



RESEARCH ARTICLE

QUALITY IN A PREACCREDITATION PERIOD AS PERCEIVED BY THE HEALTHCARE PROFESSIONALS IN HOSPITALS IN R. MACEDONIA

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ABSTRACT

Background: Considerable amount of research has been done on the evaluation and improvement of the quality of health care delivery in the past 30 years. It seems likely that there will never be a solitary criterion by which to measure the quality of patient care. One of the first steps to build quality in a healthcare organization is to evaluate the perceptions of the medical personnel about quality issues. This would be the bases upon which interventions are to be made in order to reach the quality goals set by the organizations in accordance with the requirements of the healthcare system in which services are delivered.

Objective: This study aims at evaluating the perceptions of the medical personnel in healthcare organizations, concerning quality issues in a period just before starting national accreditation in hospitals in R. Macedonia and to interconnect certain variables regarding quality with the implementation of the accreditation process to be.

Methods: A prospective cross-sectional study was conducted, performed in healthcare organizations in R. Macedonia. The study was conducted in 17 healthcare organizations and, 402 healthcare givers took part in the survey. The tool for the study was a questionnaire consisting of 4 questions of a closed type.

Results: In our study the major percent of the respondents, agree that members of the staff are involved in designing, implementing and evaluating of quality improvement plans. Also, healthcare staff according to their answers (53,8%) strongly agree that their organization has set organizational improvement goals. The answers from the respondents regarding the question if individuals and teams that make significant contributions to quality improvement are effectively rewarded are evenly distributed, that is inconclusive, between respondents that agree, do not agree and are without opinion.

Majority of the respondents, judging by their answers recognize and accept elements of quality as the basis for implementing accreditation.

Conclusion: These attitudes show the awareness of the healthcare professionals that quality and accreditation stand side by side on the road to achieving positive outcomes in terms of operating a healthcare

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INTRODUCTION

Considerable amount of research has been done on the evaluation and improvement of the quality of health care delivery in the past 30 years (Rosa Sunol, 2015). So far, quality and safety problems continue existing and this issue is more than ever in the focus of attention of various groups of stakeholders (Donabedian Avedis, 2005; Berwick et al., 2003).

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Quality of care is a remarkably difficult postulate to define and the definition of quality may be almost anything anyone wishes it to be, although it is, ordinarily, a reflection of values and goals in the current medical care system and in the society of which it is a part. It seems likely that there will never be a solitary criterion by which to measure the quality of patient care. Which of the multitude criteria are selected to define quality will, of course, have profound influence on the approaches and methods one employs in the assessment of medical care (Donabedian Avedis, 2005; Klein, 1961).

The term quality in Macedonian terminology is defined as an extent in which medical services for the patients are delivered in certain economic conditions, comply with the latest medical data, achieving most favorable results and positive outcomes in improving the health status of the client, in the same time trying to maintain a balance between the risk and the benefit of a given therapy or treatment (Davitkovski, 2009). One of the most used methods for promoting quality at the healthcare organizational level is accreditation (World Health Organization, 2004; World Health Organization, 2008). Mobilizing and engaging professionals in service-quality improvement processes requires preparation and implementing strategies that promote practice changes such as feedback, recognizing gaps (Noah *et al.*, 2010). The organisational characteristics of the workplace environment also influence the work of healthcare professionals and thus affect the quality of care (Janita *et al.*, 2015).

Organisational characteristics range from the relationships between nurses and managers or physicians, supervisory support and leadership, benefits and autonomy in practice (Smith *et al.*, 2005). It has been found that major organizational changes without changes in organizational culture and climate often fail (Umiker, 1999). Organizational climate, is defined as employees' shared perceptions regarding an organization's policies, procedures, and practices, which in turn serve as indicators of the types of behavior that are rewarded and supported in work settings (Schneider *et al.*, 1994; Zohar *et al.*, 2010). In the health care field, studies have analyzed different indicators of performance, such as quality improvement activities, patient-care quality and efficiency, effectiveness of provider teams, health care provider job satisfaction, and patient satisfaction - making it difficult to identify consistent relationships across studies (Coeling and Wilcox, 1988; Platonova *et al.*, 2006; Williams *et al.*, 2007; Zazzali *et al.*, 2007). and the majority of literature on the organizational culture of hospitals examines the United high-income countries.

