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The Scale Development on Health Professionals' Perceptions About Health Sector Privatization in Turkey

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Abstract

The world has witnessed remarkable changes in healthcare since neoliberal policies came into force. Like European countries, Turkey also has implemented the liberal policies, the health transformation program launched in 2003 and paved the way to privatization activities in healthcare sector. The structure of hospitals and health services delivery will start to change with Public Private Partnership Model. This study was aimed at developing a scale on health professionals' perceptions about health sector privatization in Turkey. Based on previous studies and professional findings, twenty-five sample statements were used to evaluate the perception of health staff on privatization in the Turkish health services. Research sample consists of 325 health workers who actually work in family healthcare centers and secondary public hospitals (physicians, nurses and allied health professionals) in Edirne Province and in its' districts. The surveys were analyzed by IBM SPSS Statistic 20.0 and IBM SPSS Amos 23.0 programs via reliability, validity and factor analysis. The content validity of the scale was found as relevant for the study (CVI=>0.87). Moreover, face validity score reflected that statements could be clearly understood (90%). The Keiser- Meyer-Olkin Measure of Sampling Adequacy indicated that sample is useful and suitable for factor analysis process (0,879). Again, the Cronbach's Alpha of the F1 is 0,848 and F2 is 0,703. According to the split half method, the scale is highly reliable. CFA results show that the model does fit data adequately. (Chi Square: 168,041, CMIN/DF: 2,241, GFI: 0,927, AGFI: 0,898, CFI: 0,930, RMSEA: 0,063, PCLOSE: 0,049). To sum up, reliability and validity analysis of the privatization scale conducted by authors indicated that privatization scale could be used as a valid and reliable tool to measure the privatization perception of health staff in the health sector.

Keywords

Privatization • Healthcare • Scale Development • Health Staff • Perception

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The world is undergoing a great period of change and healthcare services are no exception to this. Healthcare services were provided to the public via taxes or public insurance structures especially after the Second World War with regards to welfare state. However, with globalization international competition was born and public resources was found grossly inadequate to meet these enormous needs. Consequently, the world experienced the much needed wave of change in economic and health policies to signal the end of the welfare state era.

In the last decade, privatization policy of health care system has become a phenomenon. In Canada for instance, the cost of quality health services was high, which posed serious problems in accessibility of health services (Podgorsak, 2009). Also, the second wave reform movement in 1999, saw Poland restructuring the finance mechanism of healthcare, with many hospitals passing from local government to larger administrative areas (Watson, 2005). In the U.S., which is the only country that delivers market-oriented health services set the pace with more than 40% of the total public hospitals changing their ownership between the period of 1991-2001 (Villa & Kane, 2013; Angell, 2008). Profit-based hospitals which are under a DRG payment system abound in Germany. Private hospitals in Canada's health system, -profit oriented hospital investments in Sweden as well as hospital and health care system in South Korea were adapted from the U.S. system (Himmelstein & Wooldhandler, 2008). Israel's health care system has been delivering high quality care to all their citizens, however between 1995-2009 the share of publicly financed healthcare decreased by 10%. Citizens had to purchase private insurance and spend more from their pockets for quality health services (Chernichovsky, 2013). The most important privatization process was witnessed in Macedonian healthcare system, where the low-quality public health care system triggered off the growth of private services (Munoz, 2002)

From the beginning of 2003 to date, the Turkish Universal Healthcare system has changed dramatically. Citizens are compelled to "compulsory health insurance system" which came into force on 01.01.2012. This health insurance system covers medical treatment expenditure of the nationals. Patients are allowed to choose any public and or private inpatient and outpatient health care services by using this mandatory health insurance premium. Private hospitals offer short waiting lists and much more comfortable physical conditions. Therefore, patients with this health insurance policy had to pay or co-pay for using health services in private hospitals. The second fundamental change was launched with Public Private Partnership (PPP). A new model of Health campuses was born with the managerial and human resources structure of public hospitals reorganized in Turkey. According to Turkish public perception, non-government institutions (i.e. NGOs, foundations and profit-organizations) defined as 'private' (Privatization Endeavor in Turkey) By the time government had transferred the ownership of hospitals from public to private, of which, the civil servicet health staff would refer to this changing process as 'privatization'. Privatization is therefore, a method or Term, used by governments for improving the quality of health care, and solving budget problems. The main concept of privatization is 'to transfer the ownership of institutions from the public sector to the private sector' (Albrecht, 2009). There are three concepts of privatization: (i) for introduction of competitive forces, (ii) to encourage



independent management of public-based bodies (i.e. hospitals), (iii) introduction of market-oriented incentives within public institutions (Saltman, 2003)

The aim of this study was to develop a scale on perceptions of health staff about privatization, using literary review. It is pertinent to note that there is no reliable means available to measure the perceptions of the entire health staff on privatization. Therefore, the development and validation of this instrument raises serious credibility for researchers interested in health systems and analysis reform process of the health sector and privatization.

