Original Article

Psychometric Properties of the Greek Version of the «Kuopio University Hospital Transformational Leadership Scale» (KUHTLS)

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Abstract

Background: The successful practice of nursing care requires effective management of the available resources. Every nurse has to take initiatives and exploit opportunities for improving the operation of the nursing team.
Aim: Translation, cultural adaptation and checking the reliability of the Greek version of the KUHTLS.
Material and methods: The Greek version of the KUHTLS is an anonymous self-administered scale, containing 48 closed questions, with a 5 point Likert scale responsive options. Data were collected from 315 nurses working in the Hospitals of Paphos and Nicosia, while 60 nurses completed both the test and the retest questionnaire. Exploratory factor analysis and Confirmatory Factor Analysis, were performed for checking the construct validity of the questionnaire. The test–retest reliability and the internal consistency were also examined. Statistical analysis performed by the use of IBM SPSS Amos 22.0. Statistical significance level was set at p=0.05.
Results: The questionnaire translated into Greek and twelve factors were initially exported, which consolidated under conceptual coherence in 7 factors, corresponding to the original questionnaire's subscales. The Cronbach-α coefficient for the overall questionnaire was 0.95, while for the subscales were: Decision 0.72, Appreciation 0.73 Growth 0.80, Justice 0.70, Performance 0.81, Individuality 0.83 and Administration 0.86. The ICC and Pearson r was p <0.001 for all the questions. CFA confirmed the seven factor construction. The final Greek version of the questionnaire includes 47 questions. The mean age of the participants was 31.37 years. The highest mean value was observed in the factor "Justice » (3.75 ± 0.93).
Conclusions: The questionnaire is a reliable tool for assessing the Transformational Leadership in the Greek speaking population. Further studies are recommended for refining the instrument. The multidimensionality of nursing care and the modern trends of Nursing require change and transformation in nursing leadership styles. The present study contributes to the understanding of the factors that favor or impede the exercise of nursing leadership.

Key Words: Kuopio Transformational leadership scale, translation, cultural validation, test-retest reliability

Introduction

The successful practice of clinical and nursing care requires the effective organization and management of the available human resources. Both manager nurses and staff nurses have to take initiatives and exploit opportunities for improving the operation of the nursing team and achieving the objectives of their organization. Leadership qualities, which include a number of strategies depending on circumstances and needs, are required in order to increase the nurses' productivity and resolve functional issues and conflicts. The role of the organization leadership in solving problems and promoting the objectives of the hospital is crucial, since it can improve personnel engagement, communication in the organization, teamwork and the organizational climate which finally influence positively patients outcomes. (Enwereuzor, Ugwu & Eze, 2016; Wong, Cummings & Ducharme, 2013).

Leadership and its effective practice have dominated the scientific research. The terms "leadership" and "leader" refer to a particular combination of personal characteristics, i.e. "a lifestyle", which attracts and inspires others to follow. It is an individual's ability to set targets, but also to invent ways to achieve them. It is considered as a set of behaviors, that a person with a high sense of responsibility and mission and vision for an organization, uses in order to achieve his objectives, by influencing the behavior of his subordinates (Huber, 2014). Many papers published in recent years aimed to analyze the nurses' perceptions about the leadership styles (Herman, Gish, Rosenblum & Herman, 2017; Fischer, 2016; McHugh & Ma, 2014).

Transformational Leadership

The methods used by the leader to influence or persuade his subordinates vary and they can be modified according to the needs and situations. Leadership is influenced by the leader's attitudes towards, people in general, the power he holds and the interest he shows towards the project implementation. It has to be pointed out that no leadership style is effective in all cases and for all leaders. The adoption of the appropriate leadership style depends on time and conditions. The choice of a leadership style depends on the leader's personality, educational background, experience and value system, knowledge of the project and the expectations for his employees, as well as the overall structure and operating philosophy of the organization (Huber, 2014).

