RESISTANCE TO CHANGE AMONG HEALTHCARE PROVIDERS AT A TEACHING HOSPITAL: BASE LINE DATA

By

Al-Tehewey MM[1], El Nawam AAM[2], Elkholy H[3] and Gabal HA[4]

[1,4]*Department of Community, Environmental and Occupational Medicine, [3]Department of Neurology and Psychiatry, Faculty of Medicine, Ain Shams University, [2]Quality resident, Damanhour Teaching Hospital.*

Abstract

Introduction: Healthcare sector continues to experience significant changes resulting from market shifts and the introduction of new technologies. Employee resistance to change (RTC) has been suggested to be one of the greatest obstacles facing these changes. **Aim of Work:** to measure the level of readiness and resistance to change among healthcare providers in Damanhour Teaching Hospital, and to identify factors affecting them. **Material and Methods:** A cross-sectional study was performed among a sample of 305 healthcare providers using a self-administered questionnaire including socio-demographic data, job details including years of experience in the present job, years of experience since graduation, being a leader and working at the specialized building which joins the model hospital project, Validated Arabic version of Readiness for change scale (RFC), and Validated Arabic version of Resistance to change scale (RTC). **Results:** The studied sample had high readiness for change (RFC) and moderate resistance to change. There was a moderate negative statistically significant correlation between resistance to change and readiness for change scores (r=-0.36, p-value <0.001). Employees who were single or married; worked in a leadership position, or joined the model hospital project were more ready for change. Older employees with longer experience from graduation and who joined the model hospital project were less resistant to change. **Conclusion and Recommendations:** Participants in the current study had high RFC and moderate RTC and both were negatively correlated. Being married, working in a leadership position, and employed in joining the model hospital

project were significant independent factors that affected RFC. Adoption of change-supportive work environment became a fundamental issue; leaders should engage the employee in the organizational planning. Also, identifying employees ready for change and using them as a spark for change as well as early diagnosis and management of resistance to change could pave the way to make change happen.
Keywords: Health care providers; Resistance to change; Readiness for change and Healthcare providers..

Introduction

Sustainable organizational change is a must to develop the growth, success, and survival of any organization (Michel et al., 2013), hence, healthcare organizations are forced to undergo continuous changes to cope with new technologies. Along with this has come pressure to improve effectiveness and efficiency in the treatment by the adoption of evidence-based practices while maintaining patient satisfaction (Narine and Persaud, 2003 and Park et al., 2017) .

Accreditation and improvement of health care quality are continuous processes that need the willingness to change. Organizational change is defined as "the process by which organizations move from their present state to some desired future state to extend their effectiveness" (Gupta and Singla, 2016). Changes in medical facilities are hard to be done. Frequently, only a few medical workers are motivated to changes (Mares, 2018). Furthermore,

change means doubt for persons as it is moving from what is known to the unknown either in the structure of an organization or relationships within the organization (Mittal, 2012).

The success of organizational change depends on the employees chiefly because organizations only proclaim change but implementation is carried out by the employees. Cunningham et al., (2002), stressed that organizations must take care of employee readiness factors to implement the requested change successfully. The readiness concept is defined as "a belief, intention, and attitude regarding the extent to which change is needed" (Cunningham et al.,2002). This concept connects with the employees either to be supportive or resistant which displays the employees' behavioral aspects of change. Also, Readiness for change is defined as "the degree to which individuals within the organization accept and adopt altering the current status" (Rafferty, 2012).

It was found in the literature that

resistance to change among employee is a great obstacle that fails organizational change as change produces anxiety, doubt, and fear in employees so they prefer the current situation. Resistance to change is known to be a behavior which imposes a great effect on the change process, postponing its beginning, hindering its implementation, and increasing its budgets (Zafar et al., 2006). Sources of resistance to change were identified as: (a) reluctance to lose control, (b) cognitive rigidity, (c) lack of psychological resilience, (d) intolerance to the alteration period involved in change, (e) favorite for low levels of stimulation and novelty, and (f) unwillingness to stopped old habits (Oreg, 2003).

Great interests to measure the level of readiness for change and to investigate factors associated with employee readiness for change did arise recently. However, scarce researches have been done to identify influential factors on health care providers' readiness in developing countries.

Aim of Work

To measure individual readiness and resistance to change among healthcare providers at Damanhour Teaching Hospital and to identify factors associated with them.

Materials and Methods

Study design: A cross-sectional study design was used.

Place and duration of the study: Data were collected from healthcare providers at Damanhour Teaching Hospital. The latter is a 3ry level hospital that provides specialized care for patients. This hospital consists of 4 buildings (The Emergency Room building; The Main building; The Critical Medicine building and The Specialized building). The Specialized building was renewed and joined the model hospital project that is considered a strategic change that needs to be managed. The data collection lasted from May until the end of December 2019.

Study Sample: All healthcare providers' categories were legible to be included in the study. Excluded population was laborers and illiterate workers. A stratified random sample of healthcare providers was taken; after categorizing them into strata according to their job category, proportional samples were taken from each category. The job categories included were doctors, nurses, technicians, engineers, and administrative personnel. Pass program was used to calculate the sample size. A result from a previous

study (El-Sayed et al., 2017), showed that there was a negative correlation between readiness and resistance to change (r=-0.467). Based on this, a sample size of 274 achieves 90% power to detect the difference of 0.167 between the null hypothesis correlation of -0.3 using a two-sided hypothesis test with setting alpha error at 0.05. The present study included 305 employees to take into account a 10 % drop out and incomplete responses.

Study Method: An Arabic anonymous, self-administered questionnaire was used which included four sections:

Section1: Socio-demographic data: include age, sex, marital status, and education level.

Section 2: Job details: include years of experience in the present job, years of experience since graduation, type of job, being a leader and working at the specialized building which joins the model hospital project.

Section 3: A validated Arabic version of Readiness for Change scale (RFC) (Ashouer, 2012; Abd-Elkawey and Sleem, 2015); which was developed by Hanpachren in 1997 and was composed of 14 items, responses were measured on a five-point Likert

scale and ranged from 1 (very unlikely) to 5 (very likely). Items 5 and 13 need to be reversed coded. The total readiness score was calculated by summing up and averaging the14 items, with possible scores ranging from 14-70. The higher the score, the greater will be the RFC. Cronbach's alpha for internal consistency was 0.9.

Section 4 : A validated Arabic version of Resistance to Change scale (RTC) (Ashouer, 2012; Abd-Elkawey and Sleem, 2015); which was developed by Oreg, 2003 to assess individual tendencies to resist or avoid making a change and was composed of 17 items. A six-point Likert scale ranged from 1 (strongly disagree) to 6 (strongly agree) was used to measure the response. Items 4 and 14 need to be reverse coded. The total RTC score is the sum of mean subscale scores with possible scores ranging from 17-102. A higher score means a higher perception of RTC. Cronbach's alpha for internal consistency was 0.75-0.89.

This scale includes the following 4 subscales: The first is Routine Seeking (RS): the behavioral component of resistance to change "inclination to adopt routines" which includes items 1-5, The second is Emotional Reaction (ER): the

amount of stress-induced by the change which includes items 6-9, The third is Short-term Focus (SF) : the extent to which persons are distracted by the short-term inconveniences related to change which includes items 10-13, The fourth is Cognitive Rigidity (CR) : frequency and ease with which people change their minds which includes items 14-17.

The scoring system for RFC and RTC was as follows: high readiness or resistance to organizational change, 66.7–100%; moderate readiness or resistance to organizational change, 33.4–66.6%; and low readiness or resistance to organizational change, 0–33.3%.

A pilot study was applied to 10% of the sample. The purpose was to test the clarity and applicability of the tools. Besides, it helped to estimate the time required for filling the questionnaire. Based on the pilot study results no modifications were required. Pilot data were excluded from the study results.

Consent

Participation in the study was entirely voluntary and informed consent was required, to assure confidentiality, the questionnaire was anonymous.

Ethical Approval

Ethical approval was taken from Ain Shams University Ethical Committee and Administrative approval was obtained from the management of Damanhour Teaching Hospital.

