RESEARCH ARTICLE

Teamwork Quality and Clients' Perceived Quality of Care in Health Centers of Manila

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Abstract

Teamwork among members of the health care teams is integral in the delivery of quality health care. Being highly advocated in settings such as primary health care, studies establishing the relationship between teamwork and quality of care are indeed necessary. The purpose of this study is to determine the extent and relationship of teamwork quality as perceived by primary health care team (PHCT) members and quality of care as perceived by clients. This descriptive-correlational study made use of two-stage cluster sampling method to select the 22 health centers of Manila wherein 195 PHCT members and 300 clients were purposively selected. Translated short version of Teamwork Quality Survey and Health Center Assessment Questionnaire were also utilized in data gathering while descriptive statistics and structural equation modeling (SEM) were used for data analysis.

Results revealed a high perception of teamwork quality (mean=4.35) and quality of care (mean=4.23) among respective subjects. However, a significant negative relationship was found to exist between teamwork quality and quality of care (r=-0.129 p=0.032), indicating that high perception of teamwork is related to low quality of care as perceived by clients and vice versa. Nursing leaders and managers need not only rely on the quality of interaction within teams but also reevaluate task processes and other structures of care influencing patient outcome for quality improvement in primary health care.

Key words: *primary health care, health centers, teamwork quality, quality of care*

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Introduction

The concept of teamwork seems to be widely accepted as a vital element of effective health care delivery (Mickan & Rodger, 2005; Shaw, Lusignan, & Rowlands, 2005). This stems from the fact that the process involving health care delivery is intrinsically interdisciplinary, communicative and team-based (Manser, 2009). Teamwork in health care can create a more responsive and efficient service for patients as well as a more satisfying role and better morale for health care providers (Fletcher, 2008).

Among other health care settings, primary health care is one area where teamwork is highly advocated. Primary health care has become more complex with the expansion of services thereby necessitating the knowledge, skills, and experiences of both professional and non-professional health care providers (Fletcher, 2008). The World Health Organization report in 2008 entitled *"Primary Health Care Now More than Ever"* states that primary health care requires teams of health care providers such as physicians, nurses, and other assistants with related biomedical and relational skills. This plurality and diversity of health care providers in primary health care proves that the concept of teamwork is not just a simple undertaking (Sargeant, Loney, & Murphy, 2008) as team members may have role preference by nature of their background, experience, and personality (Fletcher, 2008).

Aware of the importance of teamwork in effective healthcare delivery, this study examines the extent of perceived teamwork quality among PHCT members and extent of quality of care as perceived by clients. The relationship between these two dynamic concepts was also determined to better understand factors influencing patient care.

Methods

A descriptive-correlational design was used to describe the variables under investigation and determine the relationship between them. The study was conducted in the city of Manila in coordination with the Manila Health Department (MHD), the city's working arm in delivering primary health care services Two-stage cluster sampling method was employed to randomly select the 22 health centers of Manila from which 300 clients and 195 health workers were purposively selected. Inclusion and exclusion criteria were established for the selection of participants. All literate (i.e. able to read and write) and Filipino-conversant members of PHCT were encouraged to participate in the study. Trainee staff at the time of data collection were excluded while clients were required to be at least 18 years old, literate, Filipino-conversant and without debilitating medical condition.

Three instruments in the form of structured self-reports were used to facilitate data collection. The first instrument, a Respondent's Robotfoto, created by the researcher and addressed particularly to clients and PHCT members, was used to gain socio-demographic information about the subjects. The second instrument, the Teamwork Quality Scale (TWQS) by Hoegl and Gemuenden (2001), was used to measure the quality of interactions in teams by using a 5-point Likert scale to assess respondents' level of agreement among the six constructs comprising teamwork quality. The constructs are communication, coordination, balance of member contribution, mutual support, effort and cohesion. After seeking permission from the authors, the instrument was translated to Filipino by a Language expert and had undergone pilot testing. Results of the pilot test prompted the removal of items with indicator reliability of less than 0.60 thus a short version of the tool composed of 25 items with Cronbach alpha coefficients between 0.85 and 0.95 was used for the actual study.

The third instrument, the Health Center Assessment Questionnaire (HCAQ) made by Pantoja, Beltran, and Moreno (2009), was designed for assessing quality of care from the patients' perspective in the context of primary care. The items are grouped into 10 scales which are access, infrastructure, services provided by the administrative personnel and dentist, continuity of care, and evaluation of contact with the doctor, nurse and midwife, overall satisfaction and resolution of the clients' health issues. Variables were also measured in a Likert-type scale with a

score range of 1 (very poor) to 6 (excellent). Filipino translation and pilot testing were also done, resulting again in the use of a short version of the tool composed of 28 evaluative items with reliability coefficients between 0.85 and 0.98. Both TWQS and HCAQ were reviewed by experts in public health nursing and public administration. Confirmatory factor analysis was also done to determine the tools' convergent and discriminant validity.