Little is known about hospital quality issues in countries with different socioeconomic and cultural environments. Consequently one of the first steps to build quality in a healthcare organization is to evaluate the perceptions of the medical personell about quality issues. This would be the bases upon which interventions are to be made in order to reach the quality goals set by the organizations in accordance with the requirements of the healthcare sistem in which services are delivered.

Accreditation of Healthcare Organizations in Macedonia

The process of accreditation is expected to be introduced in hospitals in R. Macedonia. The Government of Macedonia established an agency for accreditation (<https://www.iarm.gov.mk>) which prepared national accreditation standards accepted by the Government of the R. Macedonia. R. Macedonia is in a period just before introducing of accreditation in health care system and this period is considered vulnerable in the context of acceptance of certain standards which will lead to quality as part of an accreditation process.

This study aims at evaluating the perceptions of the medical personel in healthcare organizations, concerning quality issues in a period just before starting national accreditation in hospitals in R. Makedonia and to interconnect certain variables regarding quality with the implementation of the accreditation process to be. This research on perceptions of the medical team regarding quality in relation to accreditation, before introducing national accreditation of hospitals by law, is among the first of its kind in the Republic Mackedonia. In the accademic literature there are very few published studies interconnecting accreditation, quality issues and perceptions of medical professionals covering the period before introduction of accreditation.

METHOD AND DESIGN OF THE STUDY

We conducted a prospective cross-sectional study covering the territory of R. Macedonia. The research was conducted from September – December 2014 in 17 health care organizations. According to ownership, 2 were private hospitals and 15 public healthcare institutions (7 hospitals, 10 clinics and institutes. All healthcare organization had stationay wards for inpatients.

Determination of sample: The participating health care organizations were obtained by convenience sample. A total number of 700 questionnaires were divided, and 402 healthcare workers filled in the questionnaire (the number of needed respondents was calculated to be between 400-500 using the formula $C = 1 / \sqrt{400} \times 100$).

Criteria for inclusion and exclusion

Criteria for inclusion of the health organizations were: organizations that have not yet started or completed the process of accreditation and are either public or private institutions providing terciary care to patients. Tertiary care meaning that the organizacion has a determined number of beds for in-patients. Inclusion Criteria for staff were that they be healthcare providers i.e. doctors, nurses, technicians. Criteria for exclusion were: organizations that launched or completed the process of hospital accreditation.

The survey instrument

For the purpose of this research a special questionnaire was designed, consisted of close-ended questions. This research is only part of a larger questionnaire, designed to meet the objectives of the survey of the doctoral dissertation of the author of this paper. This section consisted of a set of 4 closed questions. The data were obtained through completion of the questionnaire by the healthcare givers, after receiving instructions from the author of this paper. After the completion of the activities on the field and check for quality of the completed questionnaires, they were coded and fully processed.

Statistical tools

Statistical analysis of data was carried out in the statistical program SPSS for windows 17,0. Testing differences in responses between the analyzed groups was performed with Pearson Chi-square test, Binary Logistic Regression as a prediction of effective accreditation.

The value of $p < 0,05$ was considered statistical significant, and $p < 0,01$ for statistically highly significant.

Ethical aspects

The survey was conducted on the basis of confidentiality, anonymity and voluntary participation. All participants were given a written explanation for the reasons for the investigation and for the steps taken to preserve their anonymity. Understanding the objectives of the research and the will to conduct the interview are the components of the voluntary compliance. Written consent was not required to preserve the anonymity of the participants. None of the reports prepared on the basis of data obtained from the study does not contain information to identify any of the participants.

RESILTS

Demographic data

The number of participants in the study was 402 healthcare professionals from 17 healthcare organizations, two privately owned, and the remaining 15 public health institutions delivering tertiary care (hospitals, clinics, institutes).

The gender structure of respondents presented with 122 (30.3%) male and 273 (67.9%) female respondents. The age group 31 to 45 years was dominant with 183 (45.5%) respondents. In terms of professional function performed in the organization, the majority of respondents - 44.3% have a university degree, doctor, followed by respondents with high school diploma (nurses, laboratory technicians) - 30.1% while 12.7% physicians performing managerial functions. The analysis of the answers received from respondents (table no.1) showed that the biggest procent of the healthcare professionals (53,8%) agree that their organisation has set organizational improvement goals.

The difference in percentage registered between respondents who agree versus the other modalities- without opinion and disagree, is statistically significant ($p=0,0000$.) Statistically insignificant is the association between the opinion if their organization has set organisational improvement goals versus the gender $p > 0,05$ (Pearson Chi-square: 3,69074, $p=0,883890$); versus age groups $p > 0,05$ (Pearson Chi-square: 26,8996, $p=0,309184$) and versus professional function in the organisation $p > 0,05$ (Pearson Chi-square: 14,9787, $p=0,242622$). The answers from the respondents regarding the question if individuals and teams that make significant contributions to quality improvement are effectively rewarded

Table 1. Questions regarding quality as perceived by the healthcare professionals

Question	N=402(100%)
Your organization has set organizational quality improvement goals	
I strongly disagree	10(2,5%)
I disagree	46(11,4%)
without opinion	84(20,7%)
I agree	218(53,8%)
I strongly agree	36(8,9%)
without answer	11(2,7%)
Individuals and teams that make significant contributions to quality improvement are effectively rewarded	
I strongly disagree	40(9,9%)
I disagree	113(27,9%)
without opinion	117(28,9%)
I agree	115(28,4%)
I strongly agree	14(3,5%)
without answer	6(1,5%)
Members of the staff are involved in designing, implementing and evaluating quality improvement plans	
I strongly disagree	11(2,7%)
I disagree	61(15,1%)
without opinion	113(27,9%)
I agree	195(58,1%)
I strongly agree	19(4,7%)
without answer	6 (1,5%)
According to me , recognizing and acceptaning the elements of quality is the basis for implementing Accreditation / Quality Programme	
yes	287 (69,2%)
no	19 (4,7%)
without opinion	100 (24,9%)
without answer	5 (1,2%)

Table 2. Binary logistic regression as a prediction for quality in accreditation

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B)	
							Lower	Upper
Professional function in organisation – ref. category/ doctor, doctor with managerial function	0,050	,547	,008	1	,927	,951	,326	2,777
Organization has set organizational improvement goals								
yes vs no	1,474	,571	6,664	1	,010	4,368	1,426	13,377
Employees are effectively rewarded								
yes vs no	,779	,557	1,953	1	,162	2,179	,731	6,493
Members of the staff are involved								
yes vs no	1,833	,544	11,367	1	,001	6,250	2,154	18,137

Dependant variable: opinion that recognizing and acceptaning the elements of quality is the basis for implementing accreditation and quality programmes $p < 0,01$

(Table no 1), are nearly evenly distributed between the respondents that do not agree 27.9%, without opinion 28.9%, and that agree 28.4%. The difference in percentage presented between respondents of these three modalities is statistically insignificant ($p > 0.05$). Statistically insignificant is also the association between the opinion that individuals and teams that make significant contributions to quality improvement are effectively rewarded versus gender $p > 0,05$ (Pearson Chi-square: 9,68391, $df=8$, $p=0,287929$); versus age groups $p > 0,05$ (Pearson Chi-square: 22,0038, $p=0,579041$). Statistically significant association is registered between the opinion that individuals and teams that make significant contributions to quality improvement are effectively rewarded versus the professional function in the organisation for $p < 0,05$ (Pearson Chi-square: 25,7869, $df=12$, $p=0,011512$). The major percent of the answers, 48,1%, agree that members of the staff are involved in designing, implementing and evaluating of quality improvement plans (Table no 1). The difference in percentage presented between respondents that agree versus the remaining modalities- without opinion and disagree, is statistically significant for ($p > 0.05$). Statistically insignificant is the association between the opinion that members of the staff are involved in designing, implementing and evaluating of quality improvement plans versus gender, $p > 0,05$ (Pearson Chi-square: 14,6974, $p=0,065317$). Statistically significant association is registered between the opinion that members of the staff are involved in designing, implementing and evaluating of quality improvement plans versus the professional function in the organisation for $p < 0,05$ (Pearson Chi-square: 25,3688, $p=0,013177$) and versus the age groups for $p > 0,05$ (Pearson Chi-square: 26,5328, $p=0,009023$).

According to the majority of the answers of the respondents 69,2%, recognizing and accepting the elements of quality as the basis for implementing accreditation and quality programmes and the difference in percentage recognized between these respondents versus the remaining modalities – do not agree, without opinion and without answer is statistically significant $p=0,0000$. Statistically insignificant is the association between recognizing and accepting the elements of quality is the basis for implementing accreditation and quality programmes versus age groups for $p > 0,05$ (Pearson Chi-square: 6,07689, $p=0,912150$); versus professional function in the organization for $p > 0,05$ (Pearson Chi-square: 5,62612, $p=0,466352$); Statistically significant association is registered between recognizing and accepting the elements of quality is the basis for implementing accreditation and quality programmes versus gender for $p > 0,05$ (Pearson Chi-square: 15,6705, $p=0,000396$). The results of the binary logistic regression as a prediction for quality in accreditation are significant (Table no 2) and are as follows: doctors and doctors with managerial function who gave a positive answer that recognizing and accepting the elements of quality is the basis for implementing accreditation and quality programmes, are 0.1951 95% CI (0,326-2,777) times more likely compared to respondents who with a high school diploma to have a positive attitude for elements of quality as the basis of a successful accreditation. Comparing results from respondents who answered yes regarding the question if the organization has set organizational improvement goals, are 4,368- 95% C.I. (1,426-13,377) times more likely compared to respondents

versus no to have a positive attitude for elements of quality as the basis of a successful accreditation. Results from respondents who answered yes regarding the question if employees are effectively rewarded, are 4,368- 95% C.I. (1,426-13,377) times more likely compared to respondents versus no to have a positive attitude for elements of quality as the basis of a successful accreditation. Comparing results from respondents who answered yes regarding the question if employees are members of the staff are involved in designing, implementing and evaluating quality improvement plans are 6,250- 95% C.I. (2,154-18,137) times more likely compared to respondents versus no to have a positive attitude for elements of quality as the basis of a successful accreditation.

DISCUSSION

In the center of accreditation, as a form of peer review for quality in healthcare, lie standards which integrate good practice for a certain service or practice in a healthcare organisation. Accreditation standards in the past focused mostly on organizational policies and procedures rather than on clinical activity, but this approach is now changing. The management philosophy is now perceived as a system where directors, managers, health professionals and other employees are more and more engaged in creating a frame of the work processes within the standards in order to achieve continuous improvement of the outcomes of patient care (Ellie Scrivens, 1997). There is no universal definition of engagement: it may be an attitude, behaviour, an outcome—or all three (MacLeod, 2011). In our study the major percent of the respondents, agree that members of the staff are involved in designing, implementing and evaluating of quality improvement plans, which is a good precondition for achieving quality in services as well as quality in an accreditation process.

In our study healthcare staff according to their answers (53,8%) strongly agree that their organisation has set organizational improvement goals. The management team's responsibility is to set the organizational improvement goals and to communicate them with the team, so they be followed and improved. Employees, from their part, need to understand not only the purpose of the organisation they work for but also how their individual role contributes to that purpose (Samuel Pannick *et al.*, 2015), on the road to improving quality. The answers from the respondents regarding the question if individuals and teams that make significant contributions to quality improvement are effectively rewarded are evenly distributed, that is inconclusive, between respondents that agree, do not agree and are without opinion. External factors, as well as salaries are regarded as important factors in job satisfaction (Soheyla Gholami *et al.*, 2015). Encouraging and rewarding strategies of managers could result in increased motivation and job satisfaction which in turn is a prerogative for quality. Studies have suggested quite a large number of quality management elements, namely, nonfinancial performance, patient focus, quality planning, workforce and process, goal setting, leadership, work environment, communication, knowledge management, and financial performance (Ali Morad Heidari Gorji and Jamal A Farooque, 2011). Majority of the respondents, judging by their answers recognize and accept elements of quality as the basis for implementing accreditation

and this positive attitude is a good starting point for building a climate for a successful quality program.

Conclusion

This study finds interrelation of the perceptions of healthcare professionals, to variables regarding quality in a period before introducing national accreditation in the R. Macedonia. We can conclude that variables such as involvement in designing, implementing and evaluating of quality improvement plans and organisation has set organizational improvement goals, are perceived by the majority of the respondents as elements of quality, which are the basis for introducing accreditation.

On one variable, if individuals and teams that make significant contributions to quality improvement are effectively rewarded, answers of the respondents are evenly distributed. Respondents are not conclusive about the rewarding system depending on the nonsignificant answers agree, not agree and without opinion. It is suggested that when involved with any quality program, a healthcare organization could include representatives from the staff together with the quality program experts as part of the effort. This would ensure quality strategies to be better translated into policy for quality improvement programs (24). The results showed that professional function performed by the respondents (doctors and doctors with a managerial function) has significant impact on their views on quality in the organisation concerning variables such as the opinion that individuals and teams that make significant contributions to quality improvement are effectively rewarded and the opinion that members of the staff are involved in designing, implementing and evaluating of quality improvement plans.

Comparing the results from respondents of the binary logistic regression as a prediction for quality in accreditation who answered yes regarding the question if the organization has set organizational improvement goals, regarding the question if employees are effectively rewarded, regarding the question if employees are members of the staff are involved in designing, implementing and evaluating quality improvement plans, regarding the question if the organization has set organizational improvement goals, are more likely compared to respondents versus no, to accept elements of quality as the basis of a successful accreditation. Majority of the respondents answered that they believe that recognizing and accepting elements of quality is the basis for implementing accreditation and quality programmes. These attitudes show the awareness of the healthcare professionals that quality and accreditation stand side by side on the road to achieving positive outcomes in terms of operating a healthcare organisation and providing services to the patients. An obligatory accreditation in healthcare in R. Macedonia will define the fields for operating the healthcare organisations in terms of managing them as well as integrating elements of good practice into delivering of services to the patients, but it is necessary to accept the opinion of the actors of these events, the healthcare professionals, who need to be invited to take part into modeling the ways that quality can be achieved the best possible way in their organization.

Constraints and Limitations

Limitation of our study is that while it explores the standpoint of medical staff about accreditation it does not include the

standpoint of patients and their interaction with the health care professionals. Thus future research should focus on the interaction of patients and health care professionals. A further limitation of our research is that we did not conduct focus groups with health care professionals on primary and secondary health care level, so we could not draw comparisons between the experiences of the two groups. Also future research might benefit from investigating the issue of quality from the standpoint of governmental and other fund raising and policy making bodies in the healthcare system in R. Macedonia, which was not included in our study.

Competing Interest

The authors declare that they have no competing interests.

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