Data Management

The collected data were revised, coded, and entered on a computer. SPSS package version 20 was used for the analysis. The description of quantitative data was done as mean, standard deviation (SD), and range values. To compare quantitative variables between groups; an independent t-test and ANOVA were used. The Bonferroni post hoc test was used to specify the different groups. Qualitative data were expressed as frequencies (n) and percentages (%). To test the association between qualitative variables, Chi-square was used. Correlation between different variables was done by The Pearson correlation coefficient. A correlation was considered low when r was between 0.10 to 0.29, moderate when r was between 0.30 and 0.49, and high when r was between 0.50 and 1.0 27. The level of significance was set at p-value ≤ 0.05(Cohen et al., 2013).

Results

Table 1: Participants' Socio-demographic characteristics (No=305):

Socio-demographic characteristics		No(305) (100%)
Age	*Mean ± SD (min - max)*	36.47± 9.24(19-64)
Sex	**Male**	94 (30.8%)
	Female	211(69.2%)
Marital status	**Single**	77 (25.2%)
	Married	198 (64.9%)
	Divorced	22 (7.2%)
	Widow	8 (2.6%)
Educational level	**High school**	134 (43.9%)
	University	92 (30.2%)
	Post graduate	79 (25.9%)
Job details		
Job	**Doctor**	99 (32.5%)
	Nurse	121 (39.7%)
	Technician	25 (8.2%)
	Engineer	27 (8.9%)
	Administrative job	33 (10.8%)
Leader	**Yes**	48 (15.7%)
	NO	257 (84.3%)
Clinical department join model hospital project	**NO**	146 (47.9%)
	Yes	67 (22.0%)
	Both	92 (30.2%)
Years of experience from graduation	*Mean ± SD (min - max)*	14.26 ± 9.36(1-40)
Years of experience in the present job	*Mean ± SD (min - max)*	9.91 ± 8.60(1-40)

Table 1 showed that the current study included 305 employees; their ages ranged between 19 to 64 with a mean of 36.47± 9.24. Most of them were females (69.2%), (64.9%) were married and 43.9% of them got a high school education. Most of the studied sample were doctors and nurses (32.5%, and 39.7%, respectively) and (15.7%) of the participants worked in leadership positions. Regarding joining the model hospital project, (47.9%) of participants worked at the old building of the hospital which didn't join it. Years of experience in the present job of the studied sample ranged between (1-40) years with the mean of (9.91 ± 8.60) and years of experience from the graduation of studied sample ranged between 1-40 years with the mean (14.26 ± 9.36).

Readiness for Change score among the studied sample ranged between 38 to 66 with a mean of 53.70 ± 5.75. RTC total score among the studied sample ranged between 23 to 73 with a mean of 52.23 ± 9.50, the highest score was for the Emotional reaction subscale with a mean of 14.72 ± 4.00(4-24) followed by the Cognitive rigidity subscale with a mean of 14.23 ± 3.96(4-24). The mean of Routine seeking subscale was 12.97 ± 3.24 (5-22) and the least score was for the Short-term focus subscale with a mean of 10.30 ± 3.67 (4-22). A negative statistically significant correlation was found between resistance to change score and readiness for change score (r=-0.36, p-value <0.001) (Results are not tabulated)

Table 2: Factors affecting Readiness for Change (RFC) including socio-demographic data and job details among the studied sample:

Socio-demographic characteristics		RFC score	Test of significance	p value
	Mean ± SD			
Sex	Male	54.32 ± 5.75	1.25[#]	0.21
	Female	53.43 ± 5.74		
Marital status	Single	53.75 ± 5.50	7.55[##]	<0.001*
	Married	54.35 ± 5.38		
	Divorced	50.09 ± 7.50		
	Widow	47.25± 4.74		
Educational level	High school	53.34 ± 5.63	0.79[##]	0.45
	University	54.32 ± 5.70		
	Post graduate	53.61 ± 6.02		
Age (years)		r[###]	p value	
	0.06	0.30		
Job details				
Job	Doctor	52.85 ± 5.65	1.12[##]	0.35
	Nurse	53.98 ± 5.71		
	Technician	54.76 ± 4.64		
	Engineer	54.89 ± 6.37		
	Administrative job	53.52 ± 6.33		
Leader	Yes	56.77 ± 4.93	4.13[#]	<0.001*
	NO	53.13 ± 5.72		
Clinical department join model hospital project	Yes	54.99± 5.35	3.16[#]	0.002*
	NO	52.29± 5.96		
Pearson correlation		r[###]	p value	
Years of experience in the present job		-0.05	0.41	
Years of experience from graduation		0.09	0.13	

#: Student t test   ##: One Way ANOVA test (Bonferroni post hoc test)

###: Pearson correlation   * :Statistically significant

Table 2 revealed that single and married participants had higher readiness for a change compared to divorced and widow. Also, leaders and employees who joined the model hospital project were more ready for change than other employees.

Table 3: Factors affecting Resistance to Change (RTC) including socio-demographic data and job details among studied sample:

Socio-demographic characteristics Mean ± SD		RTC score	Test of significance	p value
Sex	Male	52.17 ±9.77	0.07#	**0.95**
	Female	52.25± 9.40		
Marital status	Single	51.73± 9.55	2.54##	**0.06**
	Married	51.74 ± 9.36		
	Divorced	56.73 ±9.50		
	Widow	56.75± 9.62		
Educational level	High school	53.34± 9.05	1.89##	**0.15**
	University	51.80 ±9.25		
	Post graduate	50.82 ±10.37		
Age (years)			r###	**p value**
	-0.12	**0.04***		
Job details				
Job **Nurse** **Technician** **Engineer** **Administrative job**	Doctor	50.92 ±10.34	0.98##	**0.42**
	52.61 ±9.13			
	51.69 ±9.01			
	54.52 ±8.81			
	53.06 ±9.02			
Leader **NO**	Yes	50.21± 7.92	1.61#	**0.11**
	52.60 ±9.73			
Clinical department join model hospital project **NO**	Yes	50.93 ±9.31	2.04#	**0.04***
	53.74 ±9.35			
Characteristics		r###	**p value**	
Years of experience in the present job		-0.02	**0.69**	
Years of experience from graduation		-0.11	**0.05***	

#: Student t test   ##: One Way ANOVA test   ###:Pearson correlation   * :Statistically significant

Concerning factors affecting Resistance to Change; a weak negative statistically significant correlation was found between age and total RTC score (r= -0.12, p<0.05). Also, a weak negative statistically significant correlation with years of

experience from graduation (r=-0.11, p=0.05). Besides that employees who joined the model hospital project were less resistant to change (Table 3).

Table 4: Factors affecting Resistance to Change subscales (RTC) including socio-demographic data and job details among the studied sample:

Socio-demographic characteristics Mean± SD		Routine seeking subscale	p value Mean± SD	Emotional reaction subscale	P value Mean± SD	Short-term focus subscale	p value Mean ±SD	Cognitive rigidity subscale	p value
Sex	Male	13.2 ±3.31	0.86#	14.28 ±4.16	0.20#	10.24 ±3.70	0.85#	14.63 ±4.22	0.25#
	Female	12.95± 3.22		14.91± 3.92		10.333.66±		14.06± 3.83	
Marital status	Single	13.18± 3.18	0.01##	14.19 ±3.67	0.02##	10.19 ±3.93	0.86##	14.16 ±4.37	0.65##
	Married	12.63± 3.09		14.63 ±3.99		10.27 ±3.60		14.21 ±3.86	
	Divorced	14.683.59±		17.23 ±4.12		10.73± 3.37		14.09 ±3.50	
	Widow	14.63± 4.72		15.00 ±5.10		11.13± 3.98		16.00 ±3.82	
Education level	High school	12.96± 3.25	0.99##	14.51 ±3.98	0.66##	10.92±3.90	0.02##	14.96±3.81	0.02##
	University	13.00 ±3.06		15.00± 3.71		10.14 ±3.48		13.66 ±4.06	
	Postgraduate	12.95± 3.46		14.75 ±4.36		9.46 ±3.31		13.67 ±3.95	
JOB	Doctor	12.99± 3.44	0.40##	14.87 ±4.36	0.90##	9.64 ±3.38	0.14##	13.42 ±4.13	0.09##
	Nurse	12.92± 3.37		14.50 ±3.90		10.52 ±4.08		14.68 ±3.98	
	Technician	11.96 ±3.45		14.48 ±3.57		10.16 ±3.06		15.36 ±4.15	
	Engineer	13.67 ±2.25		14.81 ±3.90		11.52± 3.61		14.52 ±2.65	
	Administrative job	13.30± 2.56		15.18 ±3.75		10.64± 3.12		13.94 ±3.83	
Leader	Yes	12.81± 2.83	0.71#	14.10 ±3.84	0.25#	9.21 ±3.54	0.02#	14.08 ±3.91	0.78#
	NO	13.00± 3.31		14.83± 4.02		10.51 ±3.66		14.26 ±3.98	
Join model hospital project	Yes	12.54 ±3.30	0.08#	14.28 ±3.74	0.12#	9.843.43±	0.13#	14.27± 3.90	0.74#
	NO	13.40 ±3.31		15.194.39±		10.68± 3.91		14.47 ±4.19	