Method

Data were collected from health workers (physicians, nurses and allied health professionals) who are actually working in family healthcare centers and secondary public hospitals in Edirne Province and in its' districts. All the family healthcare centers including secondary public hospitals were included in this study. At the time of this study, the total number of healthcare workers was 3405. To save time and cost, 325 personnel were chosen randomly from the aforementioned population. The participants were briefed on the aim and objective of the study, after which their consent was obtained. 316 surveys were meticulously carried out without missing any and the results are included in this study.

Based on previous studies (Harmanci & Yıldırım, 2012), an extensive review of the literature on perception about privatization in healthcare sector and expert opinion, twenty-five statements were prepared by authors to measure the perception of health workers on privatization in healthcare services. Four-point Likert Scale was applied. 1=Strongly disagree, 2=Disagree, 3=Agree and 4=Strongly agree. Forced Likert Scale (Allen & Seaman, 2007) was used in order to prevent hesitations in answering. The participants were advised that if they thought they didn't have enough information about the privatization concept, to choose the best answer which is closest to their opinion. This is important in order to make participants feel comfortable in the applying process.

The surveys were analyzed by IBM SPSS Statistic 13.0 and IBM SPSS Amos 23.0 programs via reliability, validity and factor analysis.

Results

Content Validity

Content validity addresses whether the content of the scale is relevant or not to the purpose of the measurement. This validity indicates how well the items were developed and adequate for the construct of the study. To design an appropriate study, the statements of the scale have been developed based on an extensive literature review and experts' opinions (Carole & Winterstein, 2008). After the scale development process, 8 purposely chosen experts were asked to evaluate each statement whether it is relevant or not to content of the study. Each expert rated each statement in terms of relevance independently based on a Likert scale which includes, 1=not relevant, 2=somewhat relevant, 3=relevant, 4= completely relevant. The Content Validity Index(CVI) which was developed by Lynn (Lynn, 1996) was used to measure the validity of the scale. The measurement rate is the proportion of experts who rated statement as "3" or "4" in total .

A statement should be rated by %87 of experts to validate it. In our study, each questionnaire was found as relevant for the study (CVI \geq 0.87).

Face Validity

In the face validity process, all statements were evaluated in terms of clarity of words and being understandable. To measure the face validity, fifty participants were randomly chosen from the sample. Each participant rate statements based on a Likert scale (1= strongly disagree, 2=disagree, 3=agree, 4=strongly agree). Ninety percent of the participants reported that statements are clearly understood.

Exploratory Factor Analysis

To determine the factor construction of the scale, explanatory factor analysis (EFA) was performed using SPSS. The aim of EFA is to reduce the number of statements to an acceptable level and to determine the underlying constructs. The Keiser-Meyer-Olkin Measure of Sampling Adequacy was found as 0,879. This indicates that sample is useful and suitable for factor analysis process. The scree plot was used for deciding on how many factors are needed to be extracted. The scree plot is a suitable deciding method when sample is greater than 200. It provides visual results and facilitates the extraction process. It gives researchers, the importance of each factor on a graph. The number of data points which remains at the left of the inflexion point is accepted as the number of factors (Field, 2009). According to “scree plot graphics” and “total variance explained” chart, it is decided that the scale has two factors. The inflexion point is the third point. Therefore, there are two points at the left side. Two factors explain the 43 per cent of the total variance.