The study and its methods were reviewed and approved by MHD after undergoing ethical review process from the institution. Informed consents were secured from the subjects and the principle of anonymity and confidentiality were observed throughout the process.

Three experienced research assistants were also employed and trained by the researcher via role modeling to aid in data gathering. Data collection was done simultaneously for both subjects and was completed in a span of seven (7) weeks.

Descriptive statistics particularly mean scores and standard deviation was used to analyze data on the extent of perceived teamwork quality and clients' perceived quality of care. Meanwhile, Partial Least Squares-Structural Equation Modeling (PLS-SEM) was used to determine the relationship between the two variables. PLS-SEM was used to better reveal the strength and direction (i.e., positive or negative) of the relationships between variables compared to correlation coefficients (Calantone, Graham, and Mintu-Wimsatt, 1998 as cited by Henseler, Ringle, & Sinkovics, 2009).

Results

Majority of the client respondents (n=300) were in the early adulthood stage (33.9%) with mean age of 32.45; female (86.9%); attained at least secondary education (66.9%); unemployed (33.5%); visited the health center more than once a month (34.5%); had recently visited in less than six months (88.1%) and had concerns primarily on maternal and child health care (31.5%).

On the other hand, the 195 PHCT members were mostly middle adults (37.34%) with mean age of 43.43; female (86.7%); attained college education (64.7%); categorized as professional workers (53.01%); and had length of service of more than 10 years (46.15%).

Table 1 showed that members of the PHCT have an agreed perception on all the subscales comprising teamwork quality. This resulted to an overall mean score of 4.35 which is interpreted as high teamwork quality. The highest mean score was also noted in the subscale of effort (Mean=4.47) followed by communication (Mean=4.37), cohesion (Mean=4.36), coordination (Mean=4.34) mutual support (Mean=4.29), and lastly balance of member contribution (Mean=4.26). Answers were not

Table 1
Extent of Perceived Teamwork Quality of the PHCT Members

Subscale	Mean	SD	Interpretation
A. Communication	4.37	0.56	Agree
B. Coordination	4.34	0.61	Agree
C. Balance of Member Contribution	4.26	0.64	Agree
D. Mutual Support	4.29	0.60	Agree
E. Effort	4.47	0.58	Agree
F. Cohesion	4.36	0.60	Agree
OVERALL	**4.35**	**0.51**	**High TWQ**

Legend: 1.00 – 1.49 = Very low teamwork quality; 1.50 – 2.49 = Low teamwork quality; 2.50 – 3.49 = Moderate teamwork quality; 3.50 – 4.49 = High teamwork quality; 4.50 – 5.00 = Very high teamwork quality

extremely varied as reflected in the standard deviation range of 0.56 to 0.64.

Table 2 illustrates the extent of quality of care as perceived by clients. An overall mean score of 4.23 is also presented and interpreted as high quality of care. The highest mean score is shown in the subscale of satisfaction (Mean=5.65) followed by continuity of care (Mean=4.16), communication care – doctor (Mean=4.14), resolution (Mean=4.11), communication care – nurse / midwife and dentist (Mean=4.08), infrastructure and administrative personnel (Mean=4.01) and lastly access (Mean=3.90).

Table 3 presents a negative relationship between teamwork quality and clients' perceived quality of care. This can be gleaned from the correlation coefficient of r= -0.129. Furthermore, a significant relationship (p=0.032) is presented between the two variables under investigation, thus stating that high teamwork quality is related to low quality of care perceived by clients and vice versa.

Table 2
Extent of the QOC rendered by the PHCT as perceived by the clients

Subscale	Mean	SD	Interpretation
A. Access	3.90	0.90	Good
B. Infrastructure	4.01	0.88	Good
C.Administrative Personnel	4.01	0.96	Good
D. Dentist	4.08	1.02	Good
E. Continuity	4.16	0.77	Good
F. Communication care–Doctor	4.14	0.84	Good
G. Communication care–Nurse	4.08	0.84	Good
H. Communication care–Midwife	4.08	0.94	Good
I. Satisfaction	5.65	1.16	Very satisfied
J. Resolution	4.11	0.94	Good
OVERALL	**4.23**	**0.73**	**High QOC**

Legend: 1.00 – 2.00 = Very low quality of care
2.01 – 3.00 = Low quality of care
3.01 – 4.00 = Moderate quality of care
4.01 – 5.00 = High quality of care
5.01 – 6.00 = Very high quality of care

Table 3
Relationship of Teamwork Quality and Quality of Care

Variables	Correlation Coefficient	p-value	Interpretation
QOC TWQ	r = -0.129	0.032	Significant

Note: Level of significance (α) is at 0.05

Discussion

Results revealed that PHCT members of the 22 health centers of Manila displayed high perception of teamwork in health care delivery. This is accounted by their agreed perception on the six constructs comprising the concept of teamwork quality established by Hoegl and Gemuenden (2001).