#: Student t test   ##: One Way ANOVA test

Regarding factors affecting Resistance to Change subscales; the Routine Seeking Subscale score was lower among single employees compared to divorced ones. Emotional Reaction Subscale also was related to marital status as single and married had lower scores compared to divorced participants. Short Term Focus Subscale was affected by education level and working in a leadership position. Participants who achieved post-graduate degrees had lower scores compared to participants who had a high school educational level. In addition, the employee who worked as a leader had a lower score compared to the non-leader. Higher Cognitive

Rigidity was found among employees with high school education compared to employees who achieved university education (Table 4).

Routine Seeking Score was negatively correlated to age (r=-0.14, p-value < 0.05) and years of experience from graduation(r=-0.15, p-value <0.05). Emotional Reaction Score was negatively correlated to years of experience from graduation (r=-0.12, p-value =0.05). (Results are not tabulated)

Table 5: Linear regression analysis for factors affecting Readiness for Change score among the studied sample.

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
Constant	52.69	2.24		23.52	<0.001	48.28	57.12
Age	-0.06	0.05	-0.096	-1.30	0.19	-0.16	0.03
Female sex	-0.71	0.97	-0.05	-.74	0.46	-2.62	1.20
Married staff	2.34	0.87	0.19	2.70	0.01*	0.63	4.04
Education#							
High education	0.08	1.30	0.01	0.06	0.95	-2.48	2.64
Postgraduate	-0.11	1.76	-0.01	-0.06	0.95	-3.57	3.36
Job##							
Nurse	0.87	1.62	0.07	0.54	0.59	-2.32	4.06
Technician	2.13	2.38	0.07	0.89	0.37	-2.57	6.83
Engineer	-3.38	5.90	-0.04	-.57	0.57	-15.02	8.26
Administrative	-0.23	1.94	-0.01	-0.12	0.91	-4.06	3.60
Leader position	3.99	1.44	0.24	2.77	0.01*	1.15	6.84
Model hospital project	2.15	0.87	0.17	2.47	0.01*	0.43	3.86

#:Reference group is average education   ##:Reference group is doctors

* :Statistically significant

Linear regression analysis for factors affecting Readiness for Change score among the studied sample revealed that being married, working in a leadership position, and employed in joining the model hospital project were significant independent factors that affected Readiness for Change score (Table 5).

The analysis did not identify any independent factors that affected Resistance to Change score.

Discussion

Health care providers' readiness for change was found to be vital in achieving health care organizational goals and success of change programs. It was found also that resistance to change is one of the main obstacles facing change implementation. Mean Readiness For Change Score among the studied sample was 53.70 ± 5.75, which indicates high readiness for change according to the scoring system, and represents 75.7% of maximum score; reflects an overall positive attitude toward change at organization and the ability to change among participants(Results are not tabulated) .

Moderate readiness for change was documented by El-Sayed et al., (2017), in their descriptive exploratory study which aimed to investigate factors associated with nurses' readiness for organizational change which was conducted among a convenience sample of staff nurses working in all In-patient Care Units at Beni Sueif University Hospital. Also, Abd-Elkawey and Sleem (2015), who investigated factors affecting nurses' readiness for change in convalescences and critical care hospitals at Mansoura University and revealed that the majority of nurses had moderate level of readiness.

