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RESEARCH ARTICLE

EXPLORING THE LEADERSHIP MODELS IN NATIONAL HEALTH SYSTEM IN GREECE

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ABSTRACT

Background: The study aims the analysis of leadership in National Health System. The present study focused at exploring the leadership models based on the answers of Multifactor Leadership Questionnaire by medical and nursing staff at St. Panteleimon, General Hospital of Nicaea Greece. **Methods:** The Multifactor Leadership Questionnaire (M.L.Q) by Avolio & Bass was given and convenience sampling method was used on May 2018. The population of the study was 386 male and female, medical 179 and nursing staff 205. **Results:** The Transformational leadership and intellectual stimulator, followed by idealized influenced- behavior and idealized influence-attributed are the most common answers. The laisser-faire management seems that is less dominant. The nursing staff seems that prefers the Transformational leadership rather than medical and the female population adopts Transformational leadership rather than men. The PhD and MSc owners prefer less passive management and laisser-faire management rather than the rest of the population study. Population with more years of experience prefers Transformational leadership with idealized influenced-behavior or idealized influence-attributed or inspirational motivator or intellectual stimulator rather than the youngest group age of population. **Conclusion:** Finally, the Transformational Leadership and intellectual stimulator, followed by idealized influenced- behavior and idealized influence-attributed are the most common answers.

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INTRODUCTION

The present study aims the analysis of leadership in Hellenic National Health System. It is focused also at exploring the leadership models based on the answers of Multifactor Leadership Questionnaire by medical and nursing staff upon the gender, years of experience, age, level of education-studies, at St. Panteleimon, General Hospital of Nicaea Greece. To test the Multifactor Leadership Questionnaire's reliability and answers internal consistency was used index of reliability Cronbach's Alpha. Kolmogorov-Smirnov was used to test the data's normality. Due to descriptive result presentation was used tables (frequency tables, descriptive tables), charts (pie charts, bar charts). Due to inferential analysis non parametric Mann-Whitney for 2 independent samples was used. To επίπεδο στατιστικής σημαντικότητας για όλους τους ελέγχους ορίστηκε σε κάθε περίπτωση στο 5% (α=0,05). Sample was checked for reliability and normality. The index of reliability Cronbach's Alpha was very high (α=0,799). The normality test Kolmogorov-Smirnov (p<0,05). Due to inferential statistical analysis, non-parametric method used. Statistical Package for Social Science Ver.22. (SPSS) was used for the statistical analysis.

RESULTS

Results of Descriptive Statistics: Demographic elements of the sample. The population study 386. Two hundred five205 (53,4%) nursing staff and 179 (46,6%) doctors.

Table 1. Reliability Index (Cronbach's α) forleadership models (3 scales, 8 subscales) - M.L.Q

Scale/Subscale	Number of questions	Cronbach's alpha Coefficient
Transformational leadership	20	0,845
Idealized Influenced- behavior	4	0,545
Idealized Influence- Attributed	4	0,459
Inspirational motivator	4	0,672
Intellectual stimulator	4	0,671
Individualized consideration	4	0,456
Transactional leadership	12	0,621
Contingent reward	4	0,493
Active management	4	0,582
Passive management	4	0,524
Laisser-faire Leadership	4	0,565
TOTAL	36	0,799

Table 2. Test of Normality Kolmogorov-Smirnov for leadership models (3 scales, 8 subscales) - M.L.Q

SCALE/SUBSCALE	N	Colmogorov-Smirnov z	p-value
Transformational leadership	336	,065	,002
Idealized Influenced- behavior	365	,113	<,001
Idealized Influence- Attributed	366	,090	<,001
Inspirational motivator	362	,092	<,001
Intellectual stimulator	367	,071	<,001
Individualized consideration	367	,082	<,001
Transactional leadership	344	,060	,005
Contingent reward	366	,080	<,001
Active management	360	,068	<,001
Passive management	365	,108	<,001
Laisser-faire Leadership	371	,086	<,001