A criterion used for the classification of leadership styles is the content of the concept of leadership. Transformational leadership is a kind of leadership in which the leader is not limited by the perception of his team members and thusly the main goal is to work in order to change or transform the needs of the members of the group / the subordinates. This creates a sense of purpose and excitement, but also a vision of new ambitions, by making them (the subordinates / the team members) partakers in this idea (Chen, Wang, Chang & Hu, 2008). This is achieved based on specific personality traits of the leader, which include mental readiness, personalized approach (no generalization), the adequacy of knowledge of a subject / science sector, high levels of energy, risk taking, the use of practices that lead subordinates to think independently, along with a charismatic personality. The transformational leadership model is characterized by idealized influence, inspirational motivation, intellectual motivation and individualized consideration as components that influence its effectiveness. (Huber, 2014). The present paper presents the results of cultural validation and of the checking of the reliability of the Greek version of the KUHTLS.

Aim of the study

The aim of the this study was to translate into Greek and to validate the Greek version of the «Kuopio University Hospital Transformational Leadership Scale» - KUHTLS.

Material and methods

Instrument used for the study: As a data collection instrument was used the KUHTLS, a weighted questionnaire derived from the Department of Nursing Science, University of Eastern Finland and the University Hospital of Kuopio (Kvist et al. 2012). The questionnaire is self-administered, that ensures the anonymity of the participants and has been translated into English by the creators of the original one. The English version of the questionnaire consists of 10 items about the demographic and professional characteristics of the participants along with 54 five-point Likert scale items on the subjects' responsive options (1 strongly disagree, 5 strongly agree). The 54 items were primary

divided into 8 factors: (1) Decision making (6 items), (2) Appreciation (4 items), (3) Development (8 items), (4) Fairness (4 items), (5) Work efficiency and outcomes (12 items), (6) Individuality (5 items), (7) Position of the Unit Director (4 items) and (8) Nursing Director (11 items). However, a structure of 5 factors has been also suggested (Eneh, Vehviläinen-Julkunen & Kvist, 2012).

Scale's translation into Greek and cultural adaptation: For reaching a reliable cross-cultural validation and translation of the KUHTLS two independent bilingual translators translated the scale from English into Greek. It was avoided a word to word translation because this form of translation fails to take into account linguistic and cultural differences (Hanrahan et al., 2015).

For obtaining the final format of the scale an agreement was reached among the two translations of the instrument and a successful back translation by a third native English speaker was made. No differences were observed during the comparison of the translated Greek version and the original English scale.

Moreover an overall evaluation of the translated scale was made by a pilot study. A purposive sample of 6 nurses working in hospitals of Cyprus were asked to report in a special form their comments on each one question regarding the clarity and the cultural acceptability of the questions, about the appropriateness of wording used and the overall easiness on understanding the language of the scale. Minor phrasal corrections were made to the questionnaire taking into account the 6 nurses' suggestions.

The sample and data collection: The sample selection procedure chosen was convenience sampling. Data were collected from nurses working in the Hospitals of Paphos and Nicosia. Of the 400 distributed questionnaires (in the Hospital of Nicosia 250 and in the Hospital of Paphos 150), which were administrated by the investigators through liaison with people of the study, 315 fully completed questionnaires were returned (190 from the Hospital of Nicosia (response rate=86.3 per cent) and 125 from the Hospital of Paphos (response rate=83.3 per cent). Participants were working in different clinical departments (e.g. cardiologic, intensive care unit, surgical, orthopedics). Using the test-retest method sixty (60) participants filled out again the same questionnaire 15 days later.

Ethical Issues

The research protocol was approved by the University. Then it was submitted to the Ethics Committee of the Ministry of Health of Cyprus which granted permission for the distribution of the questionnaire to the nursing staff of hospitals of Paphos and Nicosia (YY5.34.01.76E/0157/2013). The nursing staff was informed about the purposes of research, the voluntary participation and the anonymity of the participants who were asked to participate. Those who accepted to participate in the research signed a consent form which was given to them to fill out. Additionally, permission to use the instrument in our study was granted by Professor Katri Vehviläinen-Julkunen, the Head of the research team, which developed the scale.

Statistical Analysis: Descriptive and inferential analysis was performed. Descriptive characteristics such as mean values, standard deviations, frequencies and percentages were calculated for the demographic and professional characteristics. The assumptions of normality, homogeneity of the sample were checked. Statistical analysis was performed with IBM SPSS Amos 22.0. The two-tailed significance was set at ≤ 0.05.

Reliability: The reliability of the Greek translation of KUHTLS was assessed in two ways. The internal consistency was evaluated through Cronbach's alpha coefficient (Trizano-Hermosilla and Alvarado, 2016). The test-retest reliability was assessed through Pearson's correlation coefficient between the initial and the second scoring of the scale and intraclass correlation coefficient with a confidence interval stated at the 95% confidence level.

Factor structure: The Exploratory Factor Analysis (EFA) is a variable reduction technique which identifies the number of latent constructs and the underlying factor structure of a set of variables. It has been used, traditionally, to explore the possible underlying factor structure of a set of observed variables without imposing a preconceived structure on the outcome (Field, 2013).

As the underlying structure of the research tool has been neither definitely determined

previously, nor applied or tested in the Greek population, we aimed to identify the underlying factor structure in the study population with EFA, as if this particular questionnaire was applied for the first time ever. EFA was conducted in order to assess the construct validity of the questionnaire. This was applied using of Principal Component Analysis with Varimax rotation. Factor loadings > 0.35 and eigenvalues > 1 were considered as acceptable. The EFA was followed by the Confirmatory Factor Analysis (CFA), which was performed by using IBM SPSS Amos 22.0.

Results

Sample characteristics

Demographic and job characteristics of the participants are presented in Table 1. Male nurses were 51.4 % of the sample and 60.3% were working in the Hospital of Nicosia. The mean age of participants was 31.37±9.05years. The majority (59.3 %) worked in internal medicine and surgical departments. 61.2 % were permanent employees and a 97.1 % of the respondents were working in all shifts. The average total work time experience was 10.78±8.81 years, while time experience in the current unit was 6.81±6.40 years

Reliability

Pearson's correlation coefficients for the 54 items were moderate to fairly high (from 0.300 to 0.980) with the exclusion of six items (4, 14, 22, 27, 28 and 31) which showed very low Pearson's correlation coefficients and they were not included in the final Greek version of the scale. The rest items showed statistical significance ($p < 0.001$), indicating high reliability of the scale.

Repetitiveness and test-retest reliability

The internal consistency of the scale was also assessed by Pearson's correlation coefficient, while the reliability of the test -retest was assessed with the interclass correlation coefficient (ICC). Regarding the latter and for all the questions in the questionnaire excellent average inter correlations values were found: ICC=0.958 (0.939-0.973) and $p<0.001$. Regarding each item's ICC 11 items showed an ICC that was above 0.800 indicating also the high reliability of the scale.

Factor analysis

Exploratory Factor Analysis

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy applied resulted in the value 0.918 indicating that the collected data were suitable for further analysis (Munro, 2005). The Bartlett Test of Sphericity applied resulted to the value of 7885.555 ($p<0.0005$). By the exploratory factor analysis applied twelve (12) factors were initially exported, that interpreted 60.73% of the total variance with eigenvalues ranging from 1.050 to 17.556. Further study of the factor loadings, given that factors with no item loadings below 0.35, no or few item crossloadings, or fewer than three items has the best fit to the data, and taking into account the conceptual coherence along with satisfactory ICC and Cronbach's alpha coefficient (>0.60), resulted in seven (7) factors. The seven factors were derived after correcting for the best possible Cronbach's alpha coefficient and the closest conceptual coherence.