Graph 1. Scree Plot of Factor Analysis

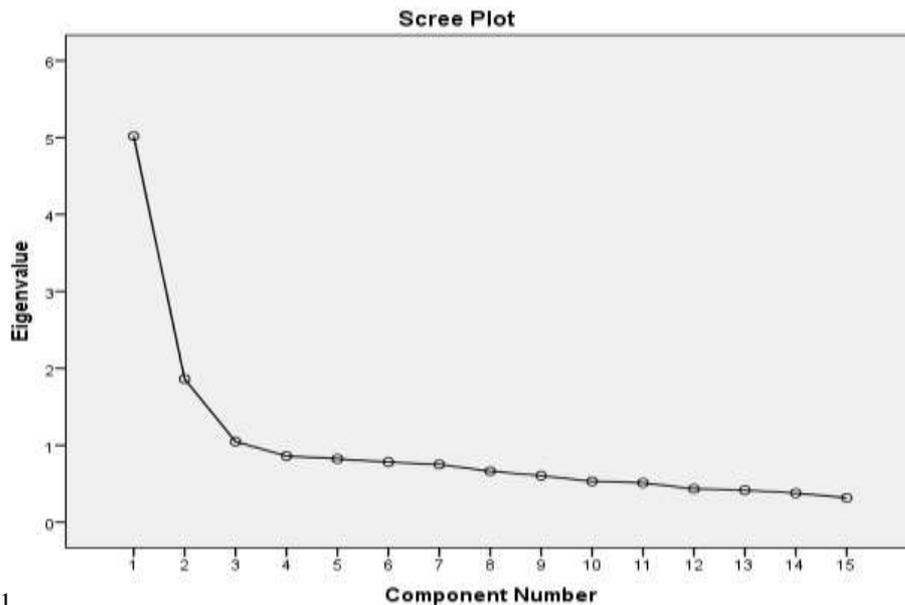


Table 1.
Keiser Meyer Olkin Value of The Scale

Keiser- Meyer-Olkin Measure of Sampling Adequacy	,879
Sig.	,000



According to factor analysis, 10 statements (3, 4, 6, 9, 11, 13, 21, 23, 24, 25) which had factor weights under 0.40 or were under two factors both were excluded from the scale. So, after the first analysis, the scale remained with 15 statements under two factors. Factor 1 refers to positive side of the privatization while “Factor 2” to negative side. The 20th statement was expected to be under the factor 1 before the analysis. But it was seen that the spread of private insurances is perceived as a negative situation by participants. So, the statement was accepted as under “Factor 2”. The loading of statements is shown in the table below.

Table 2
Factor Weights of Statements

Statements	Components		
	1	2	Alpha
10. The quality of health services rises with the privatization of public health institutions.	,770		
16. Hospitals work more efficiently with the privatization of public health institutions.	,736		
8. Health workers are paid more with the privatization of public health institutions.	,734		0,848
1. The privatization of public health institutions has benefits for public.	,707		
5. The number of health workers rises with the privatization of public health institutions.	,677		
7. Equity and fairness will be provided via privatization of public health institutions.	,667		
12. More people can benefit from health services with the privatization of public health institutions.	,621		
2. Public institutions work with over staff and inefficiently.	,560		
14. Poor people can't access to health services with the privatization of public health institutions.		,700	
22. Health expenses must be compensated by taxes.		,683	
18. Out of pocket payments rise with the privatization of public health institutions.		,660	
20. The privatization of public health institutions cause rising in the private health insurances.		,647	0,703
19. Health workers will have to work under more dangerous conditions in terms of labor health and safety with the privatization of public health institutions.		,513	
17. Public health institutions must not be transferred to the private sector completely.		,477	
15. Health expenses of a country rise with the privatization of public health institutions.		,428	

Internal Consistency Reliability of the Scale

Reliability analysis indicates the consistency level of a scale. For the scale reliability, as statements can be split into two parts, the split half method was used. Split half was performed to revised scale which includes 15 statements. According to results, the scale is reliable at the high rate as shown in the table

below. The Cronbach's Alpha of the F1 is 0,848 and F2 is 0,703. And there is a negative correlation between forms (-, 418).

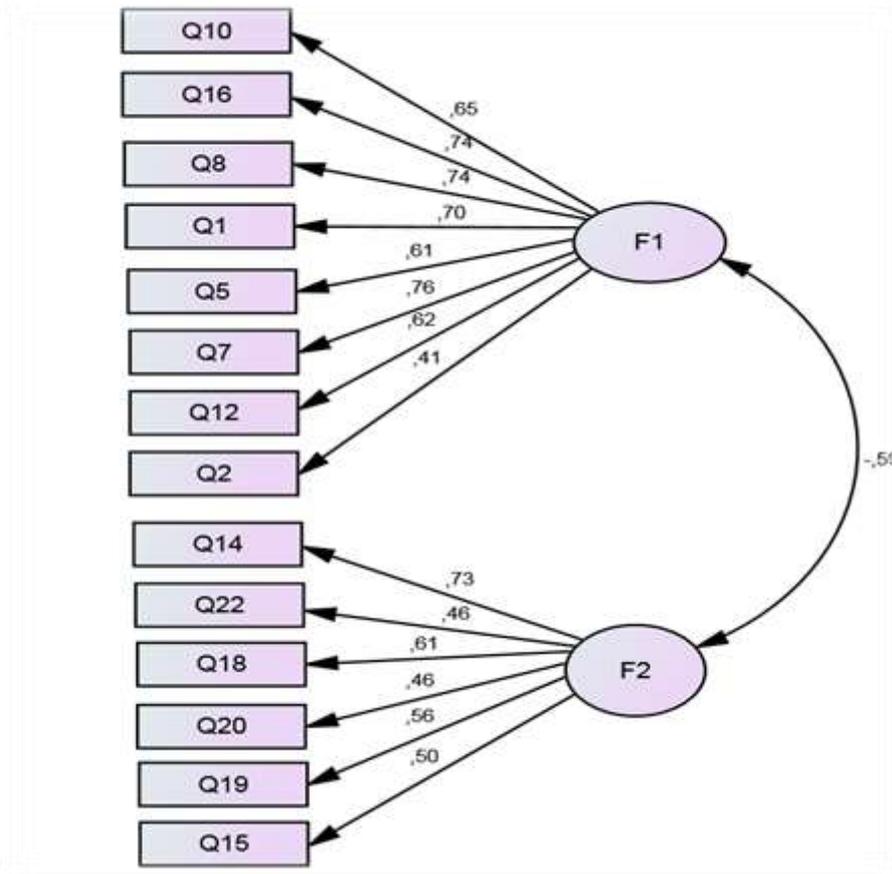
Table 3
Reliability Analysis Results

Cronbach's Alpha	Part 1	,848
	Part 2	,703

Confirmatory Factor Analysis

After the EFA, "Confirmatory Factor Analysis" (CFA) was performed using IBM SPSS Amos 23.0. If the two-factor structure that was obtained from EFA has a good fit with the CFA results, then it can be said that the same structure will be confirmed. According to results, the two factor model is confirmed and fit to data. But a statement (Q17) which has lower load than 0.40 was excluded from the model. So, ultimately scale has 14 statements which distribute in two factors as; F1: 10, 16, 8, 1, 5, 7, 12, 2, F2: 14, 22,18, 20, 19, 15. According to results the model does fit data adequately (Chi Square: 168,041, CMIN/DF: 2,241, GFI: 0,927, AGFI: 0,898, CFI: 0,930, RMSEA: 0,063, PCLOSE: 0,049).

Graph 2
Confirmatory Factor Analysis





GFI (Goodness of Fit Index) and AGFI (Adjusted Goodness of Fit Index) were developed by Jöreskog and Sörbom. GFI was developed to evaluate model fit regardless of sample size. GFI indicates to what extent the model measures covariance matrix and it is considered as the sample variance explained by the model. AGFI is a kind of readjusted GFI for the number of parameter estimates (Çokluk et al, 2010). GFI and AGFI should be close to each other. Good fit values are 0.95-1 and 0.90-1 respectively. While 0.90-0.95 is acceptable for GFI, 0.85-0.90 is acceptable for AGFI (Schermelleh et al., 2010; Waltz et al., 2010) . In the study they were found to be 0,927 and 0,898 respectively. CFI (Comparative Fit Index) represents the ratio between the discrepancy of this target model and the discrepancy of the independence model. Roughly, the CFI thus represents the extent to which the model of interest is better than the independence model. According to Wang and Wang (Wang & Wang, 2012) minimum CFI should be 0.90 to be acceptable fit and in this study it was found to be 0.93. RMSEA (Root Mean Square Error of Approximation) was developed by Steiger and Lind. It is used to determine covariance of the population in non-central χ^2 distribution. Unlike GFI and AGFI, RMSEA should be close to 0, but values up to 0.08 can be accepted. In the study it was found to be 0.063 (Çokluk et al, 2010; Hooper et al., 2008). χ^2/DF was found to be 2.241 and it is acceptable between 2 and 3 (Moss, 2016).

Table 4
CFA Results

Index	Value
Chi Square	168,041
DF	75
CMIN/DF	2,241
GFI	,927
AGFI	,898
CFI	,930
RMSEA	,063

It is observed that F1 includes the statements that refer to advantages of privatization and F2 includes the ones that refer to disadvantages of privatization at the end of the factor analysis, So, F1 can be called as “Positive Side of Privatization” and F2 as “Negative Side of Privatization”.

Conclusion

According to this study, a new scale has been developed about perceptions of health staff on privatization and reliability and validity of scale been conducted through exploratory and confirmatory factor analysis.

The content validity of the scale was found as relevant for the study ($CVI \geq 0.87$). Moreover, face validity score reflected that statements can be understood clearly (90%). The Keiser-Meyer-Olkin Measure of Sampling Adequacy indicates that sample is useful and suitable for factor analysis process (0,879). Two factors were obtained about scale: Factor 1- Positive side of the privatization; Factor 2- negative side of the privatization. According to split half method, the scale is reliable at high rate. Cronbach Alpha value of F1 and F2 are 0,848 and 0,703 respectively. CFA results show that the model

does fit data adequately (Chi Square: 168,041, CMIN/DF: 2,241, GFI: 0,927, AGFI: 0,898, CFI: 0,930, RMSEA: 0,063, PCLOSE: 0,049). The advantage of this study is in using of a sample which consists of all levels of health service institutions.

The results show that this scale presented high internal consistency and can be used to determine the perceptions about privatization. It will help the researchers to evaluate the perceptions of health staffs about privatization during next studies.

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