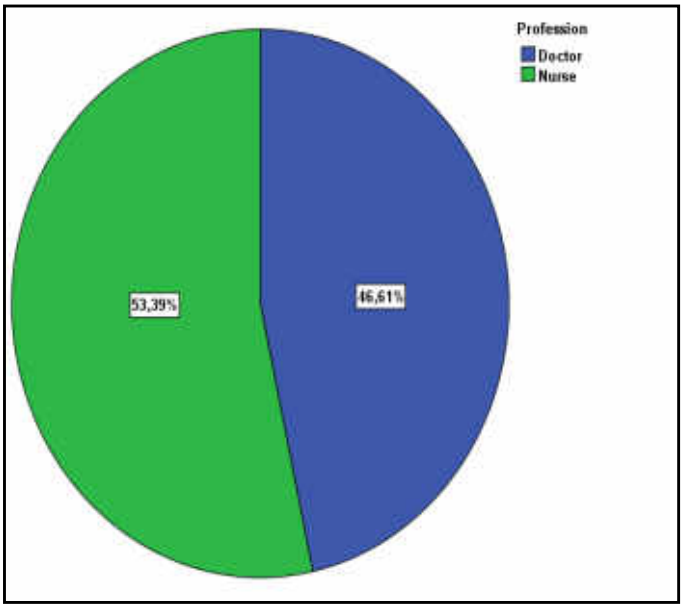

Chart 1. Profession

The sample developed 64,4% female and 35,6% male. Age group 25-35years (36,1%), age group 36-45 years (24,6%), age group 46-55 years (28,3%)and age group 56-65 years (11%).

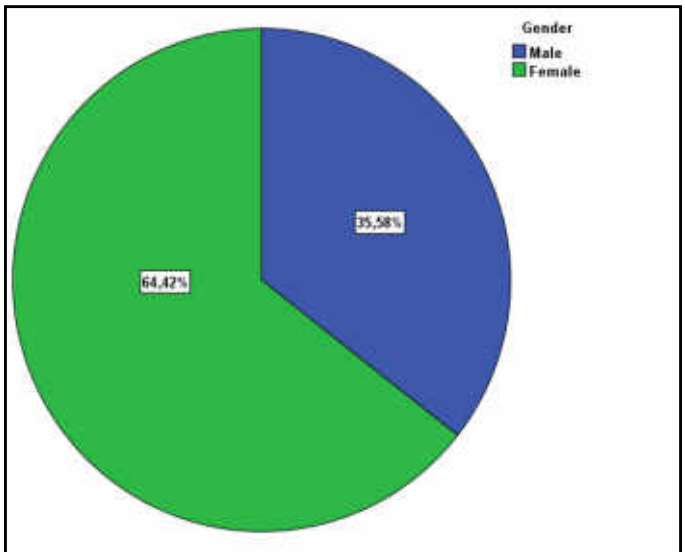

Chart 2. Gender

The majority 78,4% of the population had University studies and 21,6% had PhD, MSc.

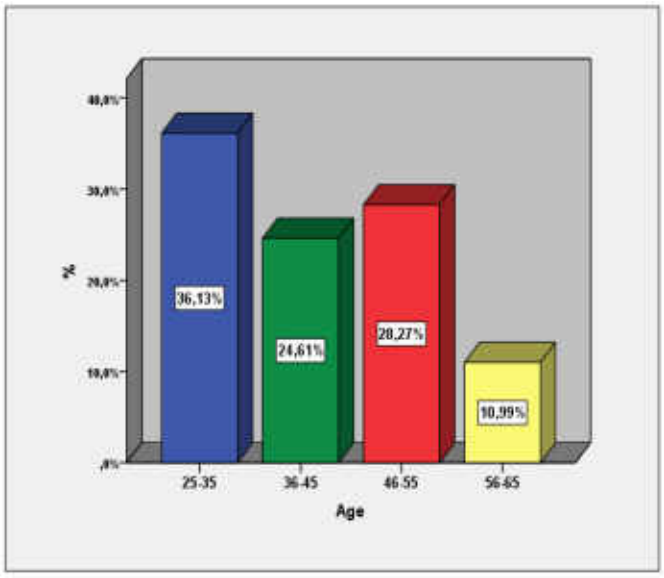

Chart 3. AGE

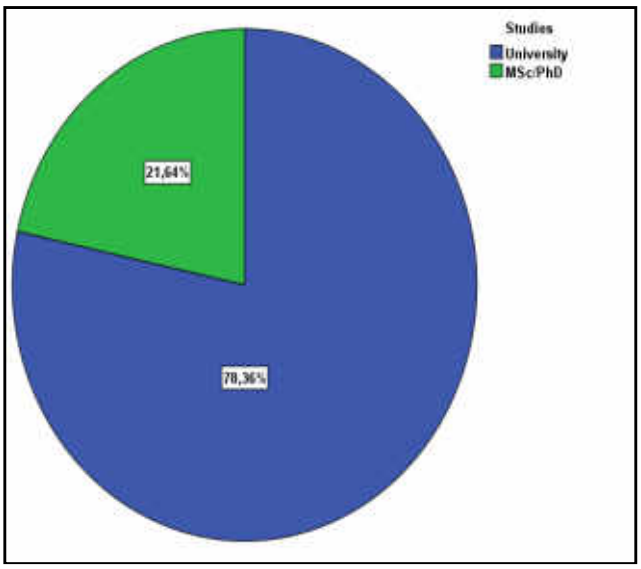

Chart 4. Studies

The 46,1% of the population had 0-10 years of experience, 18,2% 11-20 years of experience and 35,7% had 21-30 years of experience.

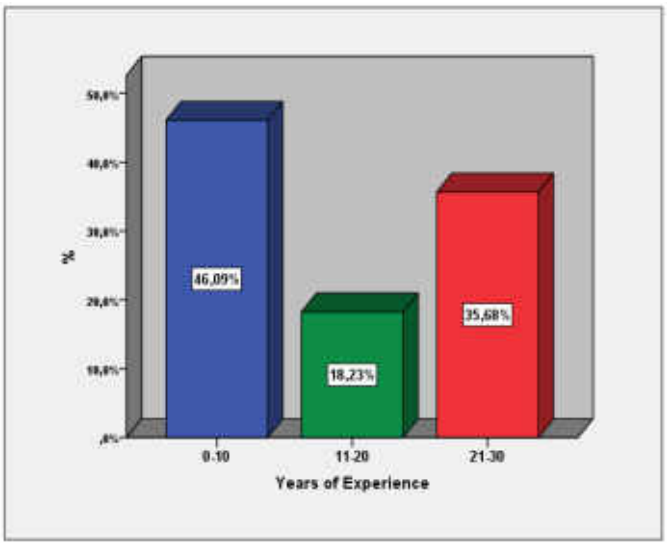

Chart 5. Years of Experience

Table 3. Demographic elements

		N	%
Gender	Male	132	35,6%
	Female	239	64,4%
	Total	371	100,0%
Age	25-35	138	36,1%
	36-45	94	24,6%
	46-55	108	28,3%
	56-65	42	11,0%
	Total	382	100,0%
Studies education level	University	286	78,4%
	Msc/ phd	79	21,6%
	Total	365	100,0%
Profession	Doctor	179	46,6%
	Nurse	205	53,4%
	Total	384	100,0%
Years of experience	0-10	177	46,1%
	11-20	70	18,2%
	21-30	137	35,7%
	Total	384	100,0%

Table 4. Perigraphic elements for leadership models

LEADERSHIP MODELS	N	Min	Max	Mean	Standard Variation
Idealized Influenced- behavior	365	2,50	7,00	5,33	,97
Idealized Influence- Attributed	366	1,00	7,00	5,22	,93
Inspirational motivator	362	1,50	7,00	5,19	1,01
Intellectual stimulator	367	2,25	7,00	5,48	,94
Individualized consideration	367	1,25	7,00	4,90	1,01
Contingentreward	366	1,75	7,00	5,16	,98
Active management	360	1,00	7,00	4,11	1,18
Passive management	365	1,00	6,00	2,80	1,13
Laisser-faire Leadership	371	1,00	6,25	2,69	1,17

Results of Inferential Statistics

Table 5. Perigraphic results Mann-Whitneyfor leadership models (3 scales, 8 subscales) and Profession

SCALE/SUBSCALE	PROFESSION	N	Mean	Standard Variation	Mann-Whitney U	p-value
Transformational leadership	DOCTOR	155	5,1052	,77527	11797,500	,012
	NURSE	181	5,3238	,70531		
Idealized Influenced- behavior	DOCTOR	166	5,1506	,94584	13298,500	,002
	NURSE	198	5,4836	,96909		
Idealized Influence- Attributed	DOCTOR	173	5,2327	,97258	16188,500	,676
	NURSE	192	5,2096	,89501		
Inspirational motivator	DOCTOR	168	5,1012	1,06462	15026,000	,199
	NURSE	194	5,2680	,96187		
Intellectual stimulator	DOCTOR	170	5,3588	,92344	14678,000	,049
	NURSE	196	5,5804	,95218		
Individualized consideration	DOCTOR	173	4,7673	1,04742	14792,500	,059
	NURSE	193	5,0117	,95412		
Transactional leadership	DOCTOR	156	3,9941	,72383	14302,500	,756
	NURSE	187	4,0205	,75774		
Contingent reward	DOCTOR	172	5,0422	1,00476	14684,500	,056
	NURSE	193	5,2655	,95900		
Active management	DOCTOR	166	4,0979	1,15298	15532,000	,619
	NURSE	193	4,1205	1,21248		
Passive management	DOCTOR	169	2,8920	1,08381	14522,500	,050
	NURSE	195	2,7000	1,13989		
Laisser-faire Leadership	DOCTOR	175	2,5429	1,10914	14863,500	,032
	NURSE	195	2,8051	1,18592		

Table 6. Perigraphic results Mann-Whitneyfor leadership models (3 scales, 8 subscales) and Gender

SCALE/SUBSCALE	GENDER	N	Mean	Standard Variation	Mann-Whitney U	p-value
Transformational leadership	MALE	119	5,0710	,74032	10047,000	,007
	FEMALE	206	5,2954	,74964		
Idealized Influenced- behavior	MALE	125	5,1820	,94580	12334,000	,036
	FEMALE	228	5,3980	,98377		
Idealized Influence- Attributed	MALE	129	5,0329	,94702	12012,000	,008
	FEMALE	224	5,3214	,92725		
Inspirational motivator	MALE	127	5,1161	1,03883	13357,000	,413
	FEMALE	222	5,2061	1,01378		
Intellectual stimulator	MALE	126	5,3492	,88717	12589,000	,046
	FEMALE	229	5,5491	,98316		
Individualized consideration	MALE	129	4,6647	1,01958	11482,500	,001
	FEMALE	225	5,0222	,99528		
Transactional leadership	MALE	116	4,0072	,75754	12273,000	,812
	FEMALE	215	4,0178	,75104		
Contingent reward	MALE	127	4,9803	1,00820	12533,000	,047
	FEMALE	226	5,2412	,97606		
Active management	MALE	125	4,0940	1,18358	13436,000	,624
	FEMALE	222	4,1340	1,19307		
Passive management	MALE	124	2,9859	1,21487	12356,000	,050
	FEMALE	228	2,7138	1,08431		
Laisser-faire Leadership	MALE	130	2,5558	1,23313	13079,000	,064
	FEMALE	228	2,7697	1,13521		

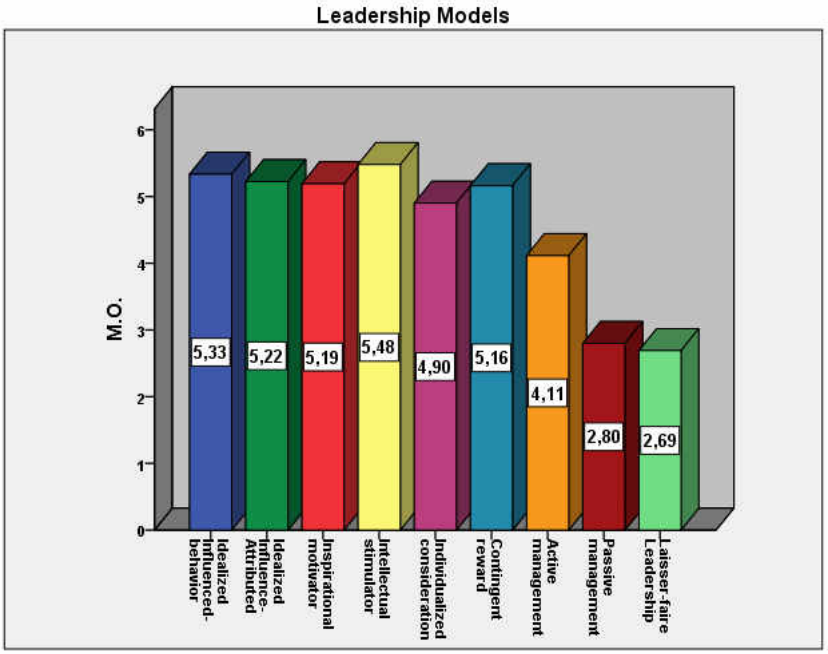

Chart 6. Leadership models

Table 7. Perigraphic results Mann-Whitneyfor leadership models (3 scales, 8 subscales) and Age

SCALE/SUBSCALE	AGE	N	Mean	Standard Variation	Mann-Whitney U	p-value
Transformational leadership	25-45	203	5,0857	,69718	9167,500	<,001
	46-65	130	5,4354	,76684		
IdealizedInfluenced- behavior	25-45	219	5,1804	,95273	12003,000	<,001
	46-65	143	5,5717	,95572		
Idealized Influence- Attributed	25-45	218	5,1067	,90908	12701,500	,001
	46-65	145	5,4000	,93560		
Inspirational motivator	25-45	216	5,0602	1,00312	12375,000	,001
	46-65	143	5,4038	,98578		
Intellectual stimulator	25-45	219	5,3265	,89188	12247,000	<,001
	46-65	145	5,6914	,97406		
Individualized consideration	25-45	219	4,6815	,99332	11193,500	<,001
	46-65	145	5,2241	,94636		
Transactional leadership	25-45	204	3,9105	,70410	11336,000	,003
	46-65	137	4,1582	,78553		
Contingent reward	25-45	221	4,9638	,96698	11050,000	<,001
	46-65	142	5,4525	,93775		
Active management	25-45	214	3,9871	1,14095	13238,000	,030
	46-65	143	4,2902	1,22354		
Passive management	25-45	216	2,8137	1,16552	15589,500	,855
	46-65	146	2,7808	1,07354		
Laisser-faire Leadership	25-45	222	2,7748	1,05797	14076,000	,032
	46-65	146	2,5582	1,31439		

Table 8. Perigraphic results Mann-Whitneyfor leadership models (3 scales, 8 subscales) and Studies (Education Level)

SCALE/SUBSCALE	STUDIES (EDUCATION LEVEL)	N	Mean	Standard Variation	Mann-Whitney U	p-value
Transformational leadership	UNIVERSITY	254	5,2016	,73264	8351,500	,438
	MSc /PhD	70	5,2671	,81034		
Idealized Influenced- behavior	UNIVERSITY	274	5,2892	,99083	9982,500	,704
	MSc /PhD	75	5,3600	,86235		
Idealized Influence- Attributed	UNIVERSITY	275	5,1755	,92629	8927,000	,073
	MSc /PhD	75	5,3400	,96093		
Inspirational motivator	UNIVERSITY	273	5,1612	1,00602	9707,000	,606
	MSc /PhD	74	5,2264	1,01628		
Intellectual stimulator	UNIVERSITY	277	5,4901	,93282	9805,000	,455
	MSc /PhD	75	5,4067	,93701		
Individualized consideration	UNIVERSITY	278	4,8768	,96597	9346,500	,226
	MSc /PhD	74	5,0034	1,16931		
Transactional leadership	UNIVERSITY	258	4,0207	,75815	8572,000	,317
	MSc /PhD	72	3,9363	,68340		
Contingent reward	UNIVERSITY	276	5,1612	,96002	10314,500	,825
	MSc /PhD	76	5,1382	1,08505		
Active management	UNIVERSITY	271	4,0747	1,21037	9783,000	,748
	MSc /PhD	74	4,1858	1,08859		
Passive management	UNIVERSITY	276	2,8469	1,12447	8666,000	,045
	MSc /PhD	74	2,5574	1,02665		
Laisser-faire Leadership	UNIVERSITY	279	2,7661	1,15588	8272,000	,003
	MSc /PhD	76	2,3388	1,14215		

Table 9. Perigraphic results Mann-Whitney for leadership models (3 scales, 8 subscales) and Years of Experience

SCALE/SUBSCALE	YEARS OF EXPERIENCE	N	Mean	Standard Variation	Mann-Whitney U	p-value
Transformational	0-10	152	5,0477	,70484	10359,500	<,001
leadership	11-30	183	5,3664	,75046		
Idealized Influenced- behavior	0-10	166	5,1386	,95802	12977,000	,001
	11-30	198	5,4937	,95536		
Idealized Influence- Attributed	0-10	167	5,1063	,92709	14354,500	,029
	11-30	198	5,3207	,92966		
Inspirational motivator	0-10	163	4,9877	1,04002	12999,000	,001
	11-30	198	5,3523	,96148		
Intellectual stimulator	0-10	168	5,3512	,91365	14224,500	,017
	11-30	198	5,5896	,95812		
Individualizedconsideration	0-10	167	4,5704	,99618	11161,000	<,001
	11-30	199	5,1784	,93282		
Transactional	0-10	157	3,9108	,72243	12466,500	,020
leadership	11-30	186	4,1071	,75262		
Contingentreward	0-10	169	4,9320	,99168	12497,000	<,001
	11-30	196	5,3648	,93656		
Activemanagement	0-10	164	3,9954	1,17830	14020,500	,044
	11-30	195	4,2244	1,17562		
Passivemanagement	0-10	167	2,8084	1,09659	15885,500	,572
	11-30	197	2,7931	1,15784		
Laisser-faire Leadership	0-10	171	2,6944	1,04557	16742,500	,790
	11-30	199	2,6947	1,26235		

Conclusion

Was found that the most frequent leadership model-scale was Transformational Leadership and the most frequent subscale was Intellectual stimulator, Idealized Influenced- behavior and Idealized Influence- Attributed. The leadership model that was less preferred was Laisser-faire Leadership.(Leach, 2005·Bass, 1999). The nursing staff adopted more than doctors Transformational Leadership model. Also Bass presented the same result (1999). Female population of the study adopted more than men subscales of Transformational Leadership. It was found also the same result by Eagly et al., 2003·Dunham, 2000·Bass, 1999. Transformational Leadership is strictly related to influence between leaders and the other members of the team- organization and the desire of the last one to be liketheir leaders. The age population 25-45 years adopted the Laisser-faire Leadership compare to age older population. An explication could be less experience, professionalism immaturity of the younger group of population. The 65 age population group preferred the models of leadership compare to the younger population group. PhD and MSc owners preferred less Laisser-faire Leadership compare to University one. Finally population sample with more years of experience adopt Transformational Leadership model and more precise Idealized Influenced- behavior and Idealized Influence-Attributed, Inspirational motivator and Intellectual stimulator Kearney, seems had the same result on his study (Kearney, 2008). He also mentioned that the relationship between leaders and co-workers was better when the leaders aged more than the others.

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