The factors "Appreciation" and "Nursing Director" fully corresponded to the same factors of the original English scale. The factors "Decision making", "Development", "Fairness" and "Work efficiency and Outcomes" corresponded to the same factors of the initial English questionnaire with the omission of the item 4 for the first factor, the item 14 for the second item, the item 22 for the third factor and the items 27, 28 and 31 for the fourth factor. The factor "Empowerment" comprises "Individuality" and "Position of unit director", due to considerably higher Cronbach's alfa coefficient of the new scale in comparison with the generic ones (a=0.69 for "Individuality" and a=0.72 for "Position of unit director") and underlying conceptual coherence of their items.

The Cronbach's alpha coefficients for the seven factors were as follows:

Factor 1: Decision making = 0.72,

Factor 2: Appreciation = 0.73,

Factor 3: Development= 0.80,

Factor 4: Fairness= 0.70,

Factor 5: Work efficiency and Outcomes = 0.81,

Factor 6: Empowerment= 0.83, and

Factor 7: Nursing Director= 0.86.

The Cronbach's alpha coefficient for the whole questionnaire was 0.95.

Loadings in the seven final factors, after applying Varimax Rotation Analysis, are listed in Table 3.

Table 1. Demographic and professional characteristics of the sample

Parameters	N	%	Mean	SD
Gender				
Males	162	51.4		
Females	153	48.6		
Location of the Hospital				
Paphos	125	39.7		
Nicosia	190	60.3		
Age (years) (N=315)			31.37	9.05
• <31 yrs	197		25.78	2.89
• 31-40 yrs	64		34.93	3.03
• 41-50 yrs	34		45.50	2.86
• 51-60 yrs	17		54.58	2.20
Department				
• Pulmonary	5	1.7		
• Haematology	16	5.1		
• Pathology	77	24.6		
• Surgical	109	34.7		
• Cardiology	27	8.5		
• Intensive care unit	35	11.0		
• Orthopedics	27	8.5		
• Otorhinolaryngology	19	5.9		
Employment status				
• Permanent	192	61.2		
• Temporary	123	38.8		
Working shift				
• Morning	9	2.9		
• All the shifts	306	97.1		
Job experience in current work place (in years)			6.81	6.40
Overall job experience (in years)			10.78	8.81

Table 2. Repetitiveness and test-retest reliability

Questions	Pearson r	ICC**	p
My unit director			
Decision-making:			
(1) Listens to the opinions of the staff in decision making	0.313	0.460	0.008
(2) Decisions are based on up-to-date knowledge	0.353	0.930	0.001
(3) Explains decisions	0.523	0.687	<0.001
*(4) Is logical with work-related decisions**	*0.220**	*0.357*	*0.120*
(5) Is fair on every employee considering work-related decisions	0.954	0.910	<0.001
(6) Gives information about decisions and their influences quickly	0.921	0.941	<0.001
Appreciation:			
(7) Is friendly to the staff	0.359	0.528	0.001
(8) Respects the rights of the staff	0.329	0.495	0.020
(9) Work is reliable	0.426	0.597	0.002
(10). Appreciates each employee	0.565	0.722	<0.001
Development:			
(11) Gives information about education and development possibilities	0.585	0.738	<0.001
(12) Motivates each employee to develop	0.317	0.487	<0.001
(13) Encourages life-long learning	0.636	0.597	<0.001
*(14) Discusses regularly with each employee about development goals in a development discussion**	*0.002**	*0.004*	*0.989*
(15) Regularly gives feedback about work performances	0.399	0.569	<0.001
(16) Awards work development	0.927	0.933	<0.001
(17) Plans work with a development view for everyone	0.917	0.926	<0.001
(18) Feedback given motivates to develop further in work	0.922	0.881	<0.001
Fairness:			
(19) Is fair in educational issues up-to-date knowledge	0.466	0.636	<0.001
(20) Is fair in workload issues	0.711	0.831	<0.001
(21) Is fair in planning work shifts	0.677	0.808	<0.001
*(22) Awards for work fairly **	*0.252**	*0.401*	*0.078*
Work efficiency and outcomes:			
(23) Guides to work efficiently	0.505	0.670	<0.001
(24) Is goal-orientated	0.332	0.497	0.014
(25) Creates challenging goals for work	0.533	0.695	<0.001
(26) Ensures the high quality care of the unit	0.640	0.780	<0.001
*(27) Instructs to pay attention to work safety**	*0.164**	*0.281*	*0.255*
*(28) Enhances work efficiency by unifying work methods**	*0.266**	*0.420*	*0.062*
(29) Uses the unit's evaluation knowledge to develop work	0.494	0.601	0.001
(30) Motivates to develop unit's work based on the evaluation knowledge	0.410	0.581	0.003
*(31) Instructs to evaluate work outcomes**	*0.247**	0.396	0.083
(32) Has a long-term perspective for work	0.486	0.654	<0.001
(33) Is genuinely interested in the well-being of the staff	0.581	0.735	<0.001
(34) Promotes co-operation in the unit by example	0.776	0.884	<0.001

Individuality:			
(35) Makes work personally suitable for each employee	0.450	0.620	<0.001
(36) Encourages everyone to personal development in work	0.329	0.495	0.020
(37) Enables everyone's development in the unit	0.650	0.788	<0.001
(38) Has positive attitudes to employees of different ages	0.503	0.665	<0.001
(39) Utilizes the staff's personal skills and qualities	0.451	0.625	<0.001
Position of the unit director:			
(40) Bravely shares views and opinions in multiprofessional co-operation	0.467	0.635	<0.001
(41) The work input is easy to appreciate	0.525	0.686	<0.001
(42) The work input is appreciated by the whole staff of the unit	0.491	0.657	<0.001
(43) Is a respected leader also outside the unit	0.435	0.646	<0.001
Nursing director			
(44) is a powerful director in her division.	0.330	0.495	0.021
(45) is equal with other members of management in the division.	0.463	0.639	0.001
(46) bravely shares views and opinions in multiprofessional co-operation.	0.347	0.545	0.016
(47) is fair in decision-making.	0.370	0.539	0.002
(48) uses evidence-based knowledge in decision-making.	0.426	0.597	<0.001
(49) has reliable work input.	0.593	0.729	<0.001
(50) understands nurses of different ages.	0.463	0.623	0.001
(51) has a clear view for work development.	0.496	0.663	<0.001
(52) motivates and supports the unit director to develop work.	0.911	0.902	<0.001
(53) is a visible director in the strategic leadership of the hospital.	0.928	0.905	<0.001
(54) is a visible leader in the equalization of work in the hospital.	0.475	0.643	<0.001

* Italics show items with very low reliability which were excluded by the final Greek version of the scale

** ICC: Intraclass Correlation Coefficient

Table 3. Loading of the factors of the final Greek version of the scale*

	Factors						
Question	**Decision making**	**Appreciation**	**Development**	**Fairness**	**Work efficiency and outcomes**	**Individuality**	**Position of the unit director**
1. (1). Listens to the opinions of the staff	.524						
2. (2). Decisions are based on up-to-date knowledge up-to-date knowledge	.534						
3. (3). Explains decisions	.717						
*(4). **							
4. (5). Is fair on every employee considering work-related decisions	.708						
5. (6). Gives information about decisions and their influences quickly	.652						
6. (7). Is friendly to the staff		.351					

7. (8). Respects the rights of the staff		.358					
8. (9). Work is reliable		.386					
9. (10). Appreciates each employee		.612					
10. (11). Gives information about education and development possibilities			.657				
11. (12). Motivates each employee to develop			.572				
12. (13). Encourages life-long learning			.477				
*(14). **							
13. (15). Regularly gives feedback about work performances			.437				
14. (16). Awards work development			.421				
15. (17). Plans work with a development view for everyone			.421				
16. (18).Feedback given motivates to develop further in work			.397				
17. (19).Is fair in educational issues				.388			
18. (20).Is fair in workload issues				.447			
19. (21).Is fair in planning work shifts				.477			
*(22). **							
20. (23).Guides to work efficiently					.393		
21. (24).Is goal-orientated					.663		
22. (25).Creates challenging goals for work					.470		
23. (26).Ensures the high quality care of the unit					.683		
*(27).**							
*(28). **							
24. (29).Uses the unit's evaluation knowledge to develop work					.566		
25. (30).Motivates to develop unit's work based on the evaluation knowledge					.573		
*(31).**							
26. (32).Has a long-term perspective for work					.441		
27. (33).Is genuinely interested in the well-being of the staff					.620		
28. (34).Promotes co-operation in the unit by example					.451		
29. (35).Makes work personally suitable for each employee						.638	
30. (36).Encourages everyone to personal development in work						.546	
31. (37).Enables everyone's development in the unit						.549	
32. (38).Has positive attitudes to employees of different ages						.599	
33. (39).Utilizes the staff's personal skills and qualities						.540	
34. (40).Bravely shares views and opinions in multiprofessional co-(operation						.516	
35. (41).The work input is easy to appreciate						.468	
36. (42).The work input is appreciated by the whole staff of the unit						.666	

37. (43).Is a respected leader also outside the unit						.557	
38. (44).Is a powerful director in her division.							.577
39. (45).Is equal with other members of management in the division.							.568
40. (46).Bravely shares views and opinions in multiprofessional co-operation.							.376
41. (47).Is fair in decision-making.							.450
42. (48).Uses evidence-based knowledge in decision-making.							.571
43. (49).Has reliable work input.							.654
44. (50).Understands nurses of different ages.							.587
45. (51).Has a clear view for work development.							.502
46. (52). Motivates and supports the unit director to develop work.							.548
47. (53).Is a visible director in the strategic leadership of the hospital.							.753
48. (54).Is a visible leader in the equalization of work in the hospital.							.501
Cronbach's alpha coefficients	0.72	0.73	0.80	0.70	0.81	0.83	0.86
Cronbach's alpha coefficient for the total scale	0.95						

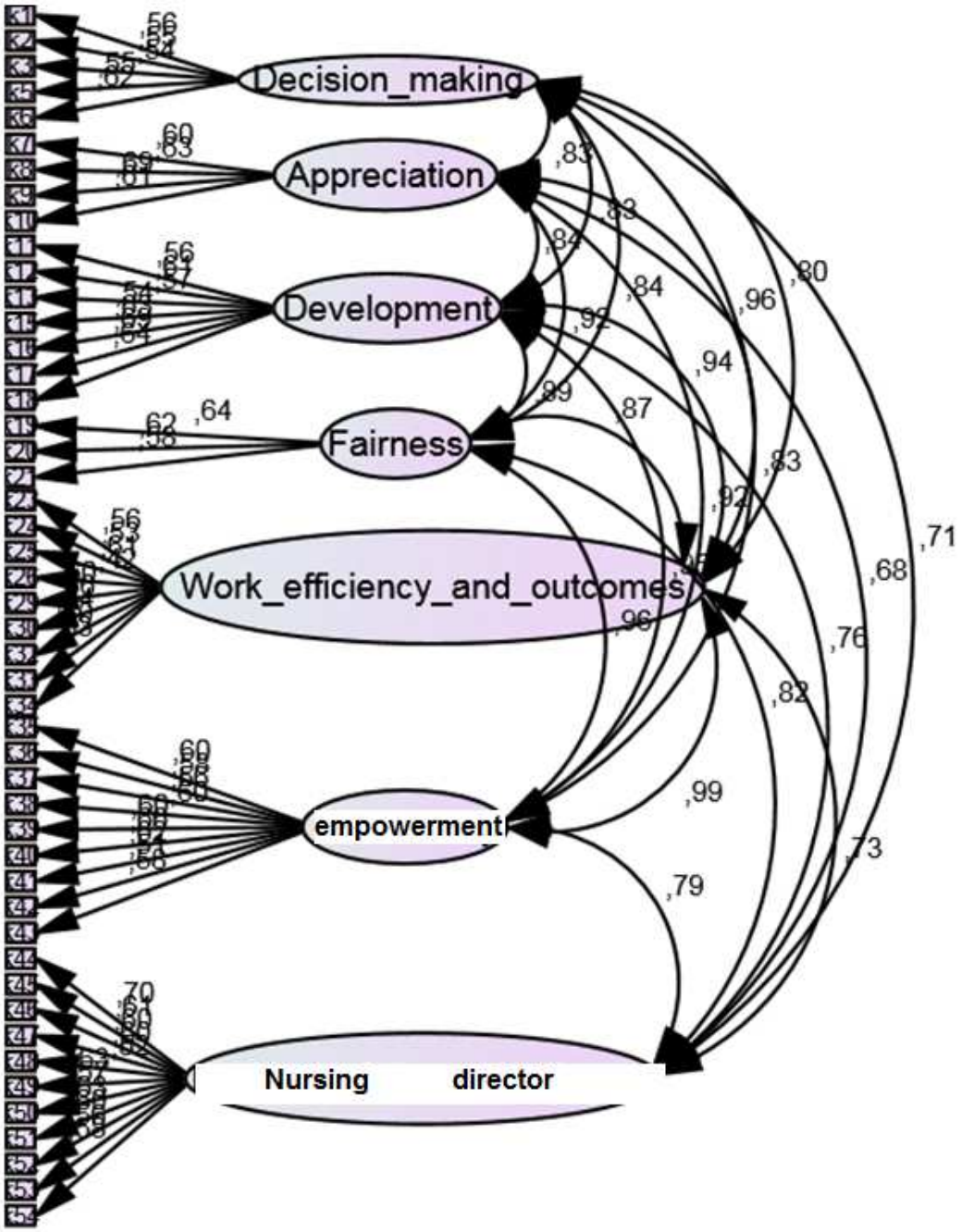
***loadings for omitted initial questions are not presented**

Confirmatory Factor Analysis

Regarding CFA, the model fit indices showed a rather good fit of the data on the model which can be further improved by examining high covariances between error terms of the common items of the different dimensions. The RMSEA index equaled 0,061 with a 90% C.I (0,058 - 0,066) and the Standardized RMR equaled 0,526 which was close to ideal. The Goodness of fit index (GFI) index equaled 0,797 and was not as close to the acceptable level of 0,9 as well as and the Comparative Fit index (CFI) which equaled 0,824. The CMIN/DF value was equal to 2,191 which showed a good fit of the data to the model. Since almost no correlation (except one) exceeded the estimate 0.7, an "unidimensional" understanding of the questionnaire by the respondents is possible.

Scale's descriptive statistics

The descriptive statistics of the scale's factors regarding mean and SD were the following: Decisions: mean 3.62 ± SD 0.83. Appreciation: 3.68 ± SD 0.87. Development: 3.72 ± SD 0.81. Fairness: mean 3.75 ±SD 0.93. Performance: mean 3.72 ± SD 0.74. Empowerment: mean 3.68 ± SD 0.78, and Nursing Director: mean 3.73 ± SD 0.76. Minimum value 1, maximum value 5 for all the subscales. All the subscales indicate that a very good Transformational Leadership is applying picturing the transformative nature of the hospital leadership, while the highest mean value was observed in the factor "Fairness" (3.75 ± 0.93).



Discussion

The present study's results revealed a high internal reliability for the seven subscales of the KUHLS and the test-retest measurement was relatively high.

This indicates that the KUHLS obtained a high acceptability by the Cypriot nurses and a satisfactory proportion of nurses completed the questionnaire twice. The Cronbach's alpha exceeded 0.70 in all questions while the overall Cronbach's alpha of the scale was 0.95 and therefore the overall test–retest reliability of the scale provides an indication that Cypriot nurses reached a good understanding of all the questions included in the scale.

The results of the Pearson's correlation coefficient suggested that any repetition of the test would be likely to obtain the same results.

This research showed that the factor "Development" and "Justice" are also highly evaluated indicating that leadership style affects the perception of nurses for ongoing growth and fairness. managers are evaluated positively by nurses regarding transformational leadership. Particularly the ethos of the managers is positively evaluated as this is reflected by the high evaluation of "fairness" and "appreciation'' subscales. The factor "development" is also highly evaluated indicating that leadership style affects the perception of nurses for ongoing growth.

Regarding the validity and reliability of the Greek version of the KUHTLS, a different structure from that of the initial English questionnaire was found. More specifically, some of the factors of the original scale were retained and fully corresponded to the same factors of the original English scale. Nevertheless, the factors "Decision making", "Development", "Fairness" and "Work efficiency and Outcomes" although corresponded to the same factors of the initial English questionnaire some items were omitted. The factor "Individuality" and "Position of the unit director" were unified, under a new factor called "Empowerment", since the Cronbach's alpha coefficient of the new factor was considerably higher (0.83) in comparison with the two generic factors: "Individuality" (a=0.69) and "Position of unit director" (a=0.72). As internal consistency reliability is a measure of how well the items on the test measure the same construct, a higher degree of internal consistency indicates that all of the items of a test measure the same latent variable. Despite the fact that more items may lead to higher Cronbach's alpha coefficient (Tavakol & Dennick, 2011) the items underlying are phrased in a way indicative of the empowerment of employees, implying a conceptual coherence of the two aforementioned generic factors. Empowerment refers to the process by which nurse managers motivate the human resources and mobilize the material ones. Empowerment has a negative impact not only on the nursing personnel's behaviors but and on patients' safety and on the quality of the delivered care (Van Bogaert et al., 2015). The encouragement of efficacy beliefs is intrinsic to transformational leadership frameworks and the influence of transformational leaders on the performance of subordinates is a consequence of how these followers think about themselves and their group (Cavazotte, Moreno & Bernardo, 2013). Transformational leaders know how to manage changes, gain their subordinates' respect due to their clear expectations and their trust to them (Hill, 2017).

Moreover, the high correlations between the proposed factors implicate an unidimensional model, that should be examined in further research. The underlying concept might be the integration of transformation leadership traits and organizational development (Warrick, 2011). Brady Germain and Cummings (2010) revealed that the perception of Canadian nurses about factors that affect their motivation and clinical skills are associated with autonomy and practices of leadership. Negussie and Denissie (2013) found that transformational leadership style significantly affect the nurses' job satisfaction.

Conclusions - Implications for practice

This study highlights the dimensions of the transformational leadership, as it is perceived by the Cypriot nurses while at the same time providing a reference score of a weighted transformational leadership scale in Greek. Future validation studies on nursing staff working in Greek hospitals should be conducted because the KUHTLS was adapted to a specific population focusing on the improvement of the scale. Special attention should be given to items with medium ICCs, as rephrasing might be considered. The results of the study highlight the importance of involving nurses in the nursing process and the importance of the appropriate feedback. The latter becomes necessary because of the different views that individuals have on the different skills they possess (Jeon, Glasgow, Merlyn & Sansoni, 2010; Tsai, 2011).

The multidimensionality of nursing care and the modern trends of Nursing require change and transformation in nursing leadership styles. The present study contributes to the understanding of the factors that favor or impede the exercise of nursing leadership. A nursing manager job includes strategic plans, management and executive functions. However, the unhindered communication with the staff will ensure the achievement of the administration's objectives (Cameron, Harbison, Lambert & Dickson, 2011). This could be aided by the appropriate administrative assistants and partners, who will

facilitate the work of the director, a subject associated with the well-known problem of hospitals understaffing.

The recognition of the views and perceptions of nurses and their participation in decision making will improve the care provided. The anonymous registration of nurses' perceptions about leadership is an effective means to assess the relationship of nurse-leadership that helps create a better working environment.

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