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The Impact of Healthcare Worker Psychological Empowerment on Managerial Creativity in the Hospital Setting

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Abstract **Background:** Creativity in healthcare management is increasingly recognized as essential for improving organizational performance, patient outcomes and adaptive decision-making. **Objective:** This study aimed to examine the relationship between psychological empowerment and managerial creativity among healthcare workers in a major health cluster in Riyadh. **Methods:** A descriptive cross-sectional survey was conducted among 316 healthcare workers. Psychological empowerment was measured using Spreitzer's 12-item scale and managerial creativity was assessed using a 13-item creativity scale. **Results:** Participants demonstrated high levels of psychological empowerment and managerial creativity. All empowerment dimensions showed significant positive correlations with creativity ($p < 0.01$). Regression analysis revealed that competence ($\beta = 0.344$, $p = 0.000$) and impact ($\beta = 0.289$, $p = 0.000$) were significant predictors of managerial creativity, while meaning ($\beta = 0.119$, $p = 0.055$) and self-determination ($\beta = -0.048$, $p = 0.294$) were not. The model explained 37.4% of the variance in creativity. **Conclusion:** Psychological empowerment plays a meaningful role in shaping managerial creativity among healthcare workers, with competence and perceived impact emerging as the strongest influences.

Key Words Psychological Empowerment, Managerial Creativity, Healthcare Workers, Hospital Administration

INTRODUCTION

All over the world, companies are developing quickly, especially those that prioritize quality and innovation in their operations and administrative procedures [1]. The guidelines and the policies, the roles and the strategies of each changing environment are specific to an organization [2]. One of these methods is employee empowerment, which is a radical concept that transforms the issue of managing and self-engaging employees in institutions [3]. The organizational structure that is referred to as employee empowerment enables employees to possess varying degrees of power and responsibility in order to execute their duties autonomously without supervision and direct management [4]. Blanchard *et al.* [4] argue that empowerment involves providing employees with the aids to work, as well as a conducive working environment to ensure that they perform their tasks with confidence and professionalism. Notwithstanding the perceived advantages, not all organizations are keen on embracing employee empowerment [5]. They are afraid of its ability to subvert managerial power and performance that may bring out less concentration on this significant concept [6]. This negligence can have a negative impact on organizational performance and a hampering effect in the effective realization of institutional objectives [7].

The Theory of Psychological Empowerment is one of the major theoretical insights that justify the concept of employee empowerment, as it describes the way how employees see their positions and their ability to impact on organizational performance. The pioneering works of Thomas and Velthouse [8] and subsequently Spreitzer [9] offer a broad perspective to the psychological empowerment by covering its fundamental dimensions and the impact it has on the performance of an individual and an organization. Thomas and Velthouse [10,11] have put forward a cognitive theory of psychological empowerment, which puts more focus on how perceptions regarding work of the employees influence their motivation and performance. Their model emphasizes that the competence, impact, meaning and self-determination are crucial dimensions that influence the engagement, motivation and creative behavior of employees jointly.

This study aims to examine the relationship between psychological empowerment and managerial creativity among healthcare workers and to identify key empowerment dimensions and demographic factors influencing managerial creativity.

Objectives

- To assess the level of psychological empowerment (meaning, competence, self-determination and impact) among healthcare workers
- To evaluate the level of managerial creativity among healthcare workers
- To examine the relationship between psychological empowerment and managerial creativity
- To determine the predictive role of psychological empowerment dimensions (meaning, competence, self-determination and impact) in influencing managerial creativity
- To assess the influence of demographic and professional characteristics (such as age, gender, job role and work experience) on managerial creativity and its relationship with psychological empowerment

Hypothesis

- **H1:** Psychological empowerment is positively associated with managerial creativity among healthcare workers.
- **H2:** Among the empowerment dimensions, competence and perceived impact will be the strongest predictors of managerial creativity.

METHODS

This descriptive cross-sectional survey was conducted among healthcare workers in a major health cluster in Riyadh City. The Institutional Ethics Committee, Ministry of Health, Riyadh Second Health Cluster was used as the ethical approval board (IRB Approval No. IRB 24-331C). Electronic informed consent was received before data collection among all participants. One hundred and sixty-nine workers in healthcare were obtained using a confidence level of 95% and a margin of error of 5% with the assumption that there were 316 eligible workers. The overall number of healthcare workers was 316. All the healthcare workers who passed the inclusion criteria were invited to participate. The measures of psychological empowerment were based on a 12-item scale created by Spreitzer and it consisted of four sub dimensions namely meaning (a = 0.840), competence (a = 0.892), self-determination (a = 0.882) and impact (a = 0.844). Sample questions are: is the work I do very important to me and I am confident about my ability to do my job. A 13-item scale based on George and Zhou was used to measure managerial creativity (a = 0.949). The examples are: I generate creative solutions to problems and I am a good source of creative ideas.

Inclusion Criteria

- Healthcare workers of all professional categories (physicians, nurses, allied health professionals, administrative staff and supervisors) working within the selected health cluster
- Employees with a minimum of 6 months of work experience in their current role to ensure adequate exposure to the organizational environment
- Staff involved in clinical, administrative or supervisory responsibilities, including those with direct or indirect involvement in decision-making processes
- Participants willing to provide informed consent and complete the survey

Exclusion Criteria

- Employees on leave during the data collection period
- Individuals who declined to provide informed consent
- Newly hired staff with less than 6 months of experience
- Staff in purely non-managerial roles with no involvement in decision-making or problem-solving activities
- Incomplete survey responses, which were excluded from the final analysis to maintain data quality and the number of excluded responses has been reported in the results section

Data Collection

Data were collected using a self-administered online survey. The survey link was emailed to the qualified healthcare workers via institutional email. The respondents were allowed to access the survey through a secure online platform. First page of survey contained information on the study, the guarantee of confidentiality and the informed consent statement. The data were collected during a number of weeks in order to ensure the maximum participation and to consider the different work schedules. Anonymization of responses was done at the time of submission and no information that could be used to identify the respondents was recorded. Every piece of data was downloaded in coded files available to the research team.

Data Analysis

Data were analyzed using SPSS v26.0. Data were analyzed using descriptive and inferential statistical techniques. Descriptive statistics, including frequencies, percentages, means and standard deviations, were used to summarize demographic characteristics and scale scores. Correlation analysis was performed to examine the relationships between psychological empowerment and managerial creativity. Multiple regression analysis was used to determine the predictive ability of empowerment dimensions on managerial creativity while controlling for demographic factors. Statistical significance was set at $p < 0.05$.

RESULTS

Data were collected from 316 participants, most of whom were female (75.0%). A large proportion were young adults, with the highest representation in the 23-26 age group (23.1%), followed by 27-30 years (20.3%). Registered nurses made up the majority of the workforce (80.1%), while managerial or supervisory roles accounted for a smaller share.

Table 1: Demographic Characteristics of Participants (N = 316)

Variable	Category	Number (Percent)
Gender	Female	237 (75.0)
	Male	79 (25.0)
Age (years)	23-26	73 (23.1)
	27-30	64 (20.3)
	31-34	53 (16.8)
	35-38	49 (15.5)
	39-42	37 (11.7)
	More than 42	40 (12.7)
Job Title	Registered Nurse	253 (80.1)
	Charge Nurse	22 (7.0)
	Senior Charge Nