference between the maximum and minimum value for the Likert

scale 5 point response on three scales, which represents the number of levels desired to find 3/1-5.

Based on this calculation, the mean values, which the study reached, adopted a standard divided into 3 equal categories: High (5-3.68) medium (3.67-2.34), low (2.33-1). Table 23 shows the results.

TABLE 23
Means and Standard Deviations of the Quality of Health Services Provided to Iraqis at Jordan Red Crescent Health Centers

Quality of Health Service Dimensions	Means	SD	Quality Level of Health Services	
			Rank	
Tangibles	4.39	0.73	1	High
Assurance	4.32	0.86	2	High
Empathy	4.31	0.80	3	High
Responsiveness	4.23	0.86	4	High
Total value	4.32	0.74	-	High

The above Table 23 shows that the perceptions of the members of the study sample for the level of health service quality provided at JRC health centers were high for all dimensions. The tangibles dimension took first place with an average of 4.39; it was followed in second place by the assurance dimension with an average of 4.32. On the other hand, the empathy dimension came second to last with an average of 4.31 and in last place came the responsive dimension with an average of 4.23.

The current study applied a pilot test of the ATPI in five health centers to measure team functioning through which it could predict team effectiveness. In the meantime this study also applied the quality of health service measure on patients in these centers. Consequently the level of service quality in these centers reflects the effectiveness of their teams. In other words, the ATPI and the quality of health service measures achieve the same goal but from different perspectives. This could be beneficial in that it provides evidence that the ATPI

measure enjoys acceptable statistical validity, a fact that reflects the concurrent validity between the two measures. The rank for the centers was extracted for the SQ measure and five of the ATPI variables, namely team effort and skills, objectives, task focus, inter-team relationship and innovation as shown in the table.

The importance of the selection of these variables is that they are more relevant than the other variables of the ATPI in terms of measuring the quality of health service. The following part section discusses the importance of the variables chosen and how they contribute to the effectiveness of teams, particularly in the quality of health service.

West et al., (2004) argued that obtaining the appropriate level of team effort and the correct team skills are essential aspects influencing team performance and effectiveness. Team effort and skills variable is associated with the skill and knowledge (capabilities) and the execution of specific tasks consistently and accurately (actual performance) and of practice guidelines and standards in terms of dependability, accuracy, reliability, and consistency by all those involved in providing services in the health sector. In successful organizations health teams undergo a continuous process of learning basic skills related to planning and facilitating meetings, communicating effectively, making group decisions, and resolving conflict and working effectively as a team. Healthcare teams that have clear objectives and emphasis on quality provide high quality patient care. Curral et al (2001) believe that the most important factor in determining group effectiveness is the presence of clear, specific team goals and objectives as these have been shown to predict group

performance outcomes. Organizations usually translate their programmatic goals and objectives into operational procedures in an attempt to provide consistently high-quality services whilst focusing on how well service delivery is undertaken. Activities, tasks as well as outcomes are analyzed using quality assurance to enable healthcare providers and managers to tackle the cause of any problem and find a cure for it rather than treat the symptoms. Castka, Baber, Sharp and Belohoubek (2001) found that team performance improved when team members were focused on task goals and reduced when teams had no focus.

Successful inter-team relationships can lead to collaboration, collective decision making and, as a result, innovation (West et al, 2004). Teams that cooperate and have a high level of trust with other teams and departments in the organization are likely to be more effective. In addition, if inter-team relationships are good then trust and credibility through demonstrations of respect, confidentiality, courtesy, responsiveness, and empathy prevail amongst team members. The dimensions of Inter-team relationships encompass interaction between providers and clients, managers and healthcare providers, and the health team and the community. Effective listening, communication and sound interpersonal relations all contribute to effective health counselling and to a positive rapport with patients. On the other hand inadequate Inter-team relations reduce the effectiveness of a technically competent health service and patients who are poorly treated are less likely to follow the advice of the healthcare providers and may avoid seeking care (Brown, Franco, Rafeh and Hatzell, 2001).

Finally team innovation has been defined as one of the main keys used to rate a team performance (Cohen and Bailey (1997). Team innovation leads to great improvement in the quality of health services provided as innovative teams think creatively in order to come up with different options and solutions. They provide choices that are based on an examination of the options potential costs and effectiveness ensuring high quality service is provided (Brown, Franco, Rafeh and Hatzell, 2001). To conclude these variables therefore considered the five most important five variables in the ATPI in terms of their centrality to healthcare team performance in the form of patient care. These variables were therefore compared in their ranking with the ranking of service quality at the five health centers.

The findings for the centers rank according to the five ATPI variables and the SQ measures show that the results were approximately the same using both measures as shown in Table 24. The results of both measures show that Al-Taj and Al-Hussein centers scored the highest on team effectiveness and services quality whereas Al-Ashrafieh and Al-Hussein scored lowest on team effectiveness and services quality compared to other centers.

TABLE 24
Center Rankings According to the Five ATPI Variables and the SQ Measures

Center Name	SERVQUAL		Team Effort and Skills		Objectives		Task Focus		Inter-team Relationship		Team Innovation	
	M	R	M	R	M	R	M	R	M	R	M	R
Al-Taj Health Center	4.59	1	4.31	1	4.33	2	4.47	2	3.3	3	4.04	3
Al-Hashemi Health Center	4.55	2	4.17	2	4.58	1	4.63	1	3.63	1	4.28	2
Marka Health Center	4.42	3	4.15	3	4.27	3	4	3	3.36	2	4.3	1
Ashrafieh Health Center	4.12	4	3.88	4	4.22	4	3.94	4	3.13	4	4	4
Al-Hussein Health Center	3.84	5	3.53	5	3.75	5	3.29	5	3.1	5	3.56	5

The items in each dimension for the quality of health services were analyzed; means and standard deviations were extracted for the perceptions of the study sample on the items of the quality of health services dimensions. Table 24 illustrates the results.

TABLE 25
Means and Standard Deviations of the Responses of the Study Items for the
Quality of Health Services, Ranked Indescending Order

Quality of Health Service Dimensions	No.	Items	Mean	SD	Rank	Level
Tangibles	2	The health center staff are well presented	4.46	0.83	1	High
	3	The doctor's clinic and its contents are clean and sterile	4.45	0.82	2	High
	1	The doctors and nurses in the health centre are committed to wearing medical clothes	4.40	0.86	3	High
	5	The health center has excellent hygiene for all facilities (waiting rooms, toilets)	4.35	0.91	4	High
	4	The health center uses available medical models.	4.28	0.96	5	High
Responsiveness	9	There is a rapid response and cooperation between the doctor and staff regarding the other center facilities (ambulance, pharmacy, radiology, lab)	4.30	0.97	1	High
	6	Information is given to patients on how the service performs for them and how the cost is rated	4.24	1.00	2	High
	7	The center provides emergency services to the patient when required	4.22	0.99	3	High
Assurance	8	The center staff ensure that the patients do not wait a long time	4.17	1.04	4	High
	10	The patients feel safe with the way the center staff handle them	4.38	0.94	1	High
	12	The center staff are exemplified by good treatment.	4.33	0.96	2	High
	13	The patient trusts the service provided to him/her	4.32	0.96	3	High
	11	The health center has skilled doctors	4.27	0.98	4	High
Empathy	17	The center staff maintain patient privacy	4.40	0.87	1	High
	16	The staff call the patients by name	4.35	0.93	2	High
	18	The center staff welcome the questions and queries of the patients	4.30	0.96	3	High
	14	The center staff express more interest in some of the cases	4.26	0.93	4	High
	15	The center staff give utmost care to the patients	4.25	0.96	5	High

Table 25 includes item 2 which states that "the health center staff are well presented"; this came first among the items from the tangibles dimension, with a mean of 4.46 and standard deviation of 0.83, while item 4, which states that "the health center uses available medical models", came last with a mean of 4.28 and a standard deviation of 0.96. Item 9, which states "there is a rapid response and cooperation between the doctor and staff regarding the other center facilities (ambulance, pharmacy, radiology, lab)", came first among the items of the responsiveness dimension, with a mean of 4.30 and a standard deviation of 0.97, while item 8, which states that "the center staff ensure that the patients do not wait a long time", came last with a mean of 4.17 and a standard deviation of 1.04.

Table 25 also includes item 10 which states that "the patients feel safe with the way the center staff handle them"; this came first among the assurance dimension items, with a mean of 4.38 and a standard deviation of 0.94, while item 11, which asserts that "the health center has skilled doctors", came last with a mean of 4.27 and a standard deviation of 0.98. Item 17, namely: "the center staff maintain patient privacy" came first among the items of the empathy dimension, with a mean of 4.40 and a standard deviation of 0.87, while item 15, "the center staff give utmost care to the patients" came last with a mean of 4.25 and a standard deviation of 0.96.

Regarding the results to the second question, which asks: "Does the quality of health services provided to the Iraqis at JRC health centers differ according to the type of health center (Al-Hilal, Al-Hashemi, Marka, Al-Taj and Hussein)?:

means, standard deviations and ANOVA test were used for the differences in the individual perceptions of the study sample for the quality of health services provided at the JRC health centers, according to the health center. Table 26 presents the results.

TABLE 26
One-way ANOVA Results for the Differences in the Individuals' Perceptions of the Study Sample for the Quality of Health Services Provided at Jordan Red Crescent Health Centers, According to the Health Center

Quality of Health Service Dimensions	Health Centre	Means	Calculated F value	Potential Value
Tangibles	Hilal	4.21	61.70	*0.00
	Hashemi	4.59		
	Marka	4.54		
	Al-Taj	4.64		
	Al -Hussein	3.89		
Responsiveness	Hilal	4.00	44.49	*0.00
	Hashemi	4.51		
	Marka	4.33		
	Al-Taj	4.48		
	Al-Hussein	3.80		
Assurance	Hilal	4.15	52.64	*0.00
	Hashemi	4.52		
	Marka	4.41		
	Al-Taj	4.63		
	Al-Hussein	3.77		
Empathy	Hilal	4.09	51.49	*0.00
	Hashemi	4.58		
	Marka	4.38		
	Al-Taj	4.58		
	Al-Hussein	3.88		
Total Score	Hilal	4.12	63.25	*0.00
	Hashemi	4.55		
	Marka	4.42		
	Al-Taj	4.59		
	Al-Hussein	3.84		

Table 26 shows that the f-values for all quality of health service dimensions were $p < 0.05$. This indicates the existence of statistically significant differences in the quality of health services provided to the Iraqis at JRC Health Centers, according to the type of health center (Al-Hilal and Al-Hashemi, Marka, Al-Taj and Hussein). To determine the direction of statistical difference a SCHEFFE test was used to compare the differences in quality of health services, according to the type of health center. The SCHEFFE results indicate that the quality of health services in Al-Hashemi, Marka and Al-Taj centers was highest when compared to the quality of health services in Al-Hilal and Al-Hussein centers.

The results of the third question will now be considered: "Does the quality of health services provided to the Iraqis at JRC health centers differ according to demographic factors (gender, duration of treatment at the center, marital status)?":

Gender: Means, standard deviations and an independent T test were used for the differences in the individual perceptions of the study sample for the quality of health services provided at JRC health centers, according to gender. Table 27 shows that the T values for all dimensions of the quality of health services was higher than the probability values (0.05), indicating that there are no statistically significant differences in the quality of health services provided to the Iraqis at JRC health centers due to gender.

TABLE 27
Means, Standard Deviations and Independent T-Test Results for the Differences in the Individual Perceptions of the Study Sample for the Quality of Health Services Provided at Jordan Red Crescent Health Centers, According to Gender

Dimensions for Quality of Health Service	Gender	Means	SD	T-Test Value	P-Value
Tangibles	Male	4.39	0.75	0.02	0.99
	Female	4.39	0.72		
Responsiveness	Male	4.22	0.87	0.68	0.50
	Female	4.25	0.86		
Assurance	Male	4.31	0.89	0.87	0.38
	Female	4.34	0.83		
Empathy	Male	4.30	0.83	0.38	0.71
	Female	4.32	0.78		
Total Score	Male	4.31	0.76	0.52	0.61
	Female	4.33	0.72		

Period of dealing with the health center: Means, standard deviations and one-way ANOVA tests were used for the differences in the individual perceptions of the study sample for the quality of health services provide at JRC health centers, according to the period of dealing with the health center. Table 28 shows the result.

TABLE 28
One-way ANOVA Results for the Differences in the Individual Perceptions of the Study Sample for the Quality of Health Services Provide at Jordan Red Crescent Health Centers, According to the Period of Visiting the Health Center

Quality of Health Service Dimensions	Period of Dealing with Health Center	Means	Calculated F value	Potential Value
Tangibles	Less than 6 months	4.31	5.52	*0.00
	6-12 months	4.48		
	13-18 months	4.39		
	More than 18 months	4.44		
Responsiveness	Less than 6 months	4.15	3.82	*0.01
	6-12 months	4.31		
	13-18 months	4.30		
	More than 18 months	4.28		
Assurance	Less than 6 months	4.25	4.40	*0.00
	6-12 months	4.43		
	13-18 months	4.35		
	More than 18 months	4.35		
Empathy	Less than 6 months	4.24	4.05	*0.01
	6-12 months	4.36		
	13-18 months	4.38		
	More than 18 months	4.38		
Total Score	Less than 6 months	4.24	5.04	*0.00
	6-12 months	4.40		
	13-18 months	4.36		
	More than 18 months	4.37		

Table 28 shows that the F values for all dimensions of quality of health services were lower than the probability values (0.05).

This indicates the existence of statistically significant differences in the quality of health services provided to the Iraqis at JRC health centers in the period concerned. To determine the trend of statistical difference, a SCHEFFE test was used to compare the differences in the quality of health services, according to the period of dealing with the health center. The SCHEFFE results indicate that the quality of health services in their dimensions (tangibles, responsiveness, assurance and total score) from the patients' point of view, who were visiting the center for 6-18 months is higher than for those visiting for less than 6 months. The SCHEFFE results also indicates that the empathy health service dimension from the point of view of patients who had been dealing with the center for more than 13 months was higher than for other patients.

Marital status: Means, standard deviations and one-way ANOVA tests were used to identify the differences in the individual perceptions of the study sample for the quality of health services provided at JRC health centers, according to marital status. Table 29 illustrates the result.

TABLE 29
One-way ANOVA Results for the Differences in the Individual Perceptions of the Study
Sample for the Quality of Health Services Provided at Jordan Red Crescent Health
Centers According to Marital Status

Quality of Health Service Dimensions	Marital Status	Means	Calculated F value	Potential Value
Tangibles	Single	4.44	3.27	*0.02
	Married	4.38		
	Divorced	4.20		
	Widowed	4.43		
Responsiveness	Single	4.30	4.02	*0.01
	Married	4.21		
	Divorced	4.01		
	Widowed	4.32		
Assurance	Single	4.39	4.96	*0.00
	Married	4.32		
	Divorced	4.05		
	Widowed	4.37		
Empathy	Single	4.35	2.38	0.07
	Married	4.31		
	Divorced	4.14		
	Widowed	4.37		
Total Score	Single	4.37	4.18	*0.01
	Married	4.31		
	Divorced	4.11		
	Widowed	4.38		

Table 29 shows that the f-values of the quality of health service dimensions (tangibles, responsiveness, assurance and total score) were less than 0.05, which indicates the existence of statistically significant differences in the quality of health services dimensions provided to Iraqis at JRC health centers according to marital status. Meanwhile there were no statistically significant differences in the empathy dimension provided to the Iraqis at JRC health centers, according to marital status. To determine the level of statistical

difference a SCHEFFE test was used to compare the dimensions' differences in the quality of health services according to marital status. The SCHEFFE results shows that the tangible dimension at JRC health centers from the unmarried patients' point of view is higher than from the divorced patients' point of view. Thus, the level of responsiveness and the total score for the quality of health service at JRC health centers from the unmarried and widowed patients' point of view is higher than from the divorced patients' point of view. The level of assurance in the health services from the unmarried, married and widowed patients' point of view is higher than from the divorced patients' point of view.

8.4.14 Discussion

The level of quality of health service provided to Iraqis at JRC health centers is found to be high in all dimensions (tangibles, responsiveness, assurance and empathy). This indicates the success of the health services providers in achieving the performance criteria set at a high level. In addition this result indicates the success of the JRC in the investment of financial support to these centers as optimal and expected. It is also noted that the greatest quality of health services dimensions available at JRC health centers are the tangibles and assurance dimensions, whereas the least accessible dimensions of health service are empathy and responsiveness.

This result can be attributed to the work pressure faced by these health centers. There is also a statistically significant difference in the quality of health services provided to the Iraqis at JRC health centers according to the type of the health center (Al-Hilal, Al-Hashemi, Marka, Al-Taj and Hussein). The quality of

health services in Al-Hashemi, Marka and Al-Taj centers is greater compared with the health services provided at the Al-Hilal and Al-Hussein centers. This result can be attributed to the fact that the services provided at the Al-Hussein health centre are new and have not been running for more than six months. As for the result at Al-Hilal health centers, it can be accounted for by the greater work pressure it is exposed to, in comparison with other centers. Notably, between 2007 and 2008 the Al-Hilal health center was able to provide services to a total of 19661 patients.

The practical benefit of ATPI is that it is a primary indicator for team effectiveness as it predicts to what extent the objectives of health teams are achieved before the services are provided to patients. On the other hand SQ is a final indicator for the quality of services already provided to patients and this is why ATPI is considered a key that guarantees success in providing a high quality health service.

The result also shows that there are no statistically significant differences in the quality of health services provided to Iraqis at JRC health centers due to gender. This result can be attributed to the fairness of the provision of services provided for both sexes in the health centers. There is also a statistically significant difference in the quality of health services provided to the Iraqis at JRC health centers relating to length of visitation.

The quality of health services in their dimensions (tangibles, responsiveness and assurance and total score), from the point of view of patients who were visiting the center for 6-18 months, was at a higher level than for those who had been visiting for less than 6 months. In addition, the level of health service from

the patients' point of view who had been dealing with the center for more than 13 months was high compared with the other patients' point of view.

This result indicates the sustainability and continuity of the health services provided to Iraqi patients. Length of stay is a key component; newer patients might encounter difficulty in adjusting to their new situation and experience initial discomfort as a result of their emigration to Jordan. The study also shows that there is a statistically significant difference in the quality of health services dimensions (tangibles, responsiveness, assurance and total score) provided to Iraqis at JRC health centers due to marital status. However, there is no statistically significant difference in the empathy dimension for the health services provided to the Iraqis at JRC health centers due to marital status, as the quality of health services provided from the divorced patients' point of view is less than that of the other patients (single, married, widowed).

Based on these findings there is a need to expand these health centers in collaboration with international humanitarian organizations to provide health services to the larger number of Iraqis who are still fleeing their country and seeking refuge in Jordan. The JRC's activities and experience should be replicated in different countries which suffer from severe humanitarian conditions causing the emigration of innocent civilians to host countries. More studies should be conducted that focus on patient satisfaction with health services provided to them at JRC health centers as a complementary study to this study and it will ensure that funds available are better utilized to alleviate human suffering.

8.5 Conclusion

This chapter presented a pilot test of the ATPI measure. The results show the accuracy and the reliability of the measure in assessing team effectiveness. The chapter also provides a test of the service quality measure in a number of healthcare centres at JRC where the ATPI and LR measures were previously applied. The result of this test shows that the service quality measure demonstrates acceptable psychometric properties. Finally, as this study applied the ATPI and the SQ measures in parallel and as these measures reflect team effectiveness from team members and patients' points of view in the five centers it is noted that the results were approximately the same. This can be considered as further evidence that the ATPI also enjoys good psychometric properties, as the findings of the study shows that there is compatibility between team effectiveness and the quality of health services in these centers.

CHAPTER 9

STUDY III: THE EFFECTIVENESS OF HEALTHCARE TEAMS IN THE JORDANIAN SETTINGS

9.1 Chapter Overview

Having established the Arabic version of the ATPI and the leader ratings measures, this chapter presents the third study which aims to test the psychometrics properties to ensure the strength of the factor structure of the two measures, based on the data collected from Jordanian health care team, and to test the hypotheses that were developed to answer the main study question "What factors predict the effectiveness of health care teams?"

9.2 Introduction

Effective teamwork has been found to improve healthcare by being more responsive and patient sensitive, lowering patient mortality, enhancing patient and staff satisfaction, increasing innovation and reducing hospitalization costs (Royal Pharmaceutical Society, 2000; Ingram and Desombre, 1999). However more research needs to be conducted to learn how team effectiveness can improve. Therefore, the main aim of this study is to answer the overall question of this research: "which factors predict the effectiveness of healthcare teams?". In addition, this study aims to determine which aspects of healthcare team inputs and processes predict team outputs in terms of effectiveness and innovation and whether team inputs and outputs are mediated by processes; and to make a practical contribution to improve the functioning of healthcare teams.

9.3 Sample

The study sample consisted of 1622 team members in 277 teams which responded to the ATPI questionnaire resulting in a response rate of 82.5% among team members and 89.3% among teams in the study sample.

The size of these teams ranged from 3 to 22 members. Table 30 outlines the characteristics of the study sample in relation to the two variables, gender and age. The other two variables, job title and work experience are outlined in Appendix 9, 10a, 10b, 10c, and 10d. Figure 7 illustrates the study and population sample. The leader ratings questionnaires were distributed three months later to 277 team leaders. The number of respondents was 255, resulting in a response rate of 92.0%.

FIGURE 7

Population and Sample for Study III

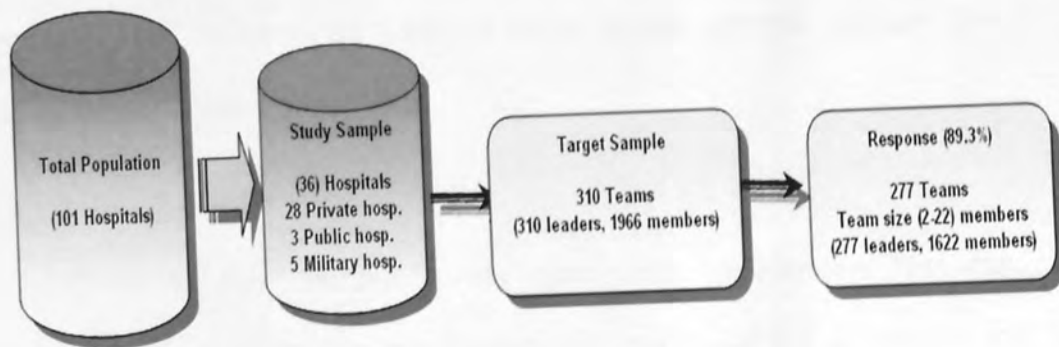


TABLE 30
Characteristics of the Study Sample

Variables	Categories	Frequency	Percent
Gender	Male	788	48.6
	Female	798	49.2
	Total	1586	97.8
Age	Less than 30 years	858	52.9
	30-39 years	471	29.0
	40-49 years	187	11.5
	50-59 years	50	3.1
	60 years and more	9	0.6
	Total	1575	97.1

9.4. Measures

9.4.1 ATPI Measure

This study assessed team inputs, processes and leadership via ATPI measure which was already mentioned in chapter 6 section 2 page 156.

9.4.2 Leader Rating Measure:

This study assessed team outputs via leader ratings measure, adapted from work by West, Borrill et al, (2000), to determine team effectiveness from the leaders' point of view. This measure consists of 18 items on a 5-point scale ranging from 1="Not at all" to 5="to a great extent" distributed across three dimensions as follows: (nine items measured team effectiveness (1-9), four items measured team strategic orientation (10-13), and five items measured team innovation (14-18). For the purpose of this study, effectiveness and innovation will be used to assess team effectiveness. However, strategic orientation will be excluded from this study as this concept appears only in the Jordanian healthcare sector.

9.4.3 Procedures

Prior to the distribution of instruments in Amman Hospitals, the researcher had to provide the Ministry of Health (MOH) in Jordan with the following documents to obtain ethical approval:

- 1- A copy of the draft proposal.
- 2- A copy of the instrument (Appendix 3 & 4)
- 3- A letter of introduction from Aston University (Appendix 8e) outlining the tasks of the researcher and

- 4- A letter of introduction from Jordan Red Crescent (JRC) (Appendix 8f) supporting the researcher's request.

The researcher had to submit the same documents along with the ethical approval obtained from the MOH (Appendix 8a and 8b) to the Military Hospitals to get their security approval and their official letters (Appendix 8c and 8d). The researcher then visited each hospital in the study sample and had a meeting with its general manager, medical manager, administrative manager and matron, and provided them with the ethical approval from the MOH and an introduction letter from JRC. The researcher explained the objectives of the study and asked the managers to identify the teams in their hospitals.

The next step was for the researcher to visit each team and brief them about the study and its importance. Most of the teams expressed their willingness to participate in the study. The researcher clarified instructions about the way they are expected to answer the instruments. In the meantime the researcher asked the members of each team to read the instructions again and review the paragraphs of the instrument to make sure that team members understood the instructions on how to respond. She then listened to comments made by some of the teams and replied to their questions. Then she asked team members to answer the instrument individually.

The researcher requested the name of a contact person in each team. This person was responsible for collecting the completed questionnaires from his/her colleagues, then to put them in the provided envelope and to seal it. The contact persons were telephoned at a later date to inquire whether the questionnaires from their respective teams were ready. Then the researcher

personally collected the questionnaires from each team which was between two weeks and one month after distributing the questionnaires. Questionnaires not obtained after that date were withdrawn from the study. This was mentioned in the covering letter attached with each questionnaire stating that "if anyone refrains from filling out the questionnaire for any reason whatsoever, it certainly remains within their right to do so since participation is entirely on voluntary basis". 1966 questionnaires were distributed to 310 teams in the hospitals that showed willingness to respond, and 1622 completed questionnaires from 277 teams were received. The total response rate was 89.3%. 48.6 percent of the respondents were female, 49.2 percent) were male and 2.2 percent did not mark the gender question.

9.4.4 ATPI Arabic Version Validity

Construct factorial and predictive validity indicators were extracted in order to test the validity of the ATPI Jordanian version measure as follows:

9.4.4.1 Construct Validity

The Pearson correlation coefficient between the eighteen ATPI dimensions was extracted to demonstrate the construct validity of the scale. It was noticed that the values of the correlation coefficient were positive and statistically significant $p < 0.05$ and ranged between 0.94-0.42 as shown in Table 31.

It was also noticed that there was a positive correlation between team conflict and the other variables of the ATPI. The reason is that all team conflict

negative items were recoded and became positive items, so there was a positive correlation between team conflict and the ATPI dimensions.

TABLE 31

Matrix Correlations between ATPI Dimensions

ATPI Variables	Dimension	Task Design	Team Effort And Skills	Organizational Support	Resources	Objectives	Reflexivity	Participation	Task Focus	Team Conflict	Creativity And Innovation	Leading	Managing	Coaching	Team Member Satisfaction	Attachment	Team effectiveness	Inter-Team Relationships	Team Innovation		
Team Input	Processes	Team Effort And Skills	0.71*																		
		Organizational Support	0.65*	0.57*																	
		Resources	0.50*	0.49*	0.61*																
		Objectives	0.65*	0.73*	0.58*	0.51*															
	Processes	Reflexivity	0.58*	0.61*	0.53*	0.45*	0.66*														
		Participation	0.68*	0.75*	0.64*	0.54*	0.84*	0.78*													
		Task Focus	0.70*	0.77*	0.61*	0.50*	0.85*	0.75*	0.87*												
		Team Conflict	0.49*	0.58*	0.55*	0.47*	0.61*	0.70*	0.72*	0.64*											
		Creativity And Innovation	0.65*	0.67*	0.65*	0.50*	0.78*	0.78*	0.88*	0.84*	0.71*										
		Leadership	0.65*	0.69*	0.55*	0.52*	0.71*	0.62*	0.71*	0.75*	0.52*	0.67*									
Team Outputs	Managing	0.60*	0.65*	0.61*	0.51*	0.76*	0.67*	0.76*	0.77*	0.55*	0.90*										
	Coaching	0.60*	0.65*	0.55*	0.50*	0.72*	0.64*	0.74*	0.73*	0.55*	0.87*	0.94*									
	Team Member Satisfaction	0.65*	0.65*	0.62*	0.54*	0.76*	0.67*	0.83*	0.80*	0.60*	0.78*	0.72*	0.78*	0.76*							
	Attachment	0.61*	0.71*	0.51*	0.42*	0.74*	0.57*	0.72*	0.77*	0.53*	0.65*	0.75*	0.73*	0.69*	0.79*						
Team Outputs	Team effectiveness	0.58*	0.58*	0.63*	0.42*	0.63*	0.67*	0.71*	0.66*	0.51*	0.69*	0.62*	0.67*	0.64*	0.73*	0.65*					
	Inter-Team Relationships	0.51*	0.48*	0.65*	0.47*	0.61*	0.59*	0.65*	0.60*	0.47*	0.62*	0.52*	0.57*	0.51*	0.70*	0.56*	0.70*				
	Team Innovation	0.59*	0.64*	0.62*	0.45*	0.73*	0.69*	0.75*	0.76*	0.54*	0.76*	0.72*	0.75*	0.68*	0.78*	0.74*	0.76*	0.73*			

(* Correlation is significant at the 0.05 level)

9.4.4.2 Factorial Validity

Confirmatory factor analysis (CFA) was adopted to measure the factorial validity. Two models were used to do this: The first was the one factor model with all items loaded into a single factor, and the second model was a four factors model with all items loaded into task design items, team effort and skills items, organizational support items, and resources items. The model fitness was assessed using standard goodness of fit indices i.e., Chi-square Test, Comparative Fit Index CFI >.90, Tucker Lewis Index TLI >.90, and the Root Mean Error of Approximation RMSEA <.05.

First: CFA for team inputs dimensions:

The following procedure is adopted to examine the relationship between different theoretical models for the ATPI team inputs. Firstly, a one factor model with all team inputs items namely: task design, team effort and skills, organizational support, resources loaded into a single factor. Secondly, a four correlated factors model for team inputs was run. In four correlated factors model, the first factor contained all the task design items, the second all the team effort and skills items, the third all the organizational support items, and the fourth all the resources items. Three relative indices (CFI, TLI and RMSEA) together with standardized regression weight were computed to provide and evaluate the model fit. The ratio of chi-squared to degrees of freedom was also calculated. Table 32 displays the CFA results of the two different models computed.

TABLE 32
Overall Fit Indices for the Team Inputs Scales

	CFI	TLI	RMSEA	Chi-squared	df	Sample size
One factor	.471	.431	.149	12942.3	351	1622
Four correlated factors	.900	.888	.066	2709.3	337	1622

The results in Table 32 indicate that the four correlated factors model is more acceptable in terms of goodness of fit statistics when compared with one factor model. The three relative indices were CFI 0.90, TLI 0.89 and RMSEA 0.06.

Table 33 indicates that task design and team effort and skills, task design and organizational support, team effort and skills and organizational support, are highly correlated. Based on the results of factor analysis, six items namely 12, 14, 19, 25, 28, and 33, were omitted from the team inputs items, making the total team inputs 28 instead of 34 items.

TABLE 33
Team Inputs Dimensions Correlations

			Estimate
Task design	<-->	Team effort and skills	1.005
Task design	<-->	Organizational Support	.946
Resource	<-->	Task design	.562
Team effort and skills	<-->	Organizational Support	.763
Resource	<-->	Team effort and skills	.518
Resource	<-->	Organizational Support	.706

Second: CFA for team processes dimensions:

The following procedure is adopted to examine the relationship between different theoretical models for the ATPI team processes. Firstly, a one factor model with all team processes items namely: objectives, reflexivity, participation, task focus, team conflict, creativity and innovation are loaded into a single factor. Secondly, six correlated factors model for team processes are run. In this model, the first factor contains all the objectives items, the second all the reflexivity items, the third all the participation items, the fourth all the task focus items, the fifth all the team conflict items, and the sixth all the creativity and innovation items. Three relative indices (CFI, TLI and RMSEA) together with standardized regression weight were computed to

provide and evaluate model fit. The ratio of chi-square to degrees of freedom is also calculated. Table 34 displays the CFA results of the two different models computed.

TABLE 34
Overall Fit Indices for the Team Processes Scales

	CFI	TLI	RMSEA	Chi-squared	df	Sample Size
One factor	.692	.668	.129	9141.5	325	1622
Six correlated factors	.901	.885	.080	2933.0	258	1622

The results in Table 34 indicate that the six correlated factors model is more acceptable in terms of goodness of fit statistics when compared with the one factor model. The three relative indices were CFI 0.90, TLI 0.89 and RMSEA 0.08.

Table 35 indicates that the objectives and reflection on performance, objectives and participation, objectives and task focus, objectives and creativity and innovation, reflection on performance and participation, reflection on performance and task focus, reflection on performance and creativity and innovation, participation and task focus, participation and creativity and innovation, task focus and creativity and innovation, are highly correlated. Based on the results of factor analysis, three items were omitted from team processes items, namely 36, 39, and 40 making the total of team processes items 25 instead of 28.

TABLE 35

Team Processes Dimensions Correlations

			Estimate
Objectives	<-->	Reflection on Performance	.614
Objectives	<-->	Participation	.977
Objectives	<-->	Task Focus	1.035
Objectives	<-->	Creativity and Innovation	.991
Reflection on performance	<-->	Participation	.722
Reflection on performance	<-->	Task Focus	.740
Reflection on performance	<-->	Creativity and Innovation	.766
Participation	<-->	Task Focus	1.058
Participation	<-->	Creativity and Innovation	1.031
Task Focus	<-->	Creativity and Innovation	1.073

Third: CFA for leadership dimensions:

The following procedure is adopted to examine the relationship between different theoretical models for the ATPIL leadership processes. Firstly, a one factor model with all leadership processes items namely: leading, managing, and coaching are loaded into a single factor. Secondly, three correlated factors model for leadership processes are run. In this model, the first factor contained all the leading items, the second all the managing items, and the third all the coaching items. Three relative indices (CFI, TLI and RMSEA) together with standardized regression weight were computed to provide and evaluate model fit. The ratio of chi-squared to degrees of freedom is also calculated. Table 36 displays the CFA results of the two different models computed.

TABLE 36
Overall Fit Indices for the Leadership Scales

	CFI	TLI	RMSEA	Chi-squared	df	Sample size
One factor	.912	.901	.096	1905.9	120	1622
Three correlated factors	.919	.904	.090	1761.0	115	1622

The results in Table 36 indicate that the three correlated factors model are more acceptable in terms of goodness of fit statistics when compared with one factor model. The three relative indices were CFI 0.92, TLI 0.90 and RMSEA 0.09. This indicates the high level of consistency in the items contents.

Table 37 indicates that the leading and managing, coaching and leading, coaching and managing, are highly correlated. Based on the results of factor analysis no items were omitted from the leadership processes items, hence the number of items remained at 17.

TABLE 37
Leadership Dimensions Correlations

			Estimate
Leading	<-->	Managing	1.018
Coaching	<-->	Leading	1.007
Coaching	<-->	Managing	1.012

Fourth: CFA for team outputs dimensions:

The following procedure is adopted to examine the relationship between different theoretical models for the ATP1 team outputs. Firstly, a one factor model with all team outputs items namely: team member satisfaction, attachment, team effectiveness, inter-team relationship and team innovation loaded into a single factor. Secondly, five correlated factors model for team outputs are run. In this model, the first factor contained all the team member satisfaction items, the second all the attachment items, the third all the team effectiveness items, the fourth all the inter-team relationships items, and the fifth all the team innovation items. Three relative indices (CFI, TLI and RMSEA) together with standardized regression weight were computed to provide and evaluate model fit. The ratio of chi-squared to degrees of freedom is also calculated. Table 38 displays the CFA results of the two different models computed.

TABLE 38
Overall Fit Indices for the Team Outputs Scales

	CFI	TLI	RMSEA	Chi-squared	df	Sample Size
One factor	.775	.748	.120	4146.0	170	1622
Five correlated factors	.898	.880	.083	1971.3	162	1622

The results in Table 38 indicate that the five correlated factors model is more acceptable in terms of goodness of fit statistics when compared with the one factor model. The three relative indices were CFI 0.90, TLI 0.88 and RMSEA (0.08). Table 39 indicates that the team member satisfaction and attachment, team member

satisfaction and team effectiveness, team member satisfaction and team innovation, team effectiveness and inter-team relationship, team effectiveness and team innovation are highly correlated.

TABLE 39
Team Outputs Dimensions Correlations

			Estimate
team member satisfaction	<-->	Attachment	.727
team member satisfaction	<-->	team effectiveness	.986
team member satisfaction	<-->	inter-team relationship	.801
team member satisfaction	<-->	Team Innovation	.798
team effectiveness	<-->	Attachment	.817
inter-team relationship	<-->	Attachment	.682
Attachment	<-->	Team Innovation	.792
team effectiveness	<-->	inter-team relationship	.946
team effectiveness	<-->	Team Innovation	.881
inter-team relationship	<-->	Team Innovation	.801

Based on the results of factor analysis, item 93 was omitted from team processes, thus leaving 20 instead of the original 21 items.

9.4.4.3 Predictive Validity

Both measures used assess the same trait, team effectiveness, only from different points of view. Accordingly the leader ratings (LR) measure is considered a criterion that could extract criterion-related validity to the ATPI measure. The LR measure was applied on team leaders three months after the ATPI measure was applied. By doing this, it was possible to extract predictive validity indicators for the ATPI measure. The Pearson correlation between ATPI and LR measures was extracted to achieve this. The results show that coefficient correlations were positive and statistically significant $p < 0.05$ and the values of the coefficient correlations ranged between 0.77-0.49 as shown in Table 40.

TABLE 40
Matrix Correlations between ATPI Dimensions and Leader Ratings Dimensions

ATPI Variables	Dimensions	Leader Ratings Factors'		
		Effectiveness	Strategic Orientation	Innovation
Team Inputs	Task Design	0.70	0.60	0.55
	Team Effort And Skills	0.69	0.59	0.57
	Organizational Support	0.63	0.61	0.57
	Resources	0.53	0.50	0.49
Processes	Team Objectives	0.74	0.67	0.64
	Processes Reflexivity	0.66	0.65	0.57
	Participation	0.77	0.69	0.69
	Task Focus	0.77	0.68	0.68
	Team Conflict	0.58	0.58	0.54
	Creativity And Innovation	0.72	0.66	0.66
	Leadership Leading	0.74	0.68	0.62
	Managing	0.73	0.71	0.64
	Coaching	0.69	0.68	0.61
	Team Outputs	Team Member Satisfaction	0.73	0.67
Attachment	0.72	0.61	0.55	
Team effectiveness	0.65	0.62	0.58	
Inter-Team Relationships	0.59	0.51	0.58	
Team Innovation	0.74	0.62	0.58	

* Correlation is significant at the 0.05 level

9.4.4.4 Reliability

Reliability is a concept that shows how well the different terms in each dimension combine to measure the same thing (Sekaran, 2006). A commonly-accepted rule of thumb is that an alpha (α) of above 0.70 indicates acceptable reliability. Cronbach's alpha is commonly used to establish internal consistency construct validity, with 0.60 considered acceptable for exploratory purposes, 0.70 considered adequate for confirmatory purposes, and 0.80 considered good for confirmatory purposes.

Internal consistency (Cronbach's Alpha) was conducted on the overall sample (1622) to test the level of internal consistency of the ATPI dimensions (team inputs,

team processes, leadership and team outputs). The results of this analysis are reported in Table 41

TABLE 41
Internal Consistency for ATPI Dimension

ATPI Variables	Dimensions	Coefficient Alpha	No. of Items
Inputs	Task design	.78	11
	Team effort and skills	.83	8
	Organizational support	.82	11
Processes	Resources	.72	4
	Objectives	.79	3
	Reflexivity	.77	4
	Participation	.85	7
	Task focus	.80	6
	Team conflict	.70	5
	Creativity and innovation	.76	3
Leadership	Leading	.84	4
	Managing	.91	8
	Coaching	.88	5
Outputs	Team member satisfaction	.87	6
	Attachment	.79	3
	Team effectiveness	.77	3
	Inter-team relationship	.73	5
	Team innovation	.84	4

As shown in Table 41 the reliability coefficient for team inputs dimensions ranged from 0.72 for resources to 0.83 for team effort and skills. The reliability coefficient for team processes dimensions ranged from 0.70 for team conflict to 0.85 for participation. It is also shown that the reliability coefficient for the leadership processes dimensions ranged from 0.84 for the leading to 0.91 for the managing dimension. In addition, Table 41 indicates that the reliability coefficient for the output dimensions ranges from 0.73 for the inter-team relationship to 0.87 for team member satisfaction. The Cronbach alpha levels of all dimensions exceeded the value of 0.70 suggested as adequate by Nunnally and Bernstein (1994).

9.4.4.5 Data Aggregation

Aggregation of data at the group level requires both a theoretical basis and an empirical justification (Kozlowski & Klein, 2000). Although the researcher handed out questionnaires to the individual team members, the study measures were clearly aimed at the team level, and therefore the variables in this study are expected to operate at the team level of analysis. ICC-values reported in table 38 supports this. James (1982,1993) reports a median ICC(1) of 0.12 for organizational literature. The ICC(1) values for the variables in this study are all higher than 0.12. The ICC(2) values are also reported in table 38. However, since the ICC(2) value also depends on team size, higher values of ICC(2) indicate an increase in team size (Bliese, 2000). The ICC(2) values in this study are all above 0.50 which is the absolute minimum recommended by Klein et al. (2000). To further assess within-team agreement, we calculated the rwg (j) (James et al., 1982, 1993). A value of 0.70 or above is suggested as 'good' with respect to within-group interrater agreement (James et al., 1993). Rwg (j) for all dimensions above 0.70 and suggesting that aggregating to the team level is justified. The team level correlations between all variables are presented in Table 42.

TABLE 42

ICC (1), ICC (2) and Rwg for the ATPI Dimensions				
Dimensions	ICC1	ICC2	Rwg	No. of items
Team Inputs				
Task design	0.24	0.65	0.96	11
Team effort and skills	0.25	0.66	0.94	7
Organizational support	0.25	0.66	0.89	7
Resources	0.25	0.66	0.77	3
Team Processes				
Objectives	0.21	0.61	0.89	3
Reflexivity	0.21	0.62	0.88	2
Participation	0.26	0.67	0.93	7
Task focus	0.28	0.69	0.92	6
Team conflict	0.25	0.66	0.86	4
Creativity and innovation	0.21	0.61	0.86	3
Leadership				
Leading	0.23	0.64	0.89	4
Managing	0.25	0.66	0.94	8
Coaching	0.24	0.65	0.91	5
Team Outputs				
Team member satisfaction	0.23	0.64	0.92	6
Attachment	0.20	0.60	0.83	3
Team effectiveness	0.17	0.55	0.85	3
Inter-team relationship	0.25	0.66	0.93	4
Team innovation	0.21	0.60	0.90	4

In summary, the ATPI Jordanian Version measure which consists of 100 items was applied to the Jordanian sample. However the number of items was reduced to 90 items after the indicators for validity and reliability were examined.

9.4.5 Leader Ratings Arabic Version Measure

As previously mentioned, the Leader Ratings measure was translated into the Arabic language (Appendix 4). This scale consists of 18 items on a 5-point scale ranging from 1="Not at all" to 5="to a great extent" distributed across three dimensions as follows: (nine items measured team effectiveness 1-9, four items measured team strategic orientation 10-13, and five items measured team innovation 14-18).

The leader ratings started 3 months after the ATPI instrument was distributed. Prior to the distribution of the questionnaires in Amman Hospitals, the researcher had

to provide the Ministry of Health in Jordan with the following documents to obtain the ethical approval:

- 1- A copy of the draft proposal
- 2- A copy of the questionnaire
- 3- A letter of introduction from Aston University outlining the tasks of the researcher and
- 4- A letter of introduction from Jordan Red Crescent supporting the researcher's request.

The researcher had to submit the same documents along with the ethical approval obtained from the MOH to the Military Hospitals in order to obtain the military security approval. 277 questionnaires were distributed to 277 team leaders in the participating hospitals and 255 completed questionnaires were received. This procedure was much easier than the ATPI with respect to procedure, because contact was made directly with one person at a time and the researcher had already met and identified most of the team leaders when the ATPI questionnaire was distributed. However the researcher had to wait longer to get appointments from the managers considering their heavy schedule.

9.4.5.1 Leader Ratings Validity

EFA was used to examine the factor structure for the leader ratings with principal axis factoring analysis to explain as much of the correlations amongst variables and minimum number of factors with oblimin rotation which allowed the factors to correlate (Conway and Huffcutt, 2003).

Table 43, based on scree plot (figure 8), shows that there are three factors, each with an eigenvalue close to 1.0 which interprets 83.154% of the variation in the

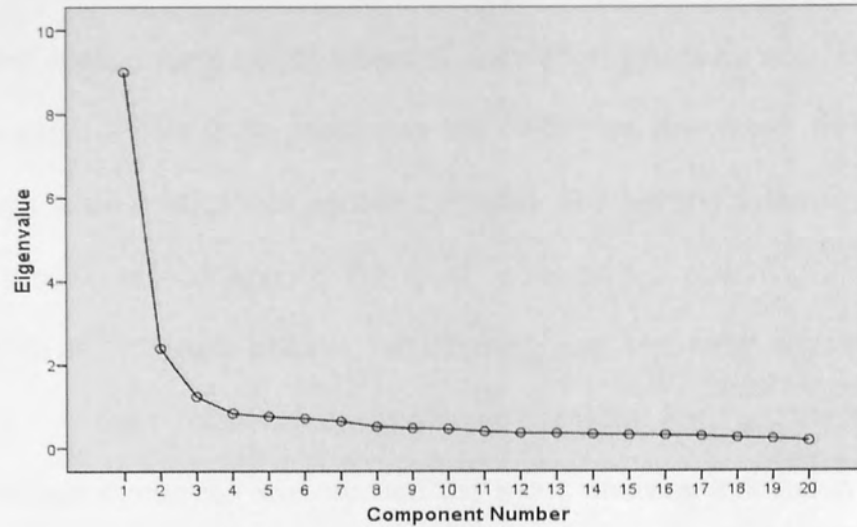
leaders' response in the study sample on the leader ratings scale. The table also shows that the interpreted variance percentage of the first factor was high at 45.015. We can also see that the eigenvalue was relatively high at 9.003 compared with other factors whose eigenvalues were closer and smaller. As a whole these results indicate the possibility of the presence of a prevailing factor reflecting one dimension which is the leader ratings. It can also be noted that the items loading of the leader ratings scale on the three factors were high, as the correlation coefficient among the items of each factor and the factor that it represents is more than 0.30.

Both items 13 and 20 showed higher loading on the effectiveness factor although the first was there to measure the innovation scale and the second to measure the strategic orientation. So both items could be deleted to ensure the purity of the model which now contains 18 items.

TABLE 43
Factor Analysis for Jordanian Version Leader Ratings Measure

Items No.	Factor 1	Factor 2	Factor3
	Effectiveness	Strategic Orientation	Innovation
Q1	0.668		
Q2	0.719		
Q3	0.823		
Q4	0.725		
Q5	0.823		
Q6	0.784		
Q7	0.819		
Q8	0.396		
Q9	0.617		
Q10			0.646
Q11			0.749
Q12			0.634
Q13	<u>0.591</u>		<u>0.355</u>
Q14			0.768
Q15		0.829	
Q16		0.884	
Q17		0.809	
Q18		0.831	
Q19		0.804	
Q20	<u>0.396</u>	<u>0.533</u>	
Eigenvalue	9.003	2.392	1.236
Percentage of Variance	45.015	11.962	6.178
Cumulative percentage of variance	45.015	56.978	83.154

FIGURE 8
Leader Ratings Scree Plot
Scree Plot



9.4.5.2 Leader Ratings Reliability

The indicators for scale reliability were examined using Cronbach Alpha and were found to be 0.90 Effectiveness 9 items, 0.78 Strategic Orientation 4 items, and 0.91 Innovation 5 items for 255 leaders, which was an acceptable ratio.

9.5 Results

The results of this study aim to answer its main research question by using a quantitative approach through research questionnaires. Mean and standard deviations were used to gain a descriptive analysis of the ATPI dimensions by using SPSS version 15; multiple regression analysis was used to test the hypotheses in order to know which factors predict the effectiveness of health care teams in this study.

9.5.1 Description of ATPI & Leader Ratings Variables

The mean, standard deviation and rank for the ATPI and LR dimensions were calculated. Table 44 shows task design and organizational support dimensions were both the most applied team inputs, whereas team effort and skills and resources were applied the least. As for team processes the objectives dimension was applied the most whereas team conflict was applied the least. The leading dimension among the leadership processes was applied the most, whereas the coaching dimension was applied the least. In team outputs, attachment was the most applied dimension whereas the inter-team relationship was applied the least. Amongst the leader ratings the effectiveness dimension was applied the most whereas innovation was applied the least.

TABLE 44
Description of ATPI Variables & Leader Ratings Variables

Team Inputs				Team Processes				Leadership				Team Outputs			
Dimensions	M	SD	Rank	Dimensions	M	SD	Rank	Dimensions	M	SD	Rank	Dimensions	M	SD	Rank
Task Design	3.69	0.346	1	Objectives	3.83	0.42	1	Leading	3.75	0.489	2	Team Member Satisfaction	3.64	0.461	3
Team Effort and Skills	3.37	0.422	3	Reflexivity	3.56	0.473	5	Managing	3.77	0.454	1	Attachment	3.78	0.495	1
Organizational Support	3.69	0.496	2	Participation	3.65	0.445	4	Coaching	3.74	0.467	3	Team effectiveness	3.54	0.463	4
Resources	3.37	0.63	4	Task Focus	3.81	0.443	2					Inter-Team Relationship	3.43	0.474	5
				Team Conflict	3.35	0.491	6					Team Innovation	3.66	0.454	2
				Creativity and Innovation	3.67	0.453	3					Leader Ratings			
												Effectiveness	3.99	0.688	1
												Strategic Orientation	3.59	0.862	2
												Innovation	3.37	0.825	3

9.6 Hypotheses Testing

As mentioned in Chapter 4, a number of hypotheses were proposed to measure the relationships between variables, namely inputs, processes and outputs, in order to answer the main study question: "Which factors predict the effectiveness of healthcare teams?" The following outlines a test for the hypotheses:

1. The Relationships between Team Inputs and Team Processes

Hypotheses (H1a to H1p) were proposed to explain the relationships between team inputs and team processes (see figure 9). Multiple regression analysis was used to test these hypotheses.

FIGURE 9

The Relationships between Team Inputs and Processes



To test the hypotheses, the team inputs were entered into regression analysis to determine their association with team processes as dependent variables. Hospital type and team size were also entered as control variables. The results are shown in Table 45.

TABLE 45

The Relationships between Team Inputs and Team Processes

Predictor Variables	Objectives		Reflexivity		Participation		Task Focus		Team Conflict		Creativity and Innovation	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
	Beta	Beta	Beta	Beta	Beta	Beta	Beta	Beta	Beta	Beta	Beta	Beta
Public Hospital	-0.135	0.007	-0.100	0.057	-0.125	0.039	-0.139	0.001	-0.037	0.130*	-0.161*	0.006
Private Hospital	0.110	-0.015	0.130	0.019	0.118	-0.013	0.148*	0.016	0.068	-0.032	0.140	0.019
Team Size	-0.161**	-0.042	-0.070	0.030	-0.169**	-0.047	-0.124*	0.003	-0.153*	-0.054	-0.099	0.008
Task Design		H1a		H1b		H1c		H1d				H1e
		0.171**		0.144*		0.167**		0.225**				0.179**
Team Effort and Skills		H1f		H1g		H1h		H1i		H1j		H1k
		0.471**		0.325**		0.453**		0.506**		0.358**		0.348**
Organizational Support		0.141*		H1l		H1m		0.141**		H1n		0.299**
				0.289**		0.218**				0.311**		
Resources		0.107*		0.062		0.112*		0.047		H1o		H1p
										0.145*		0.058
R ²	0.091	0.594	0.055	0.466	0.094	0.653	0.098	0.660	0.040	0.436	0.096	0.576

** p ≤ 0.01, * p ≤ 0.05

Table 45 indicates that the control variables explained 9.1% of the variance in team objectives, whereas team inputs, together with control variables accounted for 59.4%. It was noticed that team efforts and skills had the strongest association with team objectives $\beta=0.471$, $p < 0.01$. Hypothesis 1f is thus supported. In order to achieve team objectives, team members' effort and skills must be combined, hence the outcome. If teams possess the appropriate effort and skills, they are more likely to work in an integrated and effective manner. West et al. (2004) argued that obtaining the appropriate level of team effort and the correct team skills are essential aspects influencing team performance and effectiveness.

The data revealed that team task design had a significant association with team objectives $\beta=0.171$, $p < 0.01$. Hypothesis 1a is therefore supported. In order for it to operate effectively, a team must have a clear task design, depending directly on the objectives the members seek to achieve. This is in line with Campion, Medsker & Higgs' (1993) study, which confirmed that success in task design contributed to a high level of productivity, achieved through the implementation of team objectives. This led to a high level of satisfaction among team members.

Reflection is very important for effective team work as it allows teams to evaluate current practices and review past events. If teams demonstrate effort and exhibit skills such as trust, shared vision and goals, strong relationships and positive cooperation they will be able to solve their problems (Widmer et al. 2009). This point was strongly reinforced by the results which indicated that the control variables explained 5.5% of the variance in team reflexivity, whereas team inputs together with control variables accounted for 46.6% of the variance. It was evident that team effort

and skills had the strongest association with team reflexivity $\beta=0.325$, $p < 0.01$. Once again, hypothesis 1g is supported.

Additional support for the hypothesis 1i is provided by the fact that organizational support had considerable association with team reflexivity $\beta=0.289$, $p < 0.01$. This stresses how important feedback and communication from the organization is; it is a highly influential element of overall organizational support which impacts reflexivity (Xyrichis & Lowton, 2008). Finally, task design also had an association with team reflexivity $\beta=0.144$, $p < 0.05$. This result, again supporting hypothesis 1b, reinforces the notion that reflexivity in teams with clear goals and tasks can keep team members focused and efficient. In addition, improvements can clearly be discerned in the subjective as well as objective measures of team performance (Tjosvold et al, 2004; Schippers, 2008). Furthermore, reflexive teams plan in with a greater degree of detail, pay more attention to long-term consequences and are more responsive to their environment.(Widmer, Schnippers and West, 2009).

The table additionally indicates that the control variables explained 9.4% of the variance in team participation, while team inputs together with control variables explained 65.3%. Team efforts and skills were seen to have had the strongest association with participation $\beta=0.453$, $p < 0.01$ and so hypothesis 1h is seen to be again supported. This confirmed that the key skills for effective participation are team potency and self-leadership and therefore higher levels of these skills together indicate higher team commitment and interaction (Bligh and Pearce, 2006). Organizational support had an association with participation $\beta=0.218$, $p < 0.01$ and consequently. This supported hypothesis 1m by confirming that, in order for team members to participate effectively, organizations must provide appropriate education

and training for teams to ensure their members can contribute more effectively, a point reinforced by Al-Tajam (2002) who found, in his study of Saudi Arabian public corporations, that teams which lacked participation in decision making processes suffered internal fragmentation and reduced team functioning.

Task design was also found to have had a critical association with team participation $\beta=0.167$, $p < 0.01$, supporting hypothesis 1c in the process. One key element of task design is interdependence, which will lead team members to a high level of participation and communication in considering how best to implement their tasks. Also good communication aids both task work and team work as it facilitates interaction and social relationships as well as exchanging task-related information and developing team solutions to problems (Morgan, Salas, & Glickman, 2001).

The control variables accounted for 9.8% of the variance in team task focus, whereas team inputs together with control variables explained 66.0% of the variance. It was noticed, in support of hypothesis 1i, that team effort and skills had the strongest association with team task focus $\beta=0.506$, $p < 0.01$. This result confirmed that both the motivation that teams have to get job done and their belief in their ability to achieve goals, make it more likely for them to focus on the task and engage in constructive debate about how best to do the job. This is in line with an outcome reported by Castka, Baber, Sharp & Belohoubek (2001), who found that team performance improved when team members were focused on task goals and reduced when teams had no focus. Task design also had an association with team task focus $\beta=0.225$, $p < 0.01^*$. (Hypothesis 1d is supported). The study's assumption is confirmed in the notion that when the team has a clear and challenging task as well

as the autonomy to fulfill it, the team members will be more likely to focus on the task and be able to debate more constructively.

4.0% of the variance in team conflict was explained by the team variables, whereas team inputs together with control variables explained 43.6% of the variance. Team effort and skills had the strongest association with conflict $\beta=0.358$, $p < 0.01$. Conflict can be related to differences in personalities, perceptions, values, attitudes, needs, expectations, and resources. This research supported the link and hypothesis 1j. Effective skills in dealing with conflict can assist team members with handling and effectively resolving conflicts. Organizational support was also shown to have an impact on team conflict $\beta=0.311$, $p < 0.01$, clearly supporting hypothesis 1n. The fact is managers can reduce the impact of conflict by ensuring support through effective communication; this can prevent competition and conflict emerging between different teams in an organization. This reinforces the importance of support from higher levels (Campion and Higgs, 1995). Resources were observed to have an association with team conflict $\beta=0.145$, $p < 0.05$ which matches the study assumption in the sense that if organizational leaders are providing resources through money, training, technical expertise, and materials, they are likely to reduce the risk of conflict caused by a lack of these resources. Support is therefore accorded to hypothesis 1o.

The control variables accounted for 9.6% of the variance in team creativity and innovation; however, team inputs together with control variables accounted for 57.6%. It was noticed that team efforts and skills had the strongest association with team creativity and innovation $\beta=0.348$, $p < 0.01$. Another of the study assumptions maintained that having the skills and putting in the effort to test new ideas to improve

ways of working influences the level of creativity and innovation in a team. This, and correspondingly, hypothesis 1k, were strongly supported by the results. Furthermore, the willingness to put in effort and engage in creative work processes, especially in interdependent teams, was found to be critically important in a case study of project engineers working on a telecommunications project (Kazanjian, Drazin, and Glynn, 2000). Supporting hypothesis 1e, results also showed that task design had an association with team creativity and innovation $\beta=0.179$, $p < 0.01$. The assumption is therefore justified that if teams have a challenging task with clear objectives and the autonomy with which to complete it, task design might predict creativity and innovation. Guzzo and Shea (1992) and Pearce and Ensley (2004), argued that having shared, clear goals and visions are crucial for the innovation process as it makes the team more task-oriented, thus improving task focus.

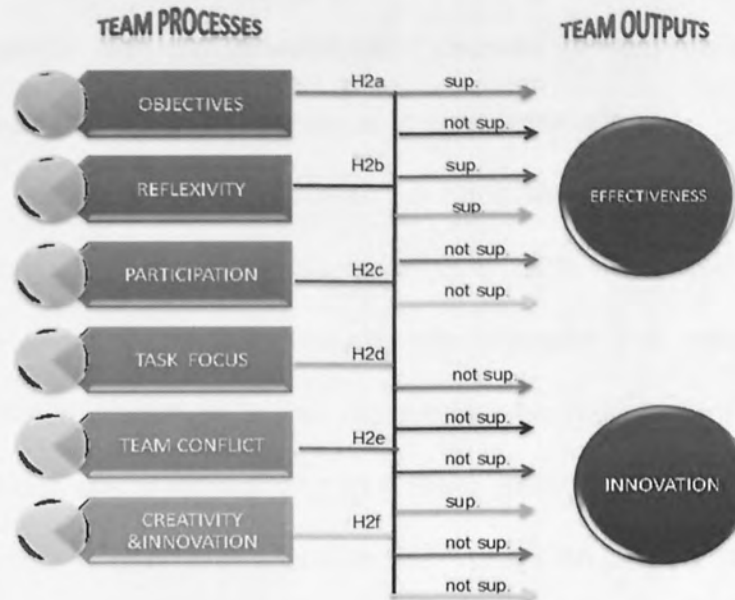
Finally, according to the results, resources had no association with team creativity and innovation $\beta=0.058$, $p > 0.05$ and so hypothesis 1p is not supported. This indicates that the team does not have the essential resources for creativity and innovation such as the right skills for the task and the necessary organizational support.

2. The Relationships between Team Processes and Outputs

Hypotheses (H2a to H2f) were proposed to explain the relationship between team processes and outputs (see figure 10). Multiple regression analysis was utilized to test the validity of these hypotheses:

FIGURE 10

The Relationships between Team Processes and Outputs



The team processes were entered into regression analysis to determine their association with team outputs as dependent variables. Hospital type and team size were also entered as control variables. The results are illustrated in Table 46.

TABLE 46

The Relationships between Team Processes and Outputs (Multiple)

H2	Predictor Variables	Effectiveness		Innovation	
		Model 1 Beta	Model 2 Beta	Model 1 Beta	Model 2 Beta
	Public Hospital	-0.189*	-0.080	-0.084	0.024
	Private Hospital	0.097	0.002	0.134	0.046
	Team Size	-0.215**	-0.070	-0.024	0.114*
H2a	Objectives		0.197**		0.104
H2b	Reflexivity		0.106		0.005
H2c	Participation		0.237**		0.221
H2d	Task Focus		0.270**		0.260*
H2e	Team Conflict		0.042		0.066
H2f	Creativity and Innovation		0.011		0.151
	R ²	0.139	0.699	0.042	0.538

** p ≤ 0.01, * p ≤ 0.05

Table 46 reveals that the control variables explained 13.9% of the variance in team effectiveness and 4.2% of the variance in team innovation, whereas team processes together with control variables accounted for 69.9% of the variance in team effectiveness and 53.8% of the variance in team innovation.

Team objectives were reported to have an association with effectiveness $\beta=0.197$, $p < 0.01$ and therefore hypothesis 2a is supported with regards to the relationship between team objectives and effectiveness. This result confirmed that the existence of team objectives is the most consistently important processes factor in determining team effectiveness (Guzzo & Shea, 1992). However, the results indicated that team objectives had no association with innovation $\beta=0.104$, $p > 0.05$ and that hypothesis 2a is not supported in respect to the relationship between team objectives and innovation. This result could be explained by the fact that team objectives are unclear and therefore resulted in a failure in all stages of the innovation process.

The results further revealed that team reflexivity had no association with effectiveness and innovation $\beta=0.106$; 0.005 , $p > 0.05$. Thus, hypothesis 2b is not supported. Since the teams did not take time out to review their objectives, strategies, the research results failed to support hypothesis 2b. Therefore these teams cannot be more effective and innovative.

It was also apparent that team participation had an association with effectiveness $\beta=0.237$, $p < 0.01$. So, in regard to the relationship between team participation and effectiveness, hypothesis 2c is fully supported. This result confirmed the importance of the participation process such as participation in decision making and regular meetings. Despite this, the results revealed that team participation had no significant impact on innovation $\beta=0.221$, $p > 0.05$. It can be noted that hypothesis

2c is not supported in respect to the relationship between team participation and innovation. This means that team members are not encouraged to contribute to the decision making process and to meet frequently to ensure appropriate levels of interaction between team members in order to be more effective and innovative.

In addition, since it was clearly indicated that team task focus had an association with effectiveness and innovation $\beta=0.270; 0.260, p < 0.01.$, hypothesis 2d *is* supported. This means that team members are strongly focused on their task. West et al. (2004) found that if teams were strongly focused on a task, then levels of demographic diversity seemed to promote innovation, while highly demographically diverse groups had low levels of innovation. It was also noticed that because team conflict had no association with effectiveness and innovation $\beta=0.042; 0.066, p > 0.05.$, hypothesis 2e is not supported. This could be explained by the fact that task-related conflict and interpersonal conflict was not high enough to affect team effectiveness and innovation positively or negatively.

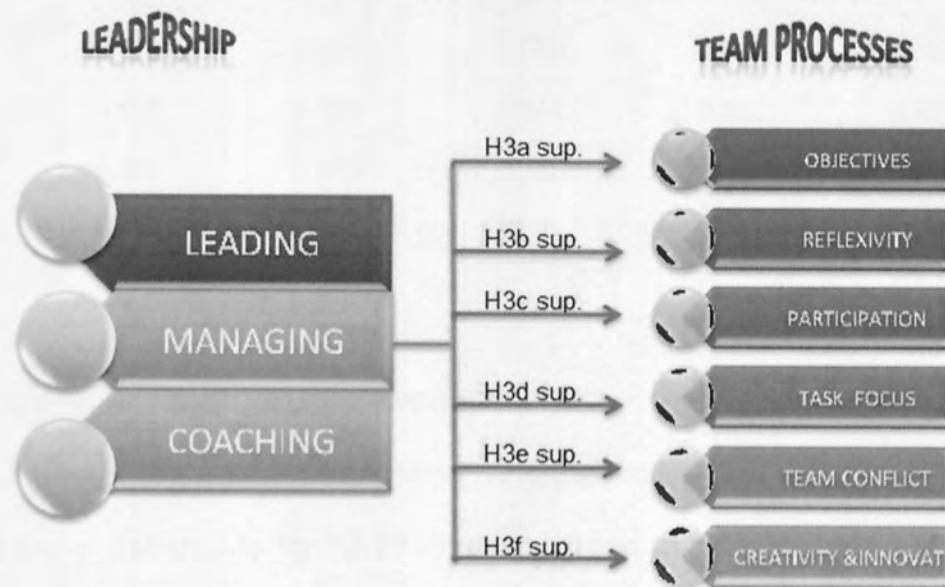
Finally, hypothesis 2f is not supported since the results indicated that team creativity and innovation had no association with effectiveness and innovation $\beta=0.011; 0.151, p > 0.05.$ This could be interpreted by the fact that exchanging ideas and views between team members and supporting each other's ideas for new products, services and ways of working are limited and therefore, team creativity and innovation had no impact on effectiveness and innovation.

3. The Relationships between Leadership and Team Processes

Hypotheses (H3a to H3f) were proposed to explain the relationships between leadership and team processes (see figure 11). Multiple regression analysis was used to test their validity.

FIGURE 11

The Relationships between Leadership and Team Processes



The leadership variables were entered into regression analysis to find their association with team processes as dependent variables. Hospital type and team size were also entered as control variables. The results are illustrated in Table 47

TABLE 47

Predictor Variables	The Relationships between Leadership and Team Processes											
	Objectives H3a		Reflexivity H3b		Participation H3c		Task Focus H3d		Team Conflict H3e		Creativity and Innovation H3f	
	Model 1	Mode I2	Mode I1	Mode I2	Model 1	Mode I2	Mode I1	Mode I2	Mode I1	Mode I2	Model 1	Mode I2
	Beta	Beta	Beta	Beta	Beta	Beta	Beta	Beta	Beta	Beta	Beta	Beta
Public Hospital	-0.135	-	-	-	-0.125	-	-	-	-	0.001	-	-
Private Hospital	0.110	-	0.100	0.043	0.118	-	0.139	0.063	0.037	-	0.161*	0.108
Team Size	-	0.068	0.130	0.002	-	0.030	*	0.148	0.005	0.068	-	0.140
Leading	0.161*	0.090*	0.070	0.007	0.169**	0.099*	0.124*	0.053	0.153*	0.103	-0.099	-0.030
Managing	-	0.113	-	0.069	-	0.079	-	0.267**	-	0.093	-	0.056
Coaching	-	0.595**	-	0.523**	-	0.495**	-	0.552**	-	0.235*	-	0.451*
R ²	0.091	0.591	0.055	0.454	0.094	0.601	0.098	0.621	0.040	0.326	0.096	0.539

** p ≤ 0.01, * p ≤ 0.05

Table 47 indicates that the control variables can be deemed responsible for 9.1% of the variance in team objectives, whereas leadership variables with control variables were responsible for 59.1%. It was noticed that leader managing had the strongest association with team objectives beta=0.595, $p < 0.01$; hypothesis 3a is therefore supported. This confirms that one of the main roles of the leaders is to ensure clarity of team objectives.

Table 47 also indicates that the control variables explained 5.5% of the variance in team reflexivity, whereas leadership variables together with control variables explained 45.4%. Leader managing was reported to have the strongest association with team reflexivity beta=0.523; in this case, hypothesis 3b is supported. It is evident that the team leader can directly influence reflexivity by encouraging the

team to reflect on their objectives, strategies, and processes and stimulating their communication (Widmer et al., 2009).

Table 47 further shows that the control variables accounted for 9.4% of the variance in team participation. Conversely, leadership variables together with control variables explained 60.1% of the variance. Leader managing had the strongest association with team participation $\beta=0.495$, $p < 0.01$, thereby supporting hypothesis 3c. Clear evidence is provided for the fact that when team leaders encourage participation, there will be relatively high levels of team innovation and effectiveness (Bonito & Hollingshead, 1997; West & Anderson, 1996).

Indication is also given in the table that the control variables were responsible for 9.8% of the variance in team task focus, whereas leadership variables together with control variables were responsible for 62.1%. It was also apparent – and this supported hypothesis 3d - that leader managing had the strongest association with team task focus $\beta=0.552$, $p < 0.01$. This result stresses the importance for leaders to be highly task-focused in order to get the job done.

It is further shown in the table that the control variables explained 4.0% of the variance in team conflict, whereas leadership variables together with control variables explained 32.6%. It was also noticed that leader coaching had the strongest association with team conflict $\beta=0.246$, $p < 0.01$ and due to this fact, hypothesis 3e is soundly supported. Explanation for this fact could come from the necessity for team leaders to be comfortable in dealing with interpersonal conflict and to be able to recognize situations in which conflict may develop: it is their responsibility to find optimum solutions. In terms of Interpersonal conflicts, leaders must be alert to them

and take quick action to eliminate or minimize their perceived dangers, which include decreases in productivity and job satisfaction.

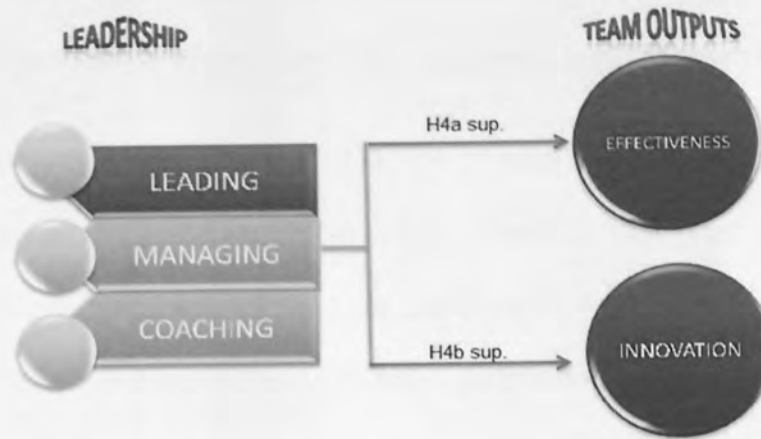
Finally, the results conclusively revealed that the control variables explained 9.6% of the variance in team creativity and innovation, whilst leadership variables together with control variables explained 53.9% of the variance. It was also evident that leader managing had the strongest association with team creativity and innovation $\beta=0.451$, $p < 0.01$ and hypothesis 3e can be seen to be supported. One way this outcome could be interpreted is by the fact that the role of team leaders in improving the creativity of teams is essential if organizations are to compete successfully in today's globally competitive environment (Thacker, 1997). Thus, if team members do not perceive that the team leader is trying to be supportive of creativity, the creative processes of the group may be correspondingly ineffective (Thacker, 1997).

4. The Relationships between Leadership and Outputs

Hypotheses H4a and H4b were proposed to explain the relationship between leadership and team outputs (see figure 12). Multiple regression analysis was employed to test the validity of these hypotheses:

FIGURE 12

The Relationships between Leadership and Outputs



The leadership variables were entered into regression analysis to determine their association with team outputs as dependent variables. Hospital type and team size were also entered as control variables. The results are set out in Table 48.

TABLE 48

The Relationships between Leadership and Outputs				
Predictor Variables	Effectiveness H4a		Innovation H4b	
	Model 1	Model 2	Model 1	Model 2
	Beta	Beta	Beta	Beta
Public Hospital	-0.189*	-0.112*	-0.084	-0.021
Private Hospital	0.097	-0.034	0.134	0.015
Team Size	-0.215**	-0.119**	-0.024	0.063
Leading		0.383**		0.190
Managing		0.358**		0.423*
Coaching		0.007		0.064
R ²	0.139	0.621	0.042	0.439

** p ≤ 0.01, * p ≤ 0.0

Table 48 indicates that the control variables were responsible for 13.9% of the variance in team effectiveness and leadership variables together with control variables explained 62.1% of the variance. It was also noticed, and for this reason hypothesis 4a is supported, that leaders leading had the strongest association with effectiveness beta=0.383, p < 0.01. This result confirms that team leaders should

adopt different behaviors; these include establishing the team's structure and purposes, ensuring it has all the resources it needs and also that any obstacles are removed (Hackman & Wageman 2005) in order to support team effectiveness.

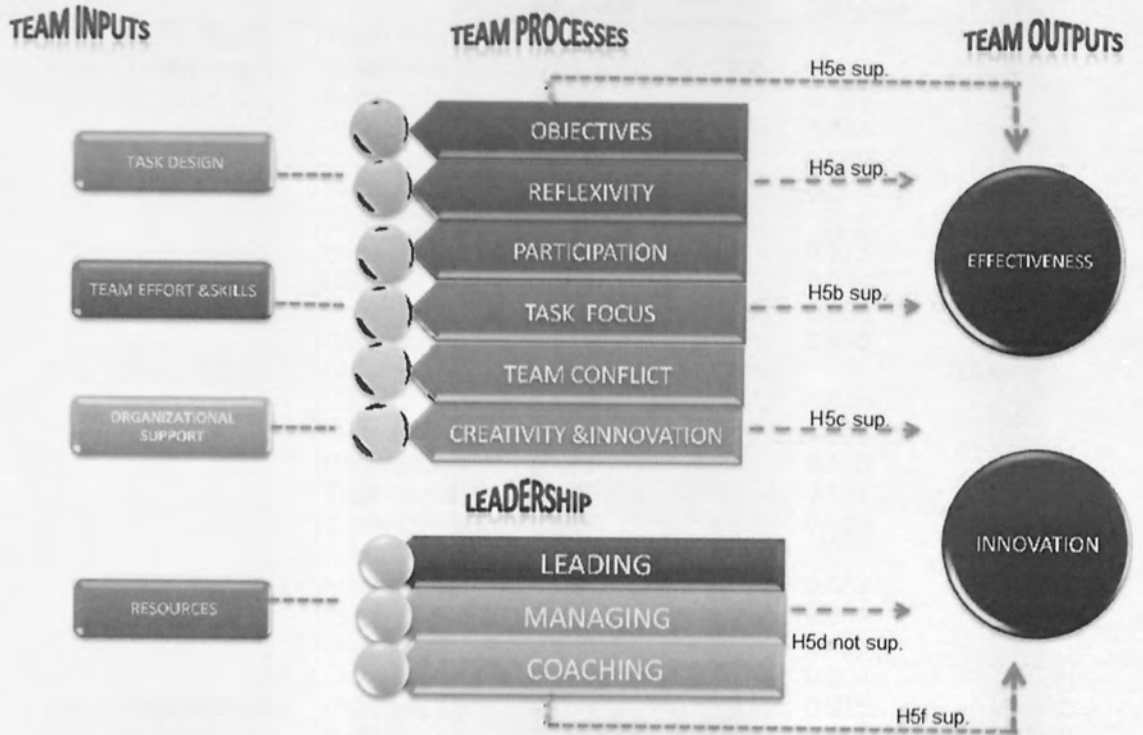
Table 48 further reveals that the control variables explained 4.2% of the variance in team innovation; leadership variables, however, together with control variables accounted for 43.9% of the variance. It was noticed that only the leaders managing had an association with team innovation $\beta=0.423$, $p < 0.01$ and so, hypothesis 4b is for that reason supported. This reinforces the fact that leaders should be clear in the team processes they develop as these are associated with clear team objectives, high levels of participation, commitment to excellence, and support for innovation (West et al., 2003).

5. The Relationships between Team Inputs and Outputs

Hypotheses (H5a to H5f) were proposed to account for the relationship between team inputs and team outputs in the presence of team processes and leadership as mediate variables (see figure 13). Multiple regression analysis was used to test the validity of these hypotheses:

FIGURE 13

The Relationships between Team Inputs and Outputs



Team inputs were entered into regression analysis to ascertain their association with outputs as dependent variables. Hospital type and team size were also entered as control variables, and team processes and leadership as mediating variables. The results are shown in Table 49.

TABLE 49

The Relationships between Team Inputs and Outputs mediated by Team Processes

H	Predictor Variables	Mediating Variables	Effectiveness H5e		Innovation H5f	
			Mediating Estimate	Estimate	Mediating Estimate	Estimate
H5a	Team Size Task Design	Team Size				
		Objectives	0.042	0.179**	0.018	0.155**
		Reflexivity	0.033		0.001	
		Participation	0.023		0.037	
		Task Focus	0.044		0.059	
		Team Conflict	0.000		0.000	
		Creativity and Innovation	0.002		0.027	
		Leading	0.041		0.044	
		Managing	0.079*		0.088	
		Coaching	0.028		0.010	
H5b	Team Effort and Skills	Objectives			0.399**	
			0.115*	0.048		
		Reflexivity	0.074*	0.002		
		Participation	0.062	0.100		
		Task Focus	0.055	0.132*		
		Team Conflict	0.036	0.023		
		Creativity and Innovation	0.005	0.053		
		Leading	0.075	0.081		
		Managing	0.144*	0.160*		
		Coaching	0.063	0.024		
H5c	Organizational Support	Objectives	0.034	0.198**	0.015	0.199**
		Reflexivity	0.066		0.001	
		Participation	0.030		0.048	
		Task Focus	0.015		0.037	
		Team Conflict	0.031		0.020	
		Creativity and Innovation	0.004		0.045	
		Leading	0.014		0.015	
		Managing	0.083*		0.092*	
		Coaching	0.028		0.010	
		H5d	Resources		Objectives	
Reflexivity	0.014			0.000		
Participation	0.015			0.025		
Task Focus	0.005			0.012		
Team Conflict	0.014			0.009		
Creativity and Innovation	0.001			0.009		
Leading	0.027			0.029		
Managing	0.036			0.039		
Coaching	0.025			0.009		
R ²					0.760	

** p ≤ 0.01, * p ≤ 0.05

It can be seen from Table 49 that the team input explained 76.0% of the variance in team effectiveness and 57.6% of the variance in team innovation. The

results point out that team task design had an association with effectiveness and innovation $\beta=0.179; 0.155, p < 0.01$ and for this reason hypothesis 5a is supported. This is consistent with the findings of Campion and colleagues (1996), which confirmed that task design characteristics were relatively strong predictors of effectiveness.

Team efforts and skills were reported to have had an association with effectiveness and innovation $\beta=0.399; 0.358, p < 0.01$. Hypothesis 5b is supported by this result, which concurs with the notion that team effectiveness is dependent on the level of effort exerted by the team members and the amount of knowledge and skills they can apply to the task (West et al., 2004; Guzzo & Dickson, 1996; Campion et al., 1994; Hackman, Brousseau and Weiss, 1976).

Also noticed was the fact that organizational support had an association with effectiveness and innovation $\beta=0.198; 0.199, p < 0.01$, supporting hypothesis 5c. This result could be explained by the fact that as teams are embedded within an organizational context; therefore the structure and support from the organization affects how teams perform and whether they achieve their goals (Guzzo & Dickson, 1996; Tata & Prasad, 2004).

It was further found that team resources had a major association with effectiveness $\beta=0.105, p < 0.01$. With regard to the relationship between team resources and effectiveness, hypothesis 5d is supported. If team members perceive that there are sufficient resources and that the team has the necessary external support (such as access to information, equipment and time to meet), then they are likely to believe that the team can achieve its goals effectively (Stocks & Harrell, 1995; Guzzo et al. 1993). The results showed that team resources had no

association with innovation $\beta=0.089$, $p > 0.05$ and so, with regard to the relationship between team resources and innovation, no support is extended to hypothesis 5d. This outcome is in line with what Payne (1990) concluded in a review of the United Nations studies of research team effectiveness, namely that there was no evidence from these studies that more resources and better facilities led to enhanced performance.

It is important to consider the relationships between team inputs and outputs in terms of effectiveness and innovation mediated by team processes. Team objectives are shown by the results to have had the strongest association among the mediating team processes variables with team effectiveness $\beta=0.115$, $p < 0.05$. This result could be attributed to the fact that the most consistently important processes factor in determining team effectiveness is the existence of team objectives (Guzzo & Shea, 1992). Team objectives should be clear and specific as clarity of team objectives is likely to facilitate innovation by enabling focused development of new ideas; these can be assessed with greater precision than if team objectives are unclear (West and Anderson, 1996). Team task focus had the strongest association among the mediating team processes variables with team innovation $\beta=0.132$, $p > 0.05$. This supports hypothesis 5e and is a logical result since the team functions determine the levels of expected performance; when team members think about how to achieve their tasks in a new and creative way they are more likely to be innovative at the team level based on the task they perform.

Lastly, the results for the relationships between team inputs and team outputs in terms of effectiveness and innovation mediated by leadership showed that leader managing had the strongest association among leadership variables with team

effectiveness and innovation $\beta=0.144; 0.160, p < 0.05$. For this reason, hypothesis 5f is supported. This result indicates that the more efficiently team management contribute to achieving their objectives with reduced time, effort and cost, this represents the highest levels of efficiency, and could be considered as important to achieve new levels of performance based on the creative efforts of the team.

9.7 Conclusion

This study aimed to assess team effectiveness based on two measures: the first is the ATPI which measures team functioning from team members' points of view and the second is the LR which measures team outputs in terms of effectiveness and innovation from leaders' points of view.

Psychometric properties tests for the ATPI and LR measures were extracted before analyzing the results of this study. In this context, factorial and predictive validity, internal consistency were extracted. After the cultural adaptation was done, factorial and predictive validity, internal consistency and data aggregation for both measures were extracted. This study was applied to 277 teams and 255 leaders in order to test the hypotheses that were developed to answer the main study question "which factors predict the effectiveness of healthcare teams ". These hypotheses aimed to investigate the relationships between team inputs, team processes, leadership and team outputs in terms of effectiveness and innovation. Findings revealed that all team inputs were deemed to have an association with team processes, with team effort and skills having the strongest association with team task focus. The strongest team processes variables for team outputs variables were team task focus on team effectiveness. Likewise, all leadership variables were found to

have an association with team processes, with leader managing having the strongest association with team objectives. The strongest leadership variables for outputs variables led on the effectiveness variable. It was also found that team objectives variable had the strongest mediated association with team effectiveness and team task focus had the strongest mediated association with team innovation. Lastly, leader managing had the strongest mediated association with team effectiveness and innovation. These findings showed that team outputs in terms of effectiveness and innovation are influenced by multiple factors that must all be taken into account. The key factors managers need to ensure are in place for effective teams are team effort and skills, team objectives and leader managing. To conclude, the implication of these discoveries in healthcare teams in Jordan will help improve their team effectiveness, and thus the healthcare services that they provide.

CHAPTER 10

DISCUSSION

10.1 Chapter Summary

This chapter presents the key findings of this research, and it then discusses the theoretical literature associated with the research subject, research limitations, and describes the practical value of the research. It also provides a set of recommendations for future research. This research has succeeded in answering its main question “which factors predict the effectiveness of healthcare teams?” through the application of three studies using the ATPI and LR measures. The first study utilized secondary data collected from 797 team members in 61 health care teams in the UK by the Institute of Health Services Effectiveness at Aston Business School to assess the psychometric properties of the survey instrument. The second pilot tested the ATPI in order to examine the reliability of this measure in the Jordanian context. Lastly, the third used the Leader Ratings measure to replace the outputs of the ATPI in order to assess team effectiveness from the team leaders' point of view. It was applied to 277 healthcare teams in hospitals in Amman, Jordan.

10.2 Summary of the Main Results

The ATPI measure developed by West, Markiewicz and Dawson (2005) was adopted for this research as it relatively comprehensively assesses the main dimensions of team working and team effectiveness based on the IPO model. The ATPI was applied to healthcare teams both in the UK and Jordan. This research succeeded in providing evidence that the ATPI measure has good psychometric properties. Based on the secondary data which was collected by the Institute of

Health Services Effectiveness at Aston Business School from 797 team members in 61 healthcare teams, the results of the reliability and validity analyses show that the ATPI survey instrument enjoys good psychometric properties.

This research also developed an Arabic version of the ATPI which was applied to healthcare teams in Jordanian hospitals. Before the application of the Arabic version of the ATPI to the study sample, a pilot test of it was conducted on a sample of five teams. These comprised 3-6 members each and were randomly selected from health centers at the Jordan Red Crescent (JRC). This study was conducted to ensure that the translated measure is adapted to the Jordanian environment culturally, socially and behaviourally. Results showed that the translated measure is reliable in assessing team effectiveness and the measure items were clear, easy to follow, and well understood.

Based on the data collected from 277 healthcare teams in Jordanian hospitals, evidence was provided to confirm that the Arabic version of the ATPI enjoys good psychometric properties; this was achieved through construct and factorial validity, predictive validity between ATPI and LR measures, and internal consistency.

Although, cross-cultural research is usually threatened by the failure to produce culturally and linguistically appropriate survey instruments (Weech-Maldonado, Weidmer, Morales & Hays, 2001) this research succeeded in developing an adapted translated version of the ATPI suitable for application in Jordanian culture. Thus, it is possible to apply this measure to cultures similar to the Jordanian culture in the Middle East.

The pilot study also sought to provide information that would be of value to Jordanian healthcare professionals by assessing the quality of care given to Iraqi

refugees in Jordan by using the SERVQUAL measure. The ATPI and the quality of health service measures achieved the same goal but from different perspectives. The findings using both measures yielded approximately the same results.

Researchers such as Cohen and Bailey (1997); Gladstein (1984); Guzzo and Shea (1992); and Hackman (1987) based their studies on the IPO model for measuring team effectiveness and tried to reveal which team inputs could predict team processes which in turn predict team outputs. Similarly, this research adopted the ATPI measure which is based on the IPO model. The ATPI allows us to test how team inputs predict team processes; how leadership predicts processes; how leadership predicts team outputs; how processes predict team outputs, and whether the processes mediate the relationships between team inputs and outputs. To our knowledge, this is the first application and testing of all the principal IPO variables simultaneously to determine which aspects of healthcare team inputs and processes predict team outputs and whether the relationships between team inputs and outputs are mediated by processes. The following section describes the main findings.

Findings showed that all team inputs do indeed predict team processes and that team effort and skills had the strongest association with team processes variables. Team effort and skills include team members' traits and motivation as well as the appropriate skills they have acquired for the task. It was found that when teams reportedly possessed the necessary skills and efforts they were more likely to work in an integrated and effective manner.

Team efforts and skills provided the team with clearer goals and when they were combined they were associated with clearly articulated team objectives. Team efforts and skills also associated with a sense of trust, shared vision and clear goals among

team members and with team reflexivity. They were associated with team participation and task focus. A highly motivated team is confident to try out new ideas and to find innovative solutions when faced by problems. When teams possess the proper skills and put in sufficient efforts then it is likely that a low level of interpersonal conflict occurs and teams become better at handling and effectively resolving challenges leading to conflicts. Consistent with this, the results showed an association with low levels of team conflict.

Findings also showed that team inputs predicted team effectiveness and innovation and that among team inputs variables, team effort and skills had the strongest association with team effectiveness and innovation. This probably reflects the fact that team effectiveness is dependent on the level of effort exerted by team members and the amount of knowledge and skills they can apply to the task. Skilled teams are also not reluctant in trying out new innovative ideas to improve their effectiveness.

Likewise, all leadership variables (leading, managing and coaching) were found to have an association with team processes and that leader managing had the strongest association with team objectives. Leaders' ability was important in influencing team members, and encouraging them to be innovative and creative which in turn affected their level of performance. Leadership is crucial in clarifying team objectives and encouraging the development of creative ways to achieve team's objectives.

The results also showed that leader managing had the strongest association with team effectiveness and innovation because when leaders set clear goals they foster a positive climate for innovation. Out of team processes variables, team task

focus which is considered one of the key indicators of team success and which reflects directly on the level of team innovation had the strongest association with team effectiveness and was associated with a higher level of team effort and effectiveness.

As to the role of team processes in mediating the relationship between team inputs and outputs, it was found that the team objectives variable had the strongest mediating association between team inputs and team effectiveness whilst team task focus had the strongest mediating association between team inputs and team innovation. This is simply because team objectives define the role of team members, how their tasks should be performed and the necessary interactions between them to achieve the expected outputs.

Lastly, with regard to the role of leadership as a mediating variable between team inputs and outputs, the results showed that leader managing had the strongest mediating effect among leadership variables between team inputs and team effectiveness and innovation. Effective leadership contributes to defining and clarifying team objectives to team members thus motivating them to be creative and innovative in order to find fresh ideas and new ways in which to perform their tasks, and thus develop and improve the performance of the team as a whole.

In conclusion, these findings support the IPO model which was measured by the ATPI. It showed that team outputs in terms of effectiveness and innovation are influenced by multiple factors that must all be taken into account. Managers need to ensure that key factors such as team effort and skills, team objectives and leader managing are in place in order to achieve effective teams. The implications of these

findings for healthcare teams in Jordan will help to improve team effectiveness which as a result will improve the healthcare services that they provide.

10.3 Theoretical Implications of all the Findings

Teamwork effectiveness studies are important due to the increased usage of teams in organizations as a result of a fast moving and a competitive global environment. Research has shown that teams increase the efficiency of organisations which would then lead to improvements in both performance and productivity, as well as reduced costs, increasing innovation, employee satisfaction and greater flexibility within the organization (McComb et al., 1999; Cohen et al., 1996; Mohrman et al., 1995; Austin, 2003 and Leggat, 2007).

Research into teams in healthcare systems is significant as teams are widespread in this profession and therefore their effective functioning is essential for the provision of good healthcare. This research is particularly important as it focuses on the effectiveness of teamwork in hospitals in Jordan, a topic which has not previously been researched, and it aims to assess which factors predict team effectiveness in healthcare teams in hospitals in Amman? In order to achieve this aim, this research offered predictions about the relationships between inputs, processes and outputs and whether processes and leadership mediate relationships between inputs and outputs. The following section discusses the findings.

A series of hypotheses was proposed to test the relationship between team inputs and team processes. Research findings supported the first five hypotheses 1a to 1e which proposed the role of task design in predicting team objectives, reflexivity,

participation, task focus and creativity and innovation. This prediction was made because task design is essential for teams. Campion, Medsker and Higgs (1993) considered task design to be one of the key team work characteristics contributing towards team productivity and satisfaction among team members and found that task design had the strongest association with team processes.

As for the relationship between task design and team objectives, Hackman and Oldham (1980) demonstrated that there should be a clear design for the team task which leads directly to the objectives that the team seeks to achieve. They also confirmed that in the absence of a direct relationship between task design and team objectives the teams would be ineffective. Task design also determines the responsibility shared by each member of the team and therefore their sub goals.

Team reflexivity promotes reflection on team functioning and determines the degree of team responsiveness to its environment, as demonstrated by Widmer, Schnippers and West (2009). It was also found in this research reported in this thesis that task design which is based on clear objectives and specific tasks is associated with higher levels of reflexivity which in turn enhances team effectiveness (Tjosvold et al, 2004; Schippers, 2008). When task design is good and there is relatively high autonomy, the team will be motivated to reflect on how they can adapt to a changing environment. This is because they have the freedom to adapt to such changes.

As for the relationship between task design and team participation task design determines the integration of team members' tasks and the interdependence between them. Task design creates a team structure among team members and provides them with an opportunity for mutual action in terms of coordinating and exchanging information relevant to the tasks they are doing (Kozlowski & Bell, 2003). This in turn

leads to interaction and the development of social relations between team members (Morgan, Salas, & Glickman, 2001). Hackman and Morris (1975) pointed out that team participation depends on interaction between team members which is the result of carefully designing the task to enable them to work as a team to accomplish it (See also Lemieux-Charles & McGuire, (2006); Benson & Rice, (2009)).

There was a significant relationship between task design and team task focus. This result highlights the fact that if the task design is clear, team focus will likely follow because team members are clear about what it is they are required to do and how to go about this. The nature of the task determines the team's ability to focus (West et al., 2004); where the task is clear, team members will have stronger task focus.

The research showed the relationship between task design and team creativity and innovation. This stems from the fact that good task design leads to high levels of interdependence, participation, and clarity of goals which together constitute the requirements for creativity (Guzzo & Shea, 1992; Pearce & Ensley, 2004).

The results of this study also supported hypotheses 1f to 1k which tested whether team effort and skills predicted team objectives, reflexivity, participation, task focus, team conflict and creativity and innovation. Findings showed that team effort and skills among team input variables had the strongest association with team processes variables. These findings reflect the fact that team effort and skills are fundamental to effective team functioning. Where team members are motivated and have the skills to perform their roles, clarifying objectives, influencing decisions, reflecting on performance, generating ideas for new and improved ways of doing the team task and managing conflict effectively are all much more likely to occur. This

result is in line with what Bell (2007) found in his analysis of 89 different sources which showed that team effort and skills influence team processes variables.

There was a significant relationship between team effort and skills and team objectives. This could be interpreted by the fact that if teams possess the right effort and have the skills required for them, they are more likely to work in an integrated and effective manner. West et al., (2004) confirmed that team effort and skills have an impact on implementing the common goals of a team and team members' effort and skills must be combined in order to achieve team objectives.

Team effort and skills also influence reflexivity through creating a sense of trust, shared vision and clear goals among team members (Widmer et al, 2009; Tjosvold et al., 2004). They also influence team participation through high motivation of team members, building their self confidence and encouraging them to work as a team (Guzzo & Shea, 1987). Castka, Baber, Sharp and Belohoubek (2001) found that team efforts and skills also influence task focus through putting an emphasis on achieving the team task and encouraging team member to do that. They also found that possessing the proper skills and putting in sufficient efforts resulted in a low level of interpersonal conflict and assisted teams in handling and effectively resolving challenges leading to conflicts which otherwise would be higher because of diverse attitudes, needs, expectations, and resources (Van Vianen and De Dreu, 2001).

Finally, team efforts and skills influence creativity and innovation through providing ideas and innovative solutions when challenged by problems based on team members' knowledge and experience, their willingness to implement innovative solutions and to be ready to bear the consequences of their decisions (Torrance, 1998; Kazanjian, Drazin, and Glynn, 2000).

The results of study 3 also supported hypotheses 1l to 1n which it was proposed that organizational support would predict team reflexivity, participation and team conflict. Team members may be motivated to accomplish their tasks through the support they receive from their organization, whether in the form of resources, information, technical or practical assistance (Fedor, Ghosh, Caldwell, Maurer and Singhal, 2003; Xyrichis & Lowton, 2008; Oandasan et al., 2006). Organizational support is a sign of the organization's commitment to the team which, through psychological contract process, may lead to higher levels of team member commitment and motivation (Guest & Conway, 2004)

The relationship between organizational support and team reflexivity may reflect the support which the team receives from management such as training, continuous information, feedback and education. This information raises team members' awareness of their organizational context and encourages reflection through this informational stimulation. Awareness of context is likely to lead to higher levels of reflexivity.

There was a significant relationship between organizational support and participation, consistent with the findings of Hackman and Morris (1975), who found a link between organizational support and team member participation. Information and communication from the organization will encourage and enable team members to discuss objectives, strategies, policies as well as alleviating stress points between members. Indeed, Ingram and Desombre (1999) amongst others have emphasized the extent to which effective communication and information from the organization will make team members' decision making more effective. One key example of this would be fundamental changes in policy or strategy. Training for team working will teach

members to share information and contribute their ideas to decision making. And a climate for team working will explicitly encourage team members to interact, share information and participate in their teams. These supports must be provided by the organization in order to ensure effective team participation.

There was a significant relationship between organizational support and team conflict such that high support was associated with low conflict. The ATPI operationalises organizational support as training for team working, technical and material resources. Training for team working is likely to include conflict management in teams so this finding in respect to the relationship between the two variables makes theoretical and practical sense.

Finally, the last two hypotheses will be addressed, which proposed that availability of resources will be associated with low levels of conflict (H1o), high levels of creativity and innovation (H1p). The results of this study supported the first hypothesis whereas it did not support the second. Availability of resources is likely to increase team members' sense of control and efficacy in their team work and hence create a more positive and benign team environment. Where organisations fail to provide teams with sufficient resources, then tensions in teams may be exacerbated and conflicts will result. With regard to the relationship of resources to low conflict, this result could be explained by the fact that limited resources available to team members could lead to a conflict if these resources are needed to carry out their work.

The assumption about the relationship between the role of resources in predicting team creativity and innovation were not supported by the results of this research. Indeed there is some research suggesting that resource limitations may

have a positive effect on creativity and innovation (Nohria and Gulati, 1997). Necessity is sometimes invoked as the mother of invention and so scarce resources might be an inhibitor of innovation in one context and a stimulant in another. Clearly there is a need for more theorizing and research in this area.

Six hypotheses, 2a to 2f, were proposed concerning the relationships between team processes and team outputs. The results varied in level of support for these hypotheses, since they tested the relationship between each dimension of team processes (objectives, reflexivity, participation, task focus, team conflict and creativity and innovation) and team outputs in terms of effectiveness and innovation. Theoretically, the important question is how processes lead to particular outputs because team processes are the activities that describe the myriad interactions of the team as they seek to achieve their objectives (Marks et al., 2001). They are the mechanisms by which it is possible to convert inputs into outputs (Campion, Papper, & Medsker, 1996; Cohen, Ledford, & Spreitzer, 1996; Hyatt & Ruddy, 1997).

The results supported the first part of hypothesis 2a which predicted a relationship between team objectives and effectiveness. However, the predicted relationship to innovation was not supported. Weldon and Weingart (1993) have shown the importance of goal setting in predicting outputs. Castka et al. (2001) have indicated that team members who are focused on achieving the objectives are more effective than those who are not. Research studies have shown the importance of team participation in setting goals because it gives them greater motivation to achieve them. Other studies have found a relationship between team objectives and innovation but it may be that in a medical context teams are not so encouraged to develop new and improved ways of doing things, being more focused on following

protocols and ensuring safe practice. There is a need to undertake research to discover in what contexts clarity of team objectives predicts team innovation.

The results of this research also failed to support hypothesis 2b which tested the relationship between team reflexivity and effectiveness and innovation. Many previous studies have shown such relationships and therefore this finding is somewhat unusual. It may be that in the Jordanian cultural context, reflexivity is discouraged since it is a more hierarchical context than in some Western cultures.

Hypothesis 2C proposed a relationship between team participation and effectiveness and innovation. The results supported the first part of the hypothesis, i.e. the relationship between team participation and effectiveness. However, there was no support for a relationship with innovation. It is possible to account for the first result by the fact that participation in decision-making is important as it predicts team effectiveness. It is through participation in decision-making processes that work-related social interaction occurs amongst team members; this exchange of views and transfer of experience leads to better decision making and therefore influences team effectiveness (Hackman & Morris, 1975). Again, a relationship between team participation and innovation has been reported in many studies so it may be that in a more hierarchical cultural context and in medical settings where participation in decision making and innovation are not encouraged, relationships with innovation are less likely to manifest. It could also be argued that the areas of problem-solving which were addressed were routine ones which did not encourage creative input or ideas on the part of team members.

The results of this research supported hypothesis 2d which proposed a relationship between task focus and effectiveness and innovation. Results also

showed that of team processes variables, team task focus had the strongest association with team effectiveness. This result reinforces the conclusions reached by a number of researchers (Forrester & Tashchian, 2006 and Morgensen et al, 2005) who focused on the role of the task in the success of the team. Task focus means that team members should invest their effort into focusing on their tasks. In order to ensure that task focus is maximized, team members must concentrate on four key aspects which will lead to a positive outcome in terms of effectiveness and innovation. Firstly, they must be customer-focused; here the outcome will be positive since the team will be delivering good products and services which increasingly meet customer requirements. Secondly, they must be focused upon quality; if team members are wholly committed to doing an excellent job and providing a good quality service this will lead to a positive outcome. Thirdly, constructive debate about team performance, by raising different perspectives and points of view, will lead to effectiveness and innovation. The fourth and last key aspect is error management. Discussion on how to learn from mistakes will again lead to a positive outcome, since team members are encouraged to evaluate their tasks.

The results did not support hypothesis 2e since there was no significant relationship between team conflict and effectiveness and innovation. Again, it may be that in a relatively hierarchical culture, the impact of conflict on performance in teams is minimized. This would be a useful area to explore in future cross cultural research. The results also failed to support hypothesis 2f, which predicted a relationship between team creativity and innovation and between effectiveness and innovation. It may be that the nature of the task inhibited creativity and innovation since many of the teams were involved in delivering routine medical procedures.

In order to test the relationship between leadership and team processes, six hypotheses, 3a to 3f, were proposed and the results supported all of them. These hypotheses tested the relationship between leadership and between each variable of team processes. Leader managing had the strongest relationships with team processes variables. Tannenbaum, Salas and Cannon-Bowers, (1996) showed the importance of this relationship especially as it defines the scope of authority and responsibility to manage the team. It can also reflect the ability of leaders to influence team processes in order to achieve the expected standards of performance. Researchers have been particularly interested in studying team leadership and its pivotal role in achieving the required outputs by controlling the functions of the team (Solansky, 2008; West et al., 2003). The results of the study reported here reinforce the importance of that line of enquiry.

Taking first the finding of the significant relationship between leadership and team objectives, this result could be explained because the role of team leaders is to ensure that team objectives correspond with the objectives of the organization (Antoni, 2005). Team leaders coordinate the efforts of team members not only to help achieve team objectives but also to promote development and continuous improvement in members' performance. Hence the team is more likely to achieve the expected outputs in the presence of effective management which contributes to planning, directing, organizing and controlling the performance of members.

There was a significant relationship between leadership and team reflexivity, West and Anderson, (1996) confirmed that clear leadership of the team can foster a high level of commitment among members and motivate them towards achieving the goals to which they are pledged. Such motivation is likely to increase levels of

reflexivity as teams strive to achieve their goals. Leadership affects the reflexivity through encouraging the team to think about their strategies and processes and ways to stimulate communication (Hirst, Mann, Bain, Pirola-Merlo, and Richter, 2004)

The significant relationship between leadership and participation, could be interpreted by the fact that good team leadership of team members, by definition, directs and motivates them to participate in the decision-making process. As a result, there is an increase in the sharing of information required for decision-making and the level of interaction increases, in turn contributing to effective decisions being reached.

There was a significant relationship too between leadership and team task focus which includes customer focus, commitment to quality, error management and constructive debate about task performance, Good team leadership will clearly include directing team members' attention to customer needs, learning from errors, and focusing on high quality performance. Engaging with these issues is likely to promote debate about the best ways of achieving customer satisfaction and high quality as well as how to minimize errors (Morgensen et al. 2005).

Higher scores on the leadership dimensions also predicted lower levels of team conflict. Schermerhorn, Jr., Hunt, and Osborn, (2002) argued that leaders must deal with the conflict between members in a positive way. They should work to manage the conflict so that they can provide the best solutions and direct or manage it in a constructive manner in order to reach the team objectives. Where team members are clear about roles and objectives and feel valued respected and supported, there are likely to be fewer conflicts than if they experience role ambiguity and lack of support within their teams.

Similarly there was a positive relationship between leadership and team creativity and innovation. Leaders seek to clarify the team objectives and support members to achieve them by fostering an appropriate environment in which they are encouraged to offer new ideas and suggestions. This supports the arguments of Thacker (1997), who clarified that team members could collectively generate ideas that could not come from one individual; this is due to the leader's role in creating a supportive climate for innovation (West, 1990). This also supports the findings of Flood et al. (2000), which clarified that if the team leaders' style is authoritarian this would be reflected by the nature of the relationship between the leader and members; as a result team creativity and participation in decision-making will be low.

With regard to testing the relationship between team leadership and outputs, two hypotheses 4a to 4b were proposed. The results of this research supported these hypotheses. Among the leadership variables, leader managing had the strongest relationship with team effectiveness and innovation. This could be explained by the fact that management skills are the cornerstone of the success not only of the team leaders in their roles, but of all team members in their roles too. Clarifying the team objectives, organizing and coordinating the efforts of team members, measuring their performance levels and outlining the deviations from what is expected all contribute directly to determining team outputs. In addition, team innovation depends directly on team management. Clarifying objectives and identifying the roles of each team member forces them to commit to what s/he must do. It also sets clear reliable criteria through which team members can be guided. Antoni (2005) found that management by objective systems can be a highly effective strategic measure for improving team effectiveness. Leadership is also important in order to coordinate the efforts of the

team and overcome the obstacles they face in achieving their objectives effectively and to create the appropriate environment for creativity at the team level, as claimed by Ahearn et al. (2004). Good team leadership will encourage all team members to contribute to the decision making process, thereby increasing levels of team innovation.

Finally, with regard to testing the relationship between team inputs and outputs, six hypotheses, 5a to 5f, were proposed and the results supported these hypotheses, consistent with previous research (Cohen & Bailey, 1997; Gladstein, 1984; Hackman, 1987; Tannenbaum, Beard, & Salas, 1992; West, Borrill, & Unsworth, 1998). This can be attributed to the fact that team outputs are self evidently dependent on team inputs in terms of the effort made by the team, skills and knowledge that they possess, the support they receive from their organization and the availability of adequate resources to accomplish their tasks (Hackman, Brousseau and Weiss, 1976; Salas et al., 1992; Hackman, Wageman, Ruddy, and Ray, 2000).

In terms of the relationship between team task design and team effectiveness and innovation, this result can be interpreted by close reference to the five characteristics (motivating task, autonomy, task variety, task significance and identity) developed in Hackman's model and this shows their importance in achieving team effectiveness.(Hackman,1990; Hackman & Lawler,1971 and Hackman & Oldham,1975).This result is consistent with what Campion and colleagues (1996) found, namely that good task design contributes to increased team effectiveness.

The significant relationship demonstrated between team effort and skills and team effectiveness and innovation will now be addressed. Team effort and skills had the strongest association with team outputs. This result makes sense because if team

members do not possess the skills required to accomplish their tasks and do not make sufficient efforts to perform their work, they will certainly not be able to carry out their tasks effectively. Furthermore, they will not be able to achieve their objectives, nor will they be able to provide new innovative ideas if they do not achieve the anticipated levels of performance. West et al. (2004) clarified that the presence of sufficient level of team effort and the availability of appropriate skills contribute to and creates a path to innovation at the team level. Campion et al., (1994); Guzzo & Dickson, (1996); and Bell, (2007) confirm that effective teams have high levels of team member skills.

In respect of the finding of significant relationship between organizational support and team effectiveness and innovation, this finding can be understood by considering the nature of the support offered, which includes the provision of information and communication and training and a good climate for team working. By its structured and directed nature it will lead to higher levels of effectiveness and innovation. Since teams are embedded within an organizational context, they cannot operate without the support of the organization which they are therefore dependent on. This reinforces the findings of Kennedy et al (2009) that providing organizational support for teamwork is important in enhancing team effectiveness.

Organizational support could be provided in two ways, first by ensuring the availability of the Information needed to perform tasks; the second is through training, particularly with regard to decision-making, which in turn achieves good levels of creativity and offers new ideas and solutions (Stocks and Harrell, 1995). In their study of maternal nurses in Armenia, Fort and Voltero (2004) found that organizational support factors were the most influential for team performance.

With regard to the relationship between team resources and their effectiveness and innovation, having enough team members, and providing the necessary financial, technological and material resources will clearly be essential to team effectiveness and innovation. In relation to innovation, the notion of some slack in resources has been referred to in previous research as a key factor in facilitating organizational innovation. The same may well be true in teams, but there is little research to address this issue.

In terms of the leadership as a mediating variable between team inputs and outputs, the leadership is working to manage team inputs in order to achieve specific and desirable outputs and, at the same time, achieve an accepted level of performance through allowing the team to provide innovative ideas. A key role for leadership is to ensure that team inputs are associated with achieving the required outputs (Borrill & West, 2005).

Finally, with regard to the relationship between team inputs and outputs mediated by processes, this relationship represents the foundation for the mechanism of teamwork. The processes convert inputs into outputs, so team process play a crucial role in mediating between team inputs and outputs. The level of required processes will necessarily affect the success of the outcome.

After analyzing all of the results of the findings of the hypotheses it is worthwhile to reflect upon the inherent value of the Input Processes Output model as a conceptualization of team working. The IPO model views the team as a system that has inputs, processes and outputs; inputs, therefore, such as task design, team effort and skills and organization and support combine to affect team processes, which in turn influence team outputs. The IPO model structures variables in a coherent order

and allows the testing of the direct and indirect relationships between the inputs, processes and outputs. The model has been found to be a good guide for evaluating team functioning and effectiveness quantitatively. In practice, it enables conclusions to be drawn about the functioning of teams and provides ways to develop their work. The ATPI provided a practical tool to assess the study variables in a comprehensive manner. Use of the measure enabled the assessment of team functioning and also indicated which factors had the strongest association in predicting team effectiveness. In addition, the research demonstrated that the ATPI measure is not only a comprehensive measure but is also applicable across cultures (UK and Jordan).

10.4 Limitations

There are some limitations to this study which should be noted. To start with this research did not use a repeated measure design as team functioning and effectiveness were not measured at intervals to help establish causality. This type of design would help to reveal the most powerful variables predicting team effectiveness and innovation over time.

Although there was a time difference between the stages at which the two measures of the third study were applied, which is a strength of the study, this is also a potential limitation. The ATPI was applied to teams to measure their functions at one point in time and after three months the LR was applied to measure team effectiveness. It may be that the functioning of teams when the first measure was applied would be different from when the second measure was applied. Also the conditions under which the first measure and the second measure were applied might

not necessarily be the same so the strength of any association might not reflect the reality because of the effects of other variables unmeasured at the first time point.

The subjectivity of the ATPI and LR measures presents another limitation in the study. The first ATPI measure assesses team functioning based on team members' points of view. Usually each team comprises three or more members which offer a somewhat high level of objectivity as the team functions are estimated through several opinions and hence bias would be minimized. The second, the LR measure, assesses team effectiveness from the leaders' points of view. In this case only one person has to judge their team and then the possibility of being either negatively or positively biased toward their team could not be ruled out. Hence this measure might not be as objective as desirable in assessing team effectiveness. In other words it might yield a false measure of team effectiveness. Future studies might use more objective measures of health care team performance such as patient outcomes. However, we would need to have a homogeneous sample of health care teams to achieve this since the patient outcome data would have to be standardized.

Lastly, another limitation of this research is the population sample to which all three studies were applied. The studies were applied to healthcare teams so the results would only be associated with healthcare teams and we would not be able to apply the results on teams in other sectors such as industrial, service or decision-making sectors. At the same time we cannot rule out their validity to other teams after presenting the required evidence for that. Moreover the third study was not only applied to healthcare teams but also to healthcare teams in a specific setting i.e. in

Amman/Jordan. This would further restrict the generalization of the research results to healthcare teams in this geographical setting.

10.5 Practical Value

The effort made in this research in providing a range of evidence that the ATPI enjoys good psychometric properties has been successful. This was achieved through factorial and predictive validity, reliability and internal consistency. It is noteworthy that the verification of the psychometric properties has been undertaken in different environments, which suggests the validity and reliability of the measure for more than one culture. Therefore, this research supports the validity of the use of this measure in different environments, and its validity for use with teams, especially the healthcare teams.

This research confirms the value of the ATPI as a measure of the functioning of healthcare teams and therefore as a means for assessing their work. It also offers a practical procedure for improving levels of effectiveness, and identifying which important dimensions have the strongest impact in predicting team effectiveness. This can be achieved by applying the ATPI and then designing interventions in areas of functioning where teams are ineffective.

The results of this research demonstrate that team effort and skills had the strongest association with team processes, leader managing had the strongest association with team processes and outputs and team objectives had the strongest mediated and direct associations with team effectiveness. These discoveries could be of benefit to managers and teams to help them attain the expected levels of effectiveness and innovation particularly in the healthcare sector. The application of

these results in healthcare teams in Jordan will help improve team effectiveness, and thus the healthcare services that they provide. Managers can focus particularly on those factors that the research demonstrates have the strongest associations with outputs.

The initial application of the ATPI measure was in Britain and this research is the first study that has applied this measure in the Middle East, specifically in Jordan. This highlights the possibility of applying the measure to Middle Eastern countries with similar cultures to Jordan. As for the LR measure, this research was also the first which has applied this measure to assess team outputs from the leaders' points of view, which could be regarded as a new perspective through which to measure team effectiveness. It can also be very easily adapted and applied to other Middle Eastern countries.

In conclusion, this research contributes in developing teamwork to achieve desired levels of effectiveness. It provides managers with the tools and mechanisms to enable them to improve the performance of their teams and achieve the expected objectives, especially for healthcare teams. Moreover, this research will encourage the Ministry of Health in Jordan to adopt its findings in order to develop the Ministry's plan to raise staff commitment to the spirit of teamwork. Accordingly it will provide teams with resources and skills which will improve the range of services offered to patients to the highest level. This in turn will positively affect patient care and welfare.

10.6 Future Research

Future studies should use repeated measure designs to assess team functioning at different intervals. This would offer a clearer picture of the direction of causality as well as showing how change in input, process and leadership variables

predicts change in outputs. It is also expected that such research would present a clearer picture of the development of teams over time, by assessing their functioning at different times. Thus newly created teams could be studied, enabling us to understand how input, process and leadership variables influence team performance at different stages of a team's life.

Future studies should also be conducted in order to measure different aspects of team effectiveness, such as team member satisfaction, team attachment, inter-team relationships, and innovation. These can be measured utilizing the ATPI measure, which includes all of these output elements. Other studies could be conducted in different sectors, such as industrial, service and banking sectors. The aim of this would be to try to determine the validity of the ATPI as a first stage and, as a second stage, to measure team functioning. The results of such studies could contribute in developing and improving teamwork.

Comparative studies between teams in different sectors would also be worthwhile in conducting future research. These would reveal the nature of differences or similarities between them, especially in relation to determining the strongest factors in predicting team effectiveness. Lastly, future research could focus on conducting analytical studies which would reveal the deficiencies present in teams and address and remedy these problems. In other words, the focus should be placed on intervention studies in order to determine what kinds of interventions will improve the level of team performance and to direct and motivate teams in achieving desired levels of effectiveness. For health care teams in particular such changes are practically important since they will lead to improvements in patient care.

10.7 Conclusion

This research through its three studies presented sufficient evidence that the ATPI enjoys psychometric properties acceptable in UK and Jordanian settings. This indicates that it is a multicultural measure and can be used in measuring team functioning and, to some extent, team effectiveness. The ATPI and LR measures were successfully applied to the specific context of 36 Jordanian hospitals. This proved that, with careful adaptation, the measures can suit and be relevant to a non UK culture. The results obtained in this research relied on the theoretical basis offered by the IPO model. The ATPI is considered a comprehensive measure, based on the IPO.

Finally this research offers insights into improving and developing teamwork, especially in the health sector. This could be a useful starting point towards the development of team work in organizations in Jordan and perhaps across much of the Middle East.

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Appendix 1

Aston Team Performance Inventory (ATPI) Questionnaire

Dear Team Member

This enclosed questionnaire aims to identify what team inputs and processes are most powerful in predicting team effectiveness in Hospitals in Amman. It is about how you view your work as a team member in your hospital. If you are working in more than one team, please focus on the team that you spend most time in working in when answering this questionnaire. We are interested in your views about your team.

I would be very grateful if you answer this questionnaire. It will take about 20 minutes to complete. Please note that incomplete questionnaires will be discarded. It is important that you reply to every single question. I very much appreciate the time you will invest in responding to this questionnaire.

Please, answer all questions as openly and honestly as possible, in your own time, independently, and without consulting with your peers. It is vital that participants commit to answering all questions. However should anyone refrain from filling out the questionnaire for any reason whatsoever, it certainly remains within their right to do so since participation is entirely on voluntary basis.

In the mean time I would like to assure you that all the information you give will be treated with confidentiality. At the end of the data collection, each team will be provided with helpful information and feedback about their team's functioning and the research could be used by the teams to change their working methods.

Please note that the research is being conducted solely for the purposes of doctoral research and publications may result.

There is a short biographical section towards the end of the questionnaire. This is used to enable us to compare the views of different groups of people across large numbers of teams in many organizations.

Should you have any queries regarding the completion of the questionnaire, I will be available for the duration of the study, contactable on: office mobile 0795512379, by e-mail at: jrcts@cyberia.jo or by appointment should the need arise for face to face meetings.

You are kindly requested to have the questionnaire completed within two weeks and I will come back to collect it.

Thank you for your kind cooperation.

Sincerely,
Taghrid Suifan
Doctoral researcher

Please mark the suitable answer by (X)

Section 1: The questions in this section aim to give us a broad view of the type of team in which you work.

1. How many teams do you work in?

1 2 3 4 5 More than 5

2. What is your main team's overall task or purpose?

3. For how long has the team been formed? _____ Years _____ Months

4. Is the team temporary or permanent/ ongoing? Temporary Ongoing

5. Does your team have clear objectives? Yes No

6. Do you have to work closely with other team members to achieve these team objectives? Yes No

7. Does the team meet regularly to discuss its effectiveness? Yes No

8. How many people are there in your team (the core members)?

3-5
6-9
10-15
More than 15

9. Does your team have a clear leader? Yes No

10. Is there conflict over leadership in your team? Yes No

Section 2:

Team Inputs: The following statements describe certain features and characteristics that may be present in a work team					
	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Neither agree nor disagree</i>	<i>Agree</i>	<i>Strongly Agree</i>
1. Every team member puts in sufficient effort to get the job done	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Members of my team have to communicate closely with each other to get the job done	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. People in this hospital are enthusiastic about the idea of working in teams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. It is 'everyone for themselves' in this hospital	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Our team members have the right skills needed to do the team's work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. The team has about the right number of people to do the task well	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. The team is given the financial, technical and material resources it needs to achieve its objectives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. The team is kept well informed about any change in hospital policy and the reasons behind such changes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. In this team we set our own goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. We have a lot of freedom in how to do the team's work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. This hospital strongly believes in the importance of training for team working	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. All team members are strongly motivated to perform well	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. We have to coordinate our work tightly in this team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Team working is seen in this hospital as a gimmick or fad	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. We usually know how well we are achieving the team goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. The team has all the skills we need to do the team's task	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. The team is given the resources it needs to do the work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Communication of information to the team by the hospital is excellent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. The team does not get the information it needs from the hospital so it can plan its work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. We decide as a team who will do what in the team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. As a team, we believe in our ability to perform the team's task well	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

22. Team members are strongly encouraged to develop their team working skills in this hospital	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Neither agree nor disagree</i>	<i>Agree</i>	<i>Strongly Agree</i>
23. Everyone in the team works hard to achieve the team goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. The team task cannot be achieved without the contribution of every team member	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. There is a genuine spirit of co-operation in this hospital	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. The team gets clear feedback on its performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. The team has the right mix of people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. The team is given a task to perform but not the material resources it needs to do the job	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. Enough effort is made by the hospital to understand the opinions and thinking of our team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. The team's task is important for the hospital's success	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. We are free to decide how to carry out the team's task	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. Team members believe we can achieve the team goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. This hospital only gives people the minimum training needed to work in a team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. The team has a complete and challenging task to perform	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Team Processes: The following statements describe ways in which the team may be Working					
	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Neither agree nor disagree</i>	<i>Agree</i>	<i>Strongly Agree</i>
35. We have strong disagreements about how to perform the team's task	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. The methods used by the team to get the job done are often discussed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. The team often reviews its objectives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. Team members are generally warm and supportive to each other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39. Heated debates about how to do our work in the team are rare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. We regularly discuss whether the team is working effectively together	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. Patient / client needs come first in this team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42. We know we can rely on one another in this team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43. Team members sometimes have unpleasant or heated conflicts with each other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

44. We have lively debates about how best to do the work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Neither agree nor disagree</i>	<i>Agree</i>	<i>Strongly Agree</i>
45. People in the team are quick to offer help to try out new ways of doing things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46. Everyone in the team contributes to decision making	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47. There is often conflict over how best the team can achieve its objectives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48. How well we communicate information is often discussed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49. We make patients / clients the top priority in this team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50. There is a feeling of trust and safety in this team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51. There is little interpersonal conflict in this team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52. There is a climate of constructive debate in this team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
53. In this team we seek out and support ideas for new products / services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
54. We all influence the final decisions made in the team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
55. In this team we know what we are trying to achieve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
56. We are careful to keep each other informed about work issues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
57. We are committed to doing an excellent job in this team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
58. We support each other 's ideas for new and improved ways of doing the team's work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
59. We agree in the team about what are our team objectives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
60. We meet together frequently to ensure effective communication and co-operation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
61. Team members are committed to achieving the team's objectives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
62. We constructively discuss errors and mistakes in the team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Leadership Processes: The following section asks about the leadership of your team					
The leader of my team...	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Neither agree nor disagree</i>	<i>Agree</i>	<i>Strongly Agree</i>
63. ...ensures we have all the resources we need to do the team's work effectively.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

64. ...helps the team organize and coordinate work activities to avoid delays, duplication of effort and wasted resources.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Neither agree nor disagree</i>	<i>Agree</i>	<i>Strongly Agree</i>
65. ...encourages the team to look at problems from a different perspective.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
66. ...checks the team's work progress against plans to see if it is on target.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
67. ...encourages us to work cooperatively with other teams and departments.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
68. ...helps the team with acquiring the resources that are needed to carry out its work.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
69. ...ensures that all team members can contribute their knowledge and expertise to the decisions made by the team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
70. ...encourages the team to learn from mistakes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
71. ...checks on the quality of the work carried out by the team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
72. ...encourages the team to work collaboratively with other teams.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
73. ...makes clear to the team what results are required.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
74. ...recognises good performance or extra effort made by team members.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
75. ...is available to team members to discuss a problem or particular issue.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
76. ...supports team members' ideas for new and improved ways of doing things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
77. ...treats each team member as an individual with different needs, abilities and aspirations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
78. ...presents feedback to the team in a helpful manner and helps them to develop a workable plan for improvement.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
79. ...provides encouragement and support when the team has a difficult or stressful task.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Team Outputs: The following statements describe certain features and characteristics that can be present in teams and certain views that team members hold					
	<i>Strongly disagree</i>	<i>Disagree</i>	<i>Neither agree nor disagree</i>	<i>Agree</i>	<i>Strongly Agree</i>
80. Managers often praise the quality of our work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
81. I would be sad if I had to leave this team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
82. I would like to keep working in this team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
83. We develop new and improved ways of working	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
84. We find new ways of meeting patient/client needs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
85. We never have disagreements with members of other teams or departments about tasks or projects we are working on	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
86. We rarely have conflicts with other teams or departments about who should do what when we work with them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
87. We work closely with other teams and departments in the hospital	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
88. The team is often told by others that it is performing well	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
89. I have a strong attachment to my colleagues in this team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
90. I am satisfied with the recognition I receive from team colleagues for my contribution to the team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
91. We develop new products or services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
92. We develop innovative ways of accomplishing targets and objectives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
93. There is no friction between our team and other teams or departments in the hospital	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
94. I am satisfied with the amount of responsibility I am given in the team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
95. There is a high level of co-operation and trust between our team and other teams and departments in the hospital	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
96. I am satisfied with the support I receive from team colleagues.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
97. This team consistently achieves or exceeds its goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
98. I am satisfied with the opportunities to discuss work-related problems in an open manner in the team.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
99. I am satisfied with the attention paid to the suggestions I make in the team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
100. I am satisfied with the way in which conflicts are resolved	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 3: Biographical Details

This part of the questionnaire asks for details about you and your work. This information will be used to enable us to compare the views of different groups of people – it will not be used to identify you personally.

1. *My gender is...*

- Female
Male

2. *My age is*

- < 30
30-39
40-49
50-59
60+

3. *My job title is...* _____

4. *I have worked in my present position for...* _____ Years _____ Months

5. *I have worked in this team for...* _____ Years _____ Months

Thank you for taking the time to answer this questionnaire.

Appendix 2

Leader Ratings Questionnaire

NAME OF PRIMARY HEALTH CARE TEAM:

Please circle the appropriate response

A. To what extent does the primary health care team named above carry out the following:

1. Effectively provide patients with information on services available, how to contact a doctor or nurse during normal hours and in an emergency?

Not at all
1 2 3 4 To a great extent
5

2. Effectively implements procedures for dealing with patient comments, suggestions and complaints?

Not at all
1 2 3 4 To a great extent
5

3. Effectively maintains clinical competence in line with current patient needs?

Not at all
1 2 3 4 To a great extent
5

4. Effectively audits the clinical practice of the team?

Not at all
1 2 3 4 To a great extent
5

5. Effectively sets protocols which are agreed and implemented by relevant members of the team?

Not at all
1 2 3 4 To a great extent
5

6. Effective commitment to the personal and professional development of all team members?

Not at all
1 2 3 4 To a great extent
5

7. Team members understand and value the roles and responsibilities of fellow team members?

Not at all				To a great extent
1	2	3	4	5

8. Effectively implement a clear strategy for communication (e.g. regular team meetings; message systems, frequent face to face sharing of information)?

Not at all				To a great extent
1	2	3	4	5

9. Effectively profile health needs and targeted interventions?

Not at all				To a great extent
1	2	3	4	5

10. Effectively review and adjust skill mix in accordance with the identified health care needs of the practice population?

Not at all				To a great extent
1	2	3	4	5

11. Effectively collaborate with other agencies, such as social services?

Not at all				To a great extent
1	2	3	4	5

12. Effectively makes effective use of its budget?

Not at all				To a great extent
1	2	3	4	5

13. Effectively implement the recommendations of the Primary Health Care Charter?

Not at all				To a great extent
1	2	3	4	5

14. Effectively concentrate on the achievement of health outcomes in pursuit of the *Health of the Nation* targets?

Not at all				To a great extent
1	2	3	4	5

B. Compared with other Primary Health Care Teams in your area how innovative do you consider the _____ team to be? Circle the appropriate response to the following task areas:

		Highly stable Few changes introduced		Highly innovative: some changes introduced		Highly innovative; many changes introduced
1.	Setting work targets or objectives.	1	2	3	4	5
2.	Deciding the methods used to achieve objectives/targets.	1	2	3	4	5
3.	Initiating new procedures or information systems.	1	2	3	4	5
4.	Developing innovative ways of accomplishing targets / objectives.	1	2	3	4	5
5.	Initiating changes in the job content and work methods of staff.	1	2	3	4	5

C. Can you give any examples of innovations you know this team has introduced in the last 2 years?

D. How would you rate their overall innovativeness?

Not at all innovative Moderately innovative Highly innovative
1 2 3 4 5

Thank you for taking the time to answer this questionnaire.

Appendix 3

Jordanian Version of Aston Team Performance Inventory (ATPI) Questionnaire

استبانة

الفاضل / الفاضلة عضو الفريق

تهدف الاستبانة المرفقة الى تحديد مدخلات وعمليات الفريق الاكثر قوة في التنبؤ بفعالية الفرق في مستشفيات العاصمة عمان. كما ستبين كيف يرى كل عضو فريق عمله في المستشفى. اذا كنت تعمل في اكثر من فريق، الرجاء التركيز على الفريق الذي تقضي فيه معظم الوقت عند الاجابة على هذه الاستبانة لان التركيز هو على آرائك ونظرتك للفريق الذي تعمل فيه.

يرجى الاجابة على جميع الاسئلة بصراحة وصدق وحسب وقتك، وبشكل مستقل بدون التشاور مع زملائك، ومع ان التزام المشاركين بالاجابة على اسئلة الاستبانة هو من الاهمية بمكان ، لكن الامتناع عن الاجابة لاي سبب كان هو حق لك لان المشاركة في هذه الدراسة قائمة على اساس طوعي ، علما ان الوقت الذي تستغرقه هو في حدود عشرين دقيقة ، وان الاستبانة التي تأتي الاجابات على اسئلتها ناقصة ستستبعد ولن تدخل في التحليل.

في الوقت نفسه ترحو الباحثة ان تؤكد لك ان جميع المعلومات التي ستقدمها ستعامل بسرية تامة وستستخدم فقط لاغراض البحث العلمي للحصول على درجة الدكتوراة.

عند الانتهاء من جمع البيانات سيتم تحليلها وتزويد كل فريق بالمعلومات والتغذية الراجعة عن كيفية اداء عمله.

ولهدف اجراء المقارنات بين الفرق او المجموعات المختلفة بالنسبة لادائها ، يرجى توفير المعلومات الشخصية المطلوبة في الجزء الاخير من الاستبانة.

اذا كان لديك اي تساؤل او استفسار يرجى الاتصال هاتفيا بالباحثة (0795512379) او البريد الالكتروني jrcs@cyberia.jo او بالمقابلة الشخصية.

اشكرك واقدر لك تعاونك الكريم

الباحثة

تغريد صالح سعيفان

الرجاء وضع علامة (X) أمام كل فقرة تراها معبرة عن رأيك:

القسم الاول: تهدف الاسئلة في هذا القسم لاعطائنا رأي واضح عن نوع الفريق الذي تعمل فيه .

1. كم عدد الفرق التي تعمل فيها؟
 1 2 3 4 5 اكثر من 5

2. ما هي المهمة الرئيسية للفريق الذي تعمل فيه؟

3. منذ متى تم تشكيل هذا الفريق؟ _____ سنوات _____ اشهر

4. هل الفريق مؤقت ام دائم مؤقت دائم / مستمر

5. هل اهداف الفريق الذي تعمل فيه واضحة؟ نعم لا

6. هل يتوجب عليك ان تعمل عن قرب مع اعضاء آخرين في الفريق حتى تنجز اهداف فريقك؟
 نعم لا

7. هل يجتمع الفريق بانتظام لمناقشة فعاليته؟ نعم لا

8. كم عدد الافراد الاساسيين في فريقك؟

<input type="checkbox"/>	3 - 5
<input type="checkbox"/>	6 - 9
<input type="checkbox"/>	10 - 15
<input type="checkbox"/>	اكثر من 15

9. هل يوجد قائد محدد للفريق؟ نعم لا

10. هل يوجد نزاع على القيادة في فريقك؟ نعم لا

مدخلات الفريق : تصف العبارات التالية بعض المزايا والخصائص التي يمكن ان تكون موجودة في فرق العمل

موافق بقوة	موافق	محايد	غير موافق	غير موافق بقوة
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

21. نحن نؤمن كفريق بقدرتنا على اداء مهمة الفريق بشكل جيد	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. يتم تشجيع اعضاء الفريق بقوة لتطوير مهارات العمل لديهم كفريق عمل في هذه المستشفى	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. كل عضو في الفريق يعمل بقوة لإنجاز اهدف الفريق	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. لا يمكن انجاز مهمة الفريق بدون مساهمة كل عضو في الفريق	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. هناك روح صداقة من التعاون في هذه المستشفى	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. يحصل الفريق على التغذية الراجعة الواضحة (الاستجابات) على ادائه	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. يضم الفريق الخليط الصحيح من الافراد	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. تحدد للفريق مهمة للقيام بها ولكن لا تتوفر له الموارد اللازمة لانجازها	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. تبذل المستشفى الجهد الكافية لتقهم آراء فريقنا وتفكيره	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. مهمة الفريق هامة لنجاح المستشفى	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. نحن احرار لنقرر كيف ننفذ مهمة الفريق	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. يؤمن اعضاء الفريق باننا قادرون على تحقيق اهدف الفريق	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. تعطي هذه المستشفى للافراد الحد الأدنى فقط من التدريب المطلوب للعمل في فريق	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. لدى الفريق مهمة كبيرة ومثيرة للتحدي	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

عمليات الفريق : تصف العبارات التالية الطرق التي قد يعمل فيها الفريق				
موافق بقوة	موافق	محايد	غير موافق	غير موافق بقوة
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

موافق بقوة	موافق	محايد	غير موافق	غير موافق بقوة	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	52. يسود مناخ بناء من النقاش في هذا الفريق
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	53. نسعى ونقدم الافكار لمنتجات وخدمات جديدة في هذا الفريق
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	54. نحن جميعا نؤثر على القرارات النهائية المتخذة في هذا الفريق
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	55. نعرف ما نحاول ان ننجز في هذا الفريق
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	56. نحن حريصون بان نبقي بعضنا البعض على اطلاع حول قضايا العمل
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	57. نحن ملتزمون بالقيام بعمل ممتاز في هذا الفريق
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	58. ندعم افكار بعضنا البعض بالطرق الجديدة والمطورة للقيام بعمل الفريق
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	59. نتفق في الفريق على اهداف فريقنا
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	60. نجتمع معا باستمرار لضمان الاتصال الفعال والتعاون
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	61. أعضاء الفريق ملتزمون بتحقيق اهداف الفريق
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	62. نناقش الاخطاء والعثرات بشكل بناء في الفريق

عمليات القيادة : العبارات التالية تسأل عن القيادة في فريقكم				
موافق بقوة	موافق	محايد	غير موافق	غير موافق بقوة
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

مخرجات الفريق : تصف العبارات التالية بعض المزايا والخصائص التي يمكن ان تكون موجودة في الفرق وبعض وجهات النظر التي يحملها اعضاء الفريق

موافق بقوة	موافق	محايد	غير موافق	غير موافق بقوة
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

موافق بقوة	موافق	محايد	غير موافق	غير موافق بقوة
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

97. هذا الفريق ينجز أهدافه أو يتجاوزها بانتظام

98. أنا راض عن الفرص الممنوحة لمناقشة المشاكل المتعلقة بالعمل بأسلوب منفتح في الفريق

99. أنا راض عن اهتمام الفريق للاقتراحات التي أقدمها في الفريق

100. أنا راض عن الطريقة التي يتم بها حل النزاعات

القسم الثالث: معلومات شخصية

هذا القسم من الاستبيان يتطلب تفاصيل عنك وعن عملك. ستستخدم هذه المعلومات لتمكننا من المقارنة بين وجهات نظر المجموعات المختلفة من الأفراد - سوف لن تستخدم لتحديد هويتك الشخصية.

<input type="checkbox"/>	أنثى
<input type="checkbox"/>	ذكر

1- النوع الاجتماعي

<input type="checkbox"/>	أقل من 30 سنة
<input type="checkbox"/>	30 - 39 سنة
<input type="checkbox"/>	40 - 49 سنة
<input type="checkbox"/>	50 - 59 سنة
<input type="checkbox"/>	60 فأكثر سنة

2- العمر

3- المسمى الوظيفي هو _____

4- اعمل في موقعي الحالي منذ _____ سنوات _____ اشهر

5- اعمل في هذا الفريق منذ _____ سنوات _____ اشهر

شكرا لإعطائك الوقت للإجابة على هذه الاستبانة

Appendix 4

Jordanian Version of Leader Ratings Questionnaire

اسم الفريق العامل في المستشفى

الرجاء وضع دائرة حول الاجابة الملائمة

أ. الى اي مدى يقوم الفريق المذكور أعلاه بالأعمال التالية:

1. يزود الفريق المرضى بالمعلومات عن الخدمات المتوفرة وعن كيفية الاتصال بالطبيب أو الممرضة خلال ساعات العمل الطبيعية وفي حالات الطوارئ بفاعلية

لا على الاطلاق 1 2 3 4 5 إلى ابعده مدى

2. يطبق الفريق الإجراءات في التعامل مع تعليقات واقتراحات وشكاوى المرضى بفاعلية

لا على الاطلاق 1 2 3 4 5 إلى ابعده مدى

3. يحافظ الفريق على الكفاءة السريرية بما يتفق مع احتياجات المرضى المطلوبة بفاعلية

لا على الاطلاق 1 2 3 4 5 إلى ابعده مدى

4. يقوم الفريق بمراقبة ممارسته السريرية بفاعلية

لا على الاطلاق 1 2 3 4 5 إلى ابعده مدى

5. يضع الفريق الإجراءات الطبية المتفق عليها ويطبقها الاعضاء المعينون في الفريق بفاعلية

لا على الاطلاق 1 2 3 4 5 إلى ابعده مدى

6. هناك التزام فعال للتطوير المهني والشخصي بفاعلية

لا على الاطلاق 1 2 3 4 5 إلى ابعده مدى

7. يفهم ويثمن أعضاء الفريق ادوار جميع أعضاء الفريق ومسؤولياتهم بفاعلية

لا على الاطلاق	1	2	3	4	5
إلى ابعده مدى					

8. يطبق الفريق بفاعلية إستراتيجية واضحة للاتصال (مثلا اجتماعات منتظمة للفريق، انظمة المراسلات، تبادل المعلومات وجها لوجه بشكل متكرر)

لا على الاطلاق	1	2	3	4	5
إلى ابعده مدى					

9. يدون الفريق الاحتياجات الصحية والمداخلات اللازمة بفاعلية

لا على الاطلاق	1	2	3	4	5
إلى ابعده مدى					

10. يراجع الفريق مجموعة المهارات المناسبة ويعدلها وفقا لاحتياجات الرعاية الصحية المحددة للفئة السكانية المستهدفة بفاعلية

لا على الاطلاق	1	2	3	4	5
إلى ابعده مدى					

11. يتعاون الفريق مع المنظمات والمؤسسات الاخرى كالخدمات الاجتماعية بفاعلية

لا على الاطلاق	1	2	3	4	5
إلى ابعده مدى					

12. يقوم الفريق بالاستعمال الفعال لميزانيته بفاعلية

لا على الاطلاق	1	2	3	4	5
إلى ابعده مدى					

13. ينفذ الفريق بنود قانون الصحة العامة بفاعلية

لا على الاطلاق	1	2	3	4	5
إلى ابعده مدى					

14. يركز الفريق على انجاز الاهداف الصحية المطلوبة من اجل الصحة للجميع (التامين الصحي الشامل)

لا على الاطلاق	1	2	3	4	5
إلى ابعده مدى					

بـ. بالمقارنة مع الفرق الأخرى في المستشفيات الأخرى في منطقتك، إلى أي درجة تعتبر الفريق مبدع.
الرجاء وضع دائرة حول الإجابة الملائمة للمهمة في الجدول التالي:

مبدع جدا تغيرات كثيرة ادخلت	مبدع جدا تغيرات قليلة ادخلت	ثابت جدا تغيرات قليلة ادخلت	
4 5	3	1 2	1. عند وضع أهداف أو مهام العمل
4 5	3	1 2	2. عند تقرير الأساليب المستخدمة لإنجاز الأهداف أو المهام
4 5	3	1 2	3. عند المبادرة بإجراءات أو بانظمة معلومات جديدة
4 5	3	1 2	4. عند تطوير طرق مبتكرة لإنجاز المهام أو الأهداف
4 5	3	1 2	5. عند المبادرة بالتغييرات في مضمون وأساليب العمل للموظفين

ج. هل يمكن إعطاء أمثلة قدمها الفريق خلال السنتين الماضيتين في مجال الإبداع؟

د. كيف تصنف (إجمالاً) إبداع هذا الفريق؟

غير مبدع	متوسط الإبداع	مبدع جدا
1 2	3	4 5

شكراً لإعطائك الوقت للإجابة عن هذه الاستبانة

Appendix 5

Comments Made During Cognitive Testing

	Original wordings/items	Suggested text
ATPI Questionnaire		
Q. No. 3,4,8,11,14,18,19,22,25,29,3 0,33,87,93,95 41,49,84	Organization	Hospital / المستشفى
Leader Ratings Questionnaire title	Customer	Patient / المريض
Q. 3	Effectively maintains clinical competence in line with current patient needs	Name of the team working in the hospital اسم الفريق العامل في المستشفى The team keep working effectively with clinical efficiency in line with the needs required by patients Arabic: يحافظ الفريق على الكفاءة السريرية بما يتفق مع احتياجات المرضى المطلوبة بفاعلية
Q. 4	Effectively audits the clinical practice of the team.	The team effectively control its clinical practice Arabic: يقوم الفريق بمراقبة ممارسته السريرية بفاعلية
Q. 5	Effectively sets protocols which are agreed and implemented by relevant members of the team.	The team prepares the medical procedures agreed upon and the members concerned in the team apply it effectively. Arabic: يضع الفريق الاجراءات الطبية المتفق عليها ويطبقها الاعضاء المعنيون في الفريق بفاعلية
Q. 9	Effectively profile health needs and targeted interventions	The team list effectively the health needs and necessary interventions Arabic: بدون الفريق الاحتياجات الصحية والمداخلات اللازمة بفاعلية
Q.10	Effectively review and adjust skill mix in accordance with the identified health care needs of the practice population	The team review effectively the appropriate skills and amend it in accordance with health needs amongst target population Arabic: يراجع الفريق مجموعة المهارات المناسبة ويعدلها وفقاً لاحتياجات الرعاية الصحية المحددة للفئة السكانية المستهدفة بفاعلية
Q. 13	Effectively implement the recommendations of the Primary Health Care Charter	The team effectively implement the items of the Public Health Law ينفذ الفريق بنود قانون الصحة العامة بفاعلية
Q. 14	Original wordings/items Effectively concentrate on the achievement of the health outcomes in pursuit of the Health of the Nation targets.	Suggested text The team focuses on achieving the required health goals of Health for All / Comprehensive Health Insurance. Arabic: يركز الفريق على انجاز الاهداف الصحية المطلوبة من اجل الصحة للجميع / التأمين الصحي الشامل.

Appendix 6

Words that were Presented in a Different from the Original English Version when Translated

Original English	Alternative wording used in the final Arabic version and adopted in the cognitive interviews	Back-translation
ATPI questionnaire		
Do you have to	هل يتوجب عليك /	Obliged
Genuine spirit	Genuine spirit/ روح صادقة	True atmosphere
People	Individuals/ الأفراد	Individuals
Opinions	Opinions/ الآراء	Ideas
Processes	Processes/ عمليات	Operations
Gimmick or fad	Gimmick or fad / خدعة او بدعة	Deception or novelty
Communication of information	Communication of information / اتصال المعلومات	Delivery of information
Adequate effort	Adequate effort / الجهود الكافية	Enough effort
Lively debates	Lively debates/ نقاش مليء بالحيوية	Full of vibrancy
Contributes	Contributes/ يساهم	Participates
Conflict	Conflict/ صراع	Dispute
How well we communicate information is often discussed	How well we communicate information is often discussed كثيرا ما نناقش أفضل الطرق لإيصال المعلومات بشكل جيد	We often discuss the best method to deliver information properly
Trust and safety	Trust and safety/ الثقة والأمان	Confidence and security
Frequently	Frequently/ باستمرار	Regularly
Errors	Errors/ الأخطاء	Faults
Checks the team's work progress against plans to see if it is on target	Checks the team's work progress against plans to see if it is on target/ يدقق تقدم عمل الفريق وفقا للخطة للتأكد من أنها تسير نحو الهدف	Scrutinizes the team work processes according to plans to ensure that the team works to achieve its objectives
Aspirations	Aspirations / تطلعات	Outlook
Recognition	Recognition/ التقدير	Respect and esteem
Friction	Friction/ احتكاك	Relation
Original English	Alternative wording used in the final Arabic version and adopted in the cognitive interviews	Back-translation
Consistently	Consistently / بانتظام	Regularly
I am satisfied with the attention paid to the suggestions I make in the team	I am satisfied with the attention paid to the suggestions I make in the team/ أنا راض عن اهتمام الفريق للاقتراحات التي أقدمها في الفريق	I am satisfied about the team's interest in my proposals
Strongly disagree	Strongly disagree/ غير موافق بشدة	Quite disagree
Neither agree nor disagree	Neither agree nor disagree/ محايد	Neutral
Leader ratings questionnaire		
Sets protocols	Sets standard medical procedures/ يضع الإجراءات الطبية المتفق عليها	Sets standard medical procedures
Profile health needs	Records the medical needs/ يدون الاحتياجات الصحية	Records the medical needs
Not at all	Not at all/ لا على الإطلاق	Absolutely No

Appendix 7

Hospitals and Teams Names in Amman/Jordan

No	Hospital Name	No. of Beds	No. of Teams	Team Names	No. of Team Members With Leaders	No. of Team Members Without Leaders
1	King Hussein Hospital	593	29	Emergency Team (CPR, Trauma, Female/Male)	9	8
				Infection Control Team	7	6
				Outpatient Team	7	6
				Urology Consultancy Team	4	3
				Urology Operating Room Anesthesia Team	8	7
				Urology Operating Room Nursing Team	12	11
				Child Surgery Team	10	9
				Eye, Nose, Throat Surgery Team	6	5
				Obstetrics Surgery Team	6	5
				Castro Enterology Surgery Team	7	6
				General Surgery Team	6	5
				ICU 1 Team 1	8	7
				ICU 1 Team 2	8	7
				ICU 1 Team 3	5	4
				ICU 2 Team 1	9	8
				ICU 2 Team 2	7	6
				Renal Dialysis Team	12	11
				Oenology Team	6	5
				Pediatric Immunology, Allergy Rheumatology and Bone Marrow Transplantation	5	4
				CT Scan Team	6	5
				MRI Team	9	8
				Medical Information and Reporting Team	9	8
				X-Ray Catheterization Team	8	7
				X-Ray for Inpatients Team	4	3
				Nuclear Medicine Team	7	6
				Gynecology and Obstetrics Team	13	12
Post Partum Team	8	7				
Ear, Nose and Throat Team	13	12				
Eye Surgery Team	14	13				
Facial and Maxillary Surgery Team	6	5				
2	Queen Alia Centre for Heart Diseases	176	9	Catheterization Team (1)	4	3
				Catheterization Team (2)	4	3
				Catheterization Team (3)	6	5
				CCU Team	12	11
				ICU 1 Team	15	14
				ICU 2 Team	13	12
				Operating Room Team 1	9	8
				Operating Room Team 2	9	9
				Operating Room Team 3	9	9
3	Farah Centre for Rehabilitation	137	3	Burn Unit Team 1	9	8
				Burn Unit Team 2	11	10
				Operating Room Team 1	7	6
4	Queen Alia	237	13	Emergency Team 1	5	4

No	Hospital Name	No. of Beds	No. of Teams	Team Names	No. of Team Members With Leaders	No. of Team Members Without Leaders
	Military			Emergency Team 2	5	4
				Emergency Team 3	5	4
				Emergency Team 4	5	4
				Renal Dialysis Team	4	3
				Operating Room Team 1	14	13
				Operating Room Team 2	10	10
				Operating Room Team 3	10	10
				Operating Room Team 4	10	10
				Obstetrics Team 1	6	5
				Obstetrics Team 2	7	6
				Physiotherapy Team	4	3
				Laboratory Team	14	13
				Infection Control Team	9	8
				Internal Medicine	6	5
				Urology Team	4	3
Radiology Team	15	14				
5	Jordan University Hospital		33	Surgery Team	14	13
				Urology Surgery Team	5	4
				Infection Control Team	4	3
				Medication Delivery Team	5	4
				Patient's Follow Up Team	7	6
				Audiogram Team	5	4
				Ear, Nose and Throat Team	6	5
				Medical Record Team	7	6
				Blood Bank Team	7	6
				Clinical Examination Team	7	6
				Ophthalmology Team A	6	5
				Ophthalmology Team B	6	5
				Ophthalmology Team C	4	3
				Ophthalmology Team D	4	3
				Diagnostic Radiology Team 1	9	8
				Diagnostic Radiology Team 2	10	9
				Gastro Enterology Surgery Team	6	5
				Hand Surgery Team	4	3
				Quality Control Team	5	4
				Nursing Team	7	6
				Continuous Education Team	8	7
				Orthopedics Surgery Team	11	10
				Pediatric Surgery Team	5	4
				Gastro Enterology Team	10	9
				In Vitro Fertilization Team	6	5
				Anesthesia Team	20	19
				Internal and Chest Medicine Team	7	6
Renal Dialysis Team	6	5				
ICU Team	5	4				
Emergency Team	7	6				
Burn and Plastic Surgery Team	6	5				
Oenology Team	4	3				
Surgical Team 2	6	5				
6	Al-Bashir	928	12	Chest and Blood Vessels Surgery Team	9	8

No	Hospital Name	No. of Beds	No. of Teams	Team Names	No. of Team Members With Leaders	No. of Team Members Without Leaders
	Hospital			Dermatology Team	22	21
				Nuclear Medicine Team 1	14	13
				Nuclear Medicine Team 2	13	13
				Chest Medicine Nursing Team	8	7
				Rehabilitation and Artificial Limbs Team	7	6
				Pediatric Ward Team	12	11
				Pediatric / New Born Team 1	9	9
				Pediatric / New Born Team 2	9	9
				Pediatric / Thalassemia Team	6	6
				Obstetrics and Gynecology Team 1 Blue	6	5
				Obstetrics and Gynaecology Team 2	6	6
				Obstetrics and Gynaecology Team 3	6	6
				Obstetrics and Gynaecology Team 4	6	6
				Anaesthesia Team 1	8	7
				Anaesthesia Team 2	8	8
				Anaesthesia Team 3	8	8
				General Surgical Nursing Team	20	19
				Surgical Emergency Team	21	20
				Internal Medicine Emergency Team 1	10	9
				Internal Medicine Emergency Team 2	9	9
				Internal Medicine Emergency Team 3	9	9
				CPR Team	7	6
				Pediatric Emergency Team	15	14
				Orthopedics Emergency Team 1	8	7
Orthopedics Emergency Team 2	8	8				
Orthopedics Emergency Team 3	8	8				
	Prince Hamza	402	16	Quality Control Team	6	5
				Ward Team (1)	7	6
				Ward Team (2)	7	6
				Ward Team (3)	7	6
				Obstetrics Team 1	7	6
				Obstetrics Team 2	8	7
				Male Team	9	8
				General Surgery Team 1	6	5
				General Surgery Team 2	12	11
				Major Surgery Team	10	9
				Ophthalmology Surgery Team 1	6	5
				Ophthalmology Surgery Team 2	6	5
				Urology Surgery Team	6	5
				Spinal Cord Surgery Team	7	6
				CCU Team	15	14
				Outpatient's Clinic Team	12	11
8	Jordan Hospital	252	9	Maternity Team	7	6
				Obstetrics and Gynecology Team	7	6
				Operating Room Team	8	7
				Emergency Team	7	6
				ICU Team	7	6
				Endoscope Team	6	5
Anaesthesia Team	5	4				

No	Hospital Name	No. of Beds	No. of Teams	Team Names	No. of Team Members With Leaders	No. of Team Members Without Leaders
				Child Team	7	6
				Internal Medicine Team	7	6
9	Al-Islami – Amman	237	10	Emergency Clinics (1) Team	6	5
				Emergency Clinics (2) Team	6	5
				New born Team	10	9
				Renal Dialysis Team	4	3
				Emergency Room Team	9	8
				Endoscope Team	6	5
				ICU Team	8	7
				CCU Team	7	6
				Maternity Team	9	8
				Emergency Room Team 2	6	5
				10	Al-Khaldee	160
ICU Team	6	5				
Central Sterilization Team	4	3				
Medical Team	7	6				
Operating Room Team	5	4				
Surgery and Internal Medicine Team (1)	6	5				
Surgery and Internal Medicine Team (2)	6	5				
CPR Team	4	3				
Infection Control Team	3	2				
11	Al-Takhasosi	150	3	Medical Learning Team	5	4
				Medication Team	6	5
				Emergency Team	5	4
				Infection Control Team	1	1
				Operating Room Team	6	5
	Arab Centre	144	7	Operating Room Team & ICU	12	11
				New Born Team	5	4
				Ward Team (2)	5	4
				Ward Team (3)	5	4
				Ward Team (5)	5	4
				Ward Team (6)	6	5
				In Vitro Fertilization Team	7	6
13	Al-Israa	125	/	/	/	/
14	King Hussein Cancer Center	118	/	/	/	/
15	Al-Estishari	108	14	Endoscope Team	4	3
				ICU Team	5	4
				Ward Team (1)	5	4
				Ward Team (2)	6	5
				New Born Team	5	4
				In Vitro Fertilization Team	4	3
				Maternity Team	4	3
				Emergency Team	6	5
				Operating Room Team	6	5
				CCU Team	6	5
				X-Ray Team	5	4
				Day Case Team	3	2
				Renal Dialysis Team	3	2
				Pharmacy Team	3	2
Laboratory Team	6	5				