On the other hand, Low readiness was reported by Mangundjaya (2013) in his discussion about leadership, readiness to change, and commitment to change. Also, Diab et al., (2018) who conducted a cross-sectional study among a convenience sample of 136 staff nurses from two hospitals (67 staff nurses from Menofia University Hospital, and 69 from Shebin El-Kom Teaching Hospital), and all nurse managers available at the time of the study (31 from Menofia University Hospitals, and 30 from Shebin El-Kom Teaching Hospital) using Change Readiness Assessment Scale, which revealed high negative responses by staff nurses and nurse managers for the readiness of their organization to change. This contradiction may be attributed to the difference in the tools used for the evaluation of readiness to change. Also, this low readiness level may be due to lack of support given by top management; lack of appreciation to health care workers in the form of low salaries and inadequate resources; in addition to lack of staff training and development. Therefore, dissatisfaction, less commitment, and less motivation to participate in any change were the main causes for low readiness for change.

In the current study the participants had moderate resistance to change. The mean RTC score was 52.23 ± 9.50, the highest score was for the Emotional Reaction subscale with a mean of 14.72 ± 4.00 followed by the Cognitive Rigidity subscale with a mean of 14.23 ± 3.96. The least score was for the Short-term Focus subscale with a mean of 10.30 ± 3.67. In the current study, the participants had moderate resistance to change (Results are not tabulated).

This is in line with Abd-Elkawey and Sleem (2015) who reported moderate dispositional resistance to organizational change. But disagreed with El-Sayed et al., (2017), who found that the mean score of nurses' resistance to organizational change was 23.34±6.26, which indicated low resistance to organizational change. On the other hand, Saksvik and Hetland(2009), found higher dispositional resistance to change among the studied subjects.

A moderate negative statistically significant correlation was found between Resistance to Change score and Readiness for Change score (Results are not tabulated). The average RFC score reflects an overall positive attitude toward change which, in turn, ought to be the cognitive precursor to behavioral enactments aimed at implementing the change. However, the inclination for greater dispositional resistance to change must be taken into consideration by supervisors and organizational leaders as they develop and implement change efforts. Current results agreed with El-Sayed et al., (2017), who showed that there was a highly statistically significant negative correlation between nurses' readiness for organizational change and dispositional resistance to organizational change. Also, Van Dam et al., (2011), reported that openness to change was significantly and negatively associated with resistance to change.

Regarding different factors affecting Readiness for Change, the current study revealed that single and married had higher readiness for change compared to divorced and widow (Table 2). This agreed with El-Sayed et al., (2017), who found that there was a strong positive correlation between nurses' readiness for change and social status. Also, Chan and Han (2011), pointed out that married employees were more committed to the organization. This may be attributed to the fact that married personnel are more emotionally stable, obligated due to their family responsibilities and financial

burden, and have a great and positive relationship with their supervisor and peers, which assist them to become more open toward change. On the other hand, Alameddine et al., (2015), pointed out that there was no significant difference between married and single in readiness for change (implementing quality subscales including Appropriateness, Efficacy, Management, and Personal valence). However, the present work results also contradicted the findings of Abd-Elkawey and Sleem (2015). It also disagreed with Shah (2010), who conducted a cross-sectional study about the relationship between organizational justice and employee readiness for change, which showed that marital status had no significant relationship with employee readiness for change.

The current study revealed that age and sex were not significantly related to readiness for change (Table 2). This result was in line with the findings of Shah (2010) and Abd-Elkawey and Sleem (2015). Also, Mrayyan (2020), who conducted a study to assess organizational RFC among 153 nurses in Jordon, reported non-significant correlations between readiness for change and sample demographics. However, El-Sayed et al., (2017);

Shah and Ghulam (2010), reported that younger employees are liable to welcome any organizational change.

The study of Matthysen and Harris (2018), on a convenience sample of employees and top managers (No = 340) showed that high levels of work engagement will generate high levels of readiness for change. This could explain our finding as leaders and employees, who were engaged in the model hospital project, were more ready for change than other employees.

Concerning factors affecting Resistance to Change among the studied sample; a weak negative correlation was found between age, years of experience from graduation, and total RTC score. Moreover, employees who joined the model hospital project were less resistant to change, but no relation was found concerning gender, marital status, and educational level (Table 3).This agreed with Berg and Hetland (2009) in their study on exploring dispositional resistance to change, but disagreed with Islam et al., (2010), in their study about resistance to change among first-line managers in multinational organizations in Malaysia who found that employees with age > 50 had a significant impact on resistance to change. This is probably

because of their "senior" career level, they do not want to accept any more change and feel "stable" in their current position. They think that any change will threaten their stable "career" position.

The current study results also against El-Sayed et al., (2017), who found that there was a significant positive relationship between nurses' age and their dispositional resistance to change (r= 0.541, p<0.05).

Conflicting with the current study results, Abd-Elkawey and Sleem (2015), found a significant relationship between RTC and marital status; indicating that single nurses had a higher mean score percentage compared to married nurses. The study justified their results by the fact that single nurses had a disturbance in their social life so they become more stressed and perceive negative emotions due to their feeling of insecurity and fear. This feeling will develop resistance to change.

Contradictory to the current study findings, El-Sayed et al., (2017), found a highly positive statistically significant correlation between dispositional resistance to change and nurses' years of experience in a nursing career (r= 1.97, p<0.05).

Improvement of health care services became a vital issue based on change. Deep investigation of factors that promote or block this improvement in different health care facilities, among health care providers covering all levels of health care services especially in the era of change and accreditation is important.

Study Limitations

The cross-sectional nature of this study prevents drawing causal inferences from the association between the determinant factors and outcomes. Also, the study was done in one hospital which is a 3ry level of care so the findings may not be applied to other hospitals with a lower level of care. Further studies should be conducted to involve health care providers covering the different levels of care.

Conclusion

Participants in the current study had high RFC and moderate RTC. Employees who were single or married, worked in a leadership position and joined the model hospital project were more ready for change. Older employees with longer experience from graduation and who joined the model hospital project were less resistant to change.

Recommendations

Adoption of change-supportive work environment became a fundamental issue. Identifying employees ready for change and using them as a spark for change as well as early diagnosis and management of resistance to change could pave the way to make change happen.

Funding

This work didn't receive any financial support.

Conflict of Interest

The authors have no competing interests.

Data Availability Statement

The data sets generated during the current study are available on request.

Acknowledgment

We express our appreciation to the health care providers who agreed to share in the current study.

References

1. Abd Elkawey H and Sleem W (2015): Factors affecting nurses' readiness for change in health care organizations. Int J Adv Res;3(11):1330-43. https://www.journalijar.com/article/6976

2. Alameddine M, Saleh S, and Natafgi N (2015): Assessing health-care providers' readiness for reporting quality and patient safety indicators at primary health-care centers in Lebanon: a national cross-sectional survey. Hum Resour Health; 13(1):13-37. doi: 10.1186/s12960-015-0031-5.

3. Ashouer HM (2012): Factors associated with nurses' readiness for change at Alexandria main university hospital. Master thesis for nursing administration, Alexandria University. (supervised by Zeinab Mohammed Nabawy and Laiila Helmi Othman)

4. Berg I and Hetland H (2009): Exploring dispositional resistance to change. J Leadersh Organ Stud ;16:175–83. doi:10.1177/1548051809335357

5. Chan S and Han H (2011): Loneliness, job satisfaction, and organizational commitment of migrant workers: empirical evidence from China. Int J Hum Res Manag; 22:1109–27.