Primary health care, being an adopted approach of our national health system in the last 30 years, may have molded through time a harmonious working relationship between professional and non-professional health care providers. Generally, the PHC team may consist of physician, nurses, midwives, health auxiliaries, locally trained community health workers, traditional birth attendants, and healers. In the Philippines, under the restructured health care delivery system, a physician, a public health nurse, and midwives compose the basic primary health care team (NLPGN, 2007).

The established goals and objectives of the Manila Health Department are significant in coordinating efforts of the PHCT members. Working toward a common goal also entailed acceptance of skills and expertise provided by each member as well as respect of each other's strengths and weaknesses. A delineated job description and well-defined organizational structure in the health centers also contributed in the respective construct of effort and communication. It is important to note than an open line of communication allows necessary information regarding delivery of health care services to be distributed among members of the primary health care team.

This study also evaluated the perception of quality of care from the perspective of clients. Though patient's perception of quality can be influenced by a variety of factors such as provider's personal and clinical skills, patients are still considered to be in the best position to evaluate their experience of care (Papp et al., 2014).

Public primary facilities are perceived for low quality with dissatisfaction arising from long waiting time, run-down facilities, unavailability and perceived lack of both medical and people skills among its personnel (Department of Health, 2005). However, results showed that clients have high perception of the quality of care provided in the health centers of Manila. The high satisfaction level among clients can be attributed to a number of factors such as infrastructure, cleanliness, waiting time, technical competence, accessibility to service and continuity of care. Babatunde et al., 2013 mentioned that the waiting time to see a doctor is inversely proportional with the level of satisfaction among primary health care clients which in the study corresponded for approximately 15 minutes or less. Nabbuye-Sekandi et al. (2011) also found that provider technical competence had the strongest correlation with general satisfaction score of clients in addition to accessibility of services. Continuity of care is also strongly associated with patient satisfaction and quality of care as majority of the sample claimed to see the doctor almost always. This result may be attributed to the distribution of 60 operational health centers in Manila, thus, serving the purpose of primary health care which is to improve the poor's access to health care (DOH, 2005). Community health workers of every health center in Manila also conduct follow-up visits among defaulter clients thereby increasing organizational access. This works in accordance to an ideal of sustained partnership between health workers and clients, which is a fundamental component of primary health care (National League of Philippine Government Nurses, 2007). The result also reflects good interpersonal relationship and evaluation of contact with some of the health staff of the health center. As claimed by Hansen et al. (2008), the interpersonal or relational aspects of care provided by health workers are related with clients' perceived quality rather than the technical aspects of care.

Contrary to previous studies and ideology about teamwork, result shows that a significant negative relationship exists between teamwork quality and clients' perceived quality of care. It is noteworthy to mention though that teamwork quality in this study focus solely on the quality of interactions (collaborative work) within teams rather than team members' tasks and activities. Though reflective of an effective team, the well-aligned structures as well as the highly stable setting of primary health care may lead to complacency among health workers. Joni and Beyer (2010) mentioned that complacent groups lack the necessary energy to perform at their best which was also supported by Hackman (2009) who said that team members may become more accepting of one another's mistake because of familiarity and comfortableness with one another.

Conclusion

Teamwork perception is moderated by processes such as communication, coordination, balance of member contribution, mutual support, effort and cohesion. It is a widely used strategy for better patient outcomes such as perceived quality of care which was noted to be largely determined also by the interpersonal relation skills of the health care providers. Though high perception of teamwork quality and quality of care was observed among the sample, this study did not support the preconception about their relationship, thus nursing leaders and managers need not only rely on the quality of interaction within teams but also reevaluate task processes and other structures of care influencing patient outcome for quality improvement in primary health care. Strategies such as a reward or incentive system for exemplary performance may be utilized to induce creativity and prevent complacency in a routine and stable setting such as primary health care. Moreover, team building programs and colloquium among the different healthcare members may be conducted regularly to address each member's concerns and experiences. Further study using more complex design and instruments may also be needed to bridge relationship and theory gaps relating to the impact of teamwork on the quality of care in the primary health care setting.

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Carina Lauren M. Lumacad, RN, MAN received her Bachelor of Science degree in Nursing, Cum Laude, and Master of Arts degree in Nursing major in Nursing Administration from the Royal and Pontifical University of Santo Tomas. She presented this study at the 7th National Nursing Research Conference of the Philippine Nursing Research Society, Inc. To date, she is working as a registered nurse in Makati Medical Center.

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*"You don't build a house without its foundation.
You don't build a hospital without its Nurses."*

– Anonymous