No	Hospital Name	No. of Beds	No. of Teams	Team Names	No. of Team Members With Leaders	No. of Team Members Without Leaders
16	Al-Istiqlal	100	3	Nursing Team	13	12
				ICU Team	7	6
				Renal Dialysis Team	8	7
17	Al-Hayat	90	8	ICU Team	8	7
				New Born Team	7	6
				Operating Room Team	7	6
				Renal Dialysis Team	7	6
				Ward Team	7	6
				Emergency Team	7	6
				Maternity Team	7	6
				Infection Control Team	7	6
				Operating Room Team	4	3
18	Al-Mouasah	83	3	Renal Dialysis Team	4	3
				Emergency Team	6	5
				Anaesthesia Team	5	4
19	Ibn Al-Haitham	74	6	Emergency Team	6	5
				Medical Team	8	7
				Nursing Team	5	4
				Maternity Team	7	6
				ICU Team	7	6
				Infection Control Team	4	4
				Operating Room Team	7	6
20	Al-Qudes	70	4	ICU Team	8	7
				Men Nursing Team	8	7
				Woman Nursing Team	6	5
				Emergency Team 1	6	5
21	Amman Al-Jerahey	69	6	New Born and Maternity Ward.	12	11
				Patient Psychology team	8	7
				Emergency Team 2	8	7
				Operating Room Team	7	6
				Patient Assistant	6	5
				Maternity Team	9	8
22	Al-Shaheed Abu Diah	68	6	Female Team	12	11
				Male Team	13	12
				Emergency team	10	9
				Physiotherapy Team	3	2
				ICU Team	5	4
				Operating Room Team	8	7
				New Born Team	6	5
23	Jordan Red Crescent	120	8	Renal Dialysis Team	4	3
				Ward Team (1)	8	7
				Ward Team (3)	6	5
				ICU Team	9	8
				Emergency Team	4	3
				Maternity & Lab Team	8	7
				Operating Room Team	6	5
				New Born Team	5	4
24	Al-Doaly	60	5	Emergency Team	8	7
				Ward Team / Internal Medicine	8	7
				ICU Team	6	5
				Operating Room Team	6	5
				Operating Room Team	6	5

No	Hospital Name	No. of Beds	No. of Teams	Team Names	No. of Team Members With Leaders	No. of Team Members Without Leaders
25	Al-Shmesani	60	4	Infection Control Team	4	3
				Nursing Team	12	11
				ICU Team	7	6
				Health Care Team	10	9
				Operating Room Team	9	8
26	Farah	59	/	/	/	/
27	Lozmelah	58	/	/	/	/
28	Tla'Al-Ali	53	7	Emergency Team	10	9
				X-Ray Team	4	3
				Maternity Team	5	4
				New Born Team	6	5
				Nursing Team	7	6
				Laboratory Team	7	6
				Operating Room Team	6	5
				Child Team	8	7
29	Al-Ahli	50	3	Operating Room Team	6	5
				Nursing Team	11	10
				CCU Team	6	5
30	Al-Italy-Amman	47	5	Emergency Team	8	7
				Operating Room Team	6	5
				Maternity Team	8	7
				Nursing Team	12	11
				External Clinics Team	8	7
31	Falasteen	43	5	Operating Room Team	6	5
				Emergency Team	6	5
				Ward Team (1)	10	9
				Ward Team (2)	5	4
				Infection Control Team	6	5
32	Pheladelphia	31	4	Emergency Team	5	4
				Operating Room Team	5	3
				Cardiopulmonary resuscitation (CPR) Team	5	4
				Laboratory Team	4	3
				ICU Team	5	4
33	Al-Hanan	30	5	Emergency Team	6	5
				Infection Control Team	6	5
				Ward Team	6	5
				ICU Team	7	6
				Operating Room Team	8	7
34	Al-Hamayda	30	5	Maternity Team	6	5
				Ward Team	6	5
				Emergency Team	7	6
				ICU Team	13	12
				New Born Team	4	3
				Operating Room Team	6	5
35	Heba	30	4	Operating Room Team	8	7
				Maternity Team	7	6
				Ward Team	8	7
				Infection Control Team	3	2
				New Born Team	6	5
36	Aqleh	30	5	Maternity Team	12	11
				Operating Room Team	6	5

No	Hospital Name	No. of Beds	No. of Teams	Team Names	No. of Team Members With Leaders	No. of Team Members Without Leaders
				Surgery Team	5	4
				Laboratory Team	3	2
				New Born Team	5	4
37	Al-Amal	29	4	Nursing Team	15	14
				ICU Team	4	3
				In-Vitro Fertilization Team	4	3
				Operating Room Team	8	7
38	Eyes Speciality	22	3	Nursing Team	5	4
				Operating Room Team 1	6	5
				Operating Room Team 2	5	4
39	Abdel Hadee	17	4	Eye Surgery Team	6	5
				Eyesight Correction Team	4	3
				Laser Team	4	3
				Outpatient Team	6	5
40	Jabal Amman	15	5	Operating Room Team 1	7	6
				New Born Team	7	6
				Emergency Team	5	4
				Ward Team	14	13
				Operating Room Team 2	13	12
				ICU Team	5	4
			277			

Official Documents

Appendix 8

a) Approval of the Ministry of Health in Jordan addressed to all hospitals in Jordan to cooperate with the Doctoral Researcher

THE HASHEMITE KINGDOM
OF JORDAN
MINISTRY OF HEALTH

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



المملكة الأردنية الهاشمية
وزارة الصحة

Ref. No

Date

الرقم
التاريخ
الموافق
١٩٢٧
٢٠٠٨ / ٣ / ٢٤

..... مدير مستشفى

تحية طيبة وبعد

ارفق طيا كتاب لجنة اخلاقيات البحث العلمي تاريخ ٢٤ / ٣ / ٢٠٠٨ والمتضمن الموافقة للباحثة تغريد صالح سعيغان على إجراء بحث حول فاعلية فرق العمل في المستشفيات الأردنية .

لطفًا للتكرم بالإطلاع وتسهيل مهمة الباحثة أعلاه في إجراء البحث .

واقبلوا احترامي

مدير تنمية القوى البشرية

الدكتورة عفاف الداود

مساعد مدير تنمية القوى البشرية

الدكتور أحمد أبو صليبي

نسخة / الملف



عمان - هاتف ٥٢٠٠٢٣٠ ص.ب : ٨٦ فاكس ٥٦٨٨٣٧٣ : تليكس ٢١٥٩٥
Amman - Tel 5200230 - P.O.Box : 86 Fax : 5688373 Telex : 21595
www.moh.gov.jo www.healthcomm.gov.jo

٢٠٠٧/٣

b. Preliminary approval of the Research Ethics Committee for Research titled
"Team effectiveness in Jordanian Hospitals"

Hashemite Kingdom of Jordan
Ministry of Health
Ethics Committee
Research Ethics Committee



المملكة الأردنية الهاشمية
وزارة الصحة
لجنة الأخلاقيات
لجنة أخلاقيات البحث العلمي

<p>We have received the following documents : (Research Protocol) The REC of the MOH has reviewed the above mention documents The REC (IRB) approves the protocol titled</p> <p>This is a preliminary approval Kindly note that if the study extend beyond six months you have to submit a renewal form.</p> <p>The Final Approval will be issued, once the P I submit a copy of his / her research at the end of study. We would like to wish you a successful study.</p>	<p>الدكتورة تغريد اسعيفان لقد استلمنا الأوراق التالية (بروتوكول البحث)</p> <p>لقد قامت لجنة البحث العملي في وزارة الصحة بمراجعة الأوراق المقدمة أعلاه ان لجنة أخلاقيات البحث توافق على إجراء البحث بعنوان</p> <p><u>فاعلية فرق العمل في المستشفيات الاردنية</u></p> <p>ان هذه الموافقة مبدئية يرجى العلم، انه إذا زادت فترة جمع البيانات عن ستة شهور يجب عليك تقديم طلب لتجديد الموافقة الموافقة النهائية، تصدر بعد قيام الباحث بتقديم نسخه من كامل البحث وبعد نهاية الدراسة نتمنى لكم النجاح والتوفيق</p>
<p>Research Ethics Committee Ministry of Health Date: _____</p> <p>REC Chair man</p>	<p>رئيس لجنة أخلاقيات البحث العلمي الدكتور عبد الهادي البريزات</p> <p>التاريخ : ٢٠٠٨-٢-٢٤</p>

c. Permission to access Military Hospitals
(Security Approval)



Aston University

Illustration removed for copyright restrictions

d. Letters from the Jordan Armed Forces Directorate addressed to the four Military Hospitals to facilitate the task of the researcher

G. H. Q. Jordan Armed Forces
DIRECTORATE
ROYAL MEDICAL SERVICES
Directorate of Technical Rehabilitation
and Human Resources Development
Amman – Jordan

بسم الله الرحمن الرحيم



القيادة العامة للقوات المسلحة الاردنية
مديرية
الخدمات الطبية الملكية
مديرية التأهيل الفني وتنمية القوى البشرية
عمان - الاردن

الرقم : ت ف ١ / ٣ / ١ / ٢٠٠٨
التاريخ : ربيع الثاني ١٤٢٩
٢٠٠٨ نيسان

مركز التأهيل الملك
الموضوع : الأبحاث

٠١ تمت الموافقة على السماح لباحثة الدكتوراة في مجال الاداره تغريد صالح سعيقان من قبل الحركة الدولية للصليب و الهلال الاحمر بتوزيع استبيانات على الكوادر الطبية والتمريضيه حول فاعلية فرق العمل في المستشفيات .

٠٢ لإجراءتكم لطفاً .

ع/اللواء الطبيب
مدير عام الخدمات الطبية الملكية بالوكالة

ملازم /
يوسف بديوي بني مهم

نسخه الى :

- مدير التأهيل الفني وتنمية القوى البشرية
- شعبة أمن الخدمات الطبية الملكية ، اشاره للتصريح الأمني رقم (٧٢٩)
- التداول

G. H. Q. Jordan Armed Forces
DIRECTORATE
ROYAL MEDICAL SERVICES
Directorate of Technical Rehabilitation
and Human Resources Development
Amman - Jordan

بسم الله الرحمن الرحيم



القيادة العامة للقوات المسلحة الأردنية
مديرية
الخدمات الطبية الملكية
مديرية التأهيل الفني وتنمية القوى البشرية
عمان - الأردن

الرقم : ت ف ١/٣/١
التاريخ : ربيع الثاني ١٤٢٩
٢٠٠٨ نيسان

مركز الملكة علياء لأمراض وجراحة القلب
الموضوع : الإيحاءات

- تمت الموافقة على السماح لباحثة الدكتوراة في مجال الأداره تغريد صالح سعيغان من قبل الحركة الدولية للصليب والهلال الاحمر بتوزيع استبيانات على الكوادر الطبية والتمريضيه حول فاعلية فرق العمل في المستشفيات .
- لإجراءتكم لطفاً .

ع/النواء الطبيب
مدير عام الخدمات الطبية الملكية بالتوكيله

ملازم /
يوسف بديوي بني ملحم

(٧٢٩)

نسخه الى :

- مدير التأهيل الفني وتنمية القوى البشرية
- شعبة أمن الخدمات الطبية الملكية ، اشاره للتصريح الأمني رقم (٧٢٩)
- التداول

G. H. Q. Jordan Armed Forces
DIRECTORATE
ROYAL MEDICAL SERVICES
Directorate of Technical Rehabilitation
and Human Resources Development
Amman - Jordan

بسم الله الرحمن الرحيم



القيادة العامة للقوات المسلحة الأردنية
مديرية
الخدمات الطبية الملكية
مديرية التأهيل الفني وتنمية القوى البشرية
عمان - الأردن

الرقم : ت ف ٣/١ / ٢٢٩٩
التاريخ : ربيع الثاني ١٤٢٩
٢٠٠٨ نيسان

كـ كـ
قائمة التوزيع (أ)
الموضوع : الأبحاث

٠١ تمت الموافقة على السماح لباحثة الدكتوراة في مجال الأدارة تغريد صالح سعيغان من قبل الحركة الدولية للصليب و الهلال الاحمر بتوزيع استبيانات على الكوادر الطبية والتمريضيه حول فاعلية فرق العمل في المستشفيات .

٠٢ لإجراء اتمك لطفاً .

عـ/النواء الطيب
مدير عام الخدمات الطبية الملكية بالوكاله
(لعتبة راشد الريان)

نسخه الى :

- مدير التأهيل الفني وتنمية القوى البشرية
- شعبة أمن الخدمات الطبية الملكية ، اشاره للتصريح الأمني رقم (٧٢٩)
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القيادة العامة للقوات المسلحة الأردنية
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ك س م ن ا ل م ك م ع ل م ا ر ا ل م ك م
قائمة التوزيع (أ)
الموضوع : الأبحاث

٠١ تمت الموافقة على السماح لباحثة الدكتوراة في مجال الإدارة تغريد صالح سعيقان من قبل الحركة الدولية للصليب و الهلال الاحمر بتوزيع استبيانات على الكوادر الطبية والتمريضيه حول فاعلية فرق العمل في المستشفيات .

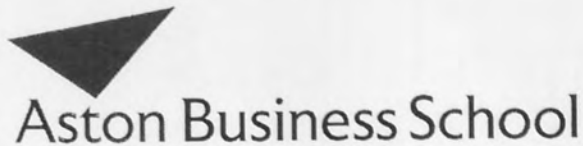
٠٢ لإجراء اتمكم لطفاً .

ع/اللواء الطبيب
مدير عام الخدمات الطبية الملكية بالوكالة
(لحسين راشد الريان)

نسخه الى :

- مدير التأهيل الفني وتنمية القوى البشرية
- شعبة أمن الخدمات الطبية الملكية ، اشاره للتصريح الأمني رقم (٧٢٩)
- التداول

e. Aston University Recommendation letter



Aston University
Aston Triangle
Birmingham B4 7ET
United Kingdom
Tel +44 (0)121 204 3000
www.abs.aston.ac.uk

14 March, 2008

To whom it may concern.

Re Taghrid Suifan

Taghrid Suifan is a doctoral researcher working for Aston Business School, Aston University, Birmingham England and a member of the School's Institute of Health Services Effectiveness. Ms Suifan is engaged in an international collaborative project aimed at determining how to develop effective multidisciplinary teams in health care contexts to ensure the best quality of patient care.

She is currently engaged in gathering data from health care teams in hospitals in Amman, Jordan. She will be distributing questionnaires to teams of medical and nursing staff in order to advance our understanding of health care in Jordan and team working in health care more generally.

Ms Suifan is working under my direct supervision and will conduct her work in accordance with the ethical standards of this University and of the British Psychological Society.

If you have any questions about the research, please do contact Ms Suifan or me directly.

Thank you for your help and support with this important research

Yours Sincerely



Professor Michael West
Executive Dean

f. Jordanian Red Crescent Recommendation letter

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

JORDAN NATIONAL
RED CRESCENT SOCIETY
EST. 1948
Central Executive Committee



الجمعية الوطنية للهلال الأحمر الأردني
تأسست عام ١٩٤٨
اللجنة التنفيذية المركزية

التاريخ: 2008/3/25

الإشارة: هـ/ 182/08/1/9

السيد / الدكتور

رئيس / مدير

تحية طيبة،،

يهدي الهلال الأحمر الأردني تحياته لكم ولمؤسسةكم الرائدة ويود إعلامكم بان الباحثة تغريد صالح سعيقان تقوم بإعداد أطروحة الدكتوراة في مجال الإدارة في جامعة (ASTON) - برمنجهام - المملكة المتحدة حول فاعلية فرق العمل في المستشفيات الأردنية.

راجين التكرم والإيعاز لمن يلزم بتسهيل مهمة الباحثة والمكلفة من قبل الحركة الدولية للصليب الأحمر والهلال الأحمر لتوزيع الإستيبيان على الفرق الطبية والتمريضية لاستكمال إجراءات البحث.

شاكرين لكم كريم تعاونكم.

وتفضلوا بقبول فائق الاحترام،،

الرئيس العام

الدكتور محمد مطلق الحديد

رئيس اللجنة الدائمة للصليب الأحمر والهلال الأحمر

IRC is part of the International Red
Cross and Red Crescent Movement



الهلال الأحمر الأردني عضو في الحركة
الدولية للصليب الأحمر والهلال الأحمر

فاكس ٤٧٥٠٨١٥

ت: ٤٧٧٣١٤١

عمان ١١١٥١ الأردن

ص ب ١٠٠٠١

P.O.Box 10001 Amman 11151 Jordan Tel: 4773141 Fax: 4750815 e-mail:jrc@cyberia.jo

Appendix 9
Job Description of the Study Sample

Job Title	Frequency	Percent
A & E Nurse	6	.4
A & E Supervisor	2	.1
Administrator	1	.1
Anaesthesia Resident	4	.2
Anaesthesia Technician	40	2.5
Anaesthetist	30	1.8
Artificial Limbs Technician	1	.1
Assistant Nurse	500	30.8
Assistant Surgeon	1	.1
Audiogram Technician	3	.2
Cardiology Technician	1	.1
Cath Technician	9	.6
Clinic coordinator	1	.1
Consultant	6	.4
Consultant Doctor	1	.1
Coordinator	2	.1
CT Scan Technician	5	.3
Department Supervisor	1	.1
Director	1	.1
Echo Technician	1	.1
Endoscope Technician	3	.2
ENT Consultant	3	.2
Eye Surgeon	1	.1
Eye Test Supervisor	1	.1
Gastro Enterologist	2	.1
General Practitioner	87	5.4
Gypsum Technician	1	.1
Head of Department	7	.4
ICU Physician	2	.1
ICU Supervisor	2	.1
ICU Technician	1	.1
Infection Control Supervisor	1	.1
Information auditor	1	.1
IT Director	1	.1
Lab Doctor	1	.1
Lab Supervisor	4	.2
Lab Technician	37	2.3
Matron	2	.1
Medical Secretary	1	.1
Midwife	27	1.7
MRI Technician	6	.4
Nuclear Resident	3	.2
Nuclear Specialist	1	.1
Nuclear Technician	8	.5
Nursing Education	1	.1
Nutritionist	1	.1
Obstetrics Consultant	1	.1
Paediatric Resident	1	.1
Paediatrician	1	.1
Pharmacist	4	.2

Job Title	Frequency	Percent
Physiotherapist	3	.2
Psychologist	3	.2
QC Assistant	1	.1
QC Coordinator	1	.1
QC Director	1	.1
Radiologist	7	.4
Registered Nurse	358	22.1
Renal Dialysis Supervisor	1	.1
Renal Dialysis Technician	5	.3
Resident Doctor	118	7.3
Resident Researcher	1	.1
Resident Surgeon	14	.9
Senior Nurse	1	.1
Skin Care Technician	1	.1
Specialist	18	1.1
Specialist Assistant	2	.1
Specialist Doctor	2	.1
Staff Nurse	9	.6
Supervisor	13	.8
Surgeon	16	1.0
Technician	50	3.1
Theatre Nurse	37	2.3
Theatre Supervisor	3	.2
Theatre Technician	20	1.2
Therapist	1	.1
Trainee Physiotherapist	1	.1
Treatment Specialist	1	.1
Ward Supervisor	1	.1
X-Ray Nurse	2	.1
X-Ray Technician	13	.8
Total	1622	100.0

Appendix 10
Work Experience of the Study Sample

a. Present Position Experience (Years)

Number of Years	Frequency	Percent
1	216	13.3
2	252	15.5
3	164	10.1
4	108	6.7
5	98	6.0
6	54	3.3
7	39	2.4
8	48	3.0
9	24	1.5
10	62	3.8
11	20	1.2
12	24	1.5
13	20	1.2
14	21	1.3
15	22	1.4
16	9	.6
17	6	.4
18	13	.8
19	1	.1
20	17	1.0
21	2	.1
22	6	.4
23	1	.1
24	4	.2
25	4	.2
26	1	.1
27	2	.1
29	2	.1
30	4	.2
32	1	.1
35	2	.1
41	2	.1
42	1	.1
Total	1256	77.4
Missing System	366	22.6
Total	1622	100.0

b. Present Position Experience (Months)

Number of Months	Frequency	Percent
1	51	3.1
2	72	4.4
3	81	5.0
4	70	4.3
5	37	2.3
6	112	6.9
7	40	2.5
8	51	3.1
9	49	3.0
10	35	2.2
11	14	.9
Total	616	38.0
Missing System	1006	62.0
Total	1622	100.0

c. Current Team Experience (Months)

Number of Months	Frequency	Percent
1	70	4.3
2	72	4.4
3	99	6.1
4	71	4.4
5	38	2.3
6	112	6.9
7	35	2.2
8	50	3.1
9	40	2.5
10	27	1.7
11	9	.6
13	1	.1
15	1	.1
Total	631	38.9
Missing System	991	61.1
Total	1622	100.0

d. Current Team Experience (Years)

Number of Years	Frequency	Percent
1	247	15.2
2	224	13.8
3	144	8.9
4	102	6.3
5	82	5.1
6	50	3.1
7	33	2.0
8	32	2.0
9	16	1.0
10	46	2.8
11	13	.8
12	14	.9
13	13	.8
14	10	.6
15	11	.7
16	3	.2
17	5	.3
18	7	.4
19	2	.1
20	10	.6
21	2	.1
22	2	.1
23	1	.1
24	3	.2
26	1	.1
27	1	.1
28	1	.1
35	1	.1
52	1	.1
Total	1081	66.6
Missing System	541	33.4
Total	1622	100.0