6. doi:10.1080/09585192.2011.556785

7. Cohen J, Cohen P, West SG, and Aiken LS (2013): Applied multiple regression/correlation analysis for the behavioral sciences. Routledge, 3rd edition. doi: 10.4324/9780203774441

8. Cunningham CE, Woodward CA, Shannon HS, MacIntosh J, Lendrum B, et al. (2002): Readiness for organizational change: A longitudinal study of workplace, psychological and behavioral correlates. J Occup Organ Psychol; 75(4):377-92.doi:abs/10.1348/096317902321119637

9. Diab GM, Safan SM, and Bakeer HM (2018): Organizational change readiness and manager' behavior in managing change. J Nurs Educ Pract; 8(7):68-77. doi: 10.5430/jnep.v8n7p68

10. El-Sayed FF, Seada AM, and El-Guindy HA (2017): Factors associated with nurses' readiness for organizational change at Beni Sueif University Hospital. Egypt Nurs J; 14(2):141-51. DOI: 10.4103/ENJ.ENJ_24_17

11. Gupta S and Singla A (2016): Organizational change and job satisfaction: An analysis of mediating effect of organizational trust. Indian J Commer Manag Stud; 7(3), 7–13.

12. Hanpachern C, Morgan GA, and Griego OV (1998): An extension of the theory of margin : a framework for assessing readiness for change.

Hum Res Dev Q ;9 (4): 339–50. doi:10.1002/hrdq.3920090405

13. Islam A, Janee A, and Wafi S (2010): Resistance to change among first line managers in multinational organizations in Malaysia. Int Rev Bus Res Pap; 6(4):232–45. Available at:https://www.researchgate.net/profile/Md_Aminul_Islam3/publication/259852894.

14. Mangundjaya WL (2013): Leadership, readiness to change, and commitment to change. In Proceedings International Management Conference:8-9. Available at: http://www.Onlinelibrary.Wiley.Com

15. Mareš J (2018): Resistance of health personnel to changes in healthcare. Kontakt; 20(3):262-72. doi:10.1016/j.kontakt.2018.04.002

16. Matthysen M and Harris C (2018): The relationship between readiness to change and work engagement: A case study in an accounting firm undergoing change. SA J Hum Resour Manag; 16(1):1-1. doi : 10.4102/sajhrm.v16i0.855

17. Michel A, Todnem R, and Burnes B (2013): The limitations of dispositional resistance in relation to organizational change. Management Decision; 51(4):761-80. doi: https://doi.org/10.1108/00251741311326554.

18. Mittal S (2012): Managing employee resistance to change: a comparative study of Indian organizations and MNCs in Delhi-NCR Region. Int Referee Res J; 3(4):64-71.

19. Mrayyan MT (2020): Nurses' views of organizational readiness for change. Nurs Forum; 55(2):83-91. Available at: wileyonlinelibrary.com/journal/nuf. doi: 10.1111/nuf.12393.

20. Narine L and Persaud D(2003):Gaining and maintaining commitment to large-scale change in healthcare organizations. Health Serv Manage Res; 16(3):179-87. doi: 10.1258/095148403322167933

21. Oreg S (2003): Resistance to change: Developing an individual differences measure. J Appl Psychol; 88(4):680-93.doi:10.1037/0021-9010.88.4.680

22. Park I, Jung Y, and Suk S (2017): The perception of healthcare employees and the impact of healthcare accreditation on the quality of healthcare in Korea. J Hosp Adm; 6(6):20-7.

23. Rafferty AE, Jimmieson NL and Armenakis AA (2012): Change readiness: A multilevel review. J Manage; 39(1); 110-35. doi:10.1177/0149206312457417

24. Saksvik I and Hetland H (2009): Exploring dispositional resistance to change. J Leadersh Organ Stud; 16(2):175-83. doi:10.1177/1548051809335357.

25. Shah N (2010): The relationship between organizational justice and employee readiness for change. J Enterprise Inf Manag; 24(3):224–36. doi: 10.1108/17410391111122835.

26. Shah N and Ghulam S (2010): Relationships between employee readiness for organizational change, supervisor and peer relations and demography. J Enterprise Inf Manag; 23(5):640–52.doi: 10.1108/17410391011083074

27. Van Dam K, Oreg S, and Schyns B (2008): Daily work contexts and resistance to organizational change: The role of leader–member exchange, development climate, and change process characteristics. Appl Psychol; 57(2):313-34. doi: 10.1111/j.1464-0597.2007.00311.x

28. Zafar UA, Zbib I, Arokiasamy S, Ramayah T, and Chiun LM (2006): Resistance to change and ERP implementation success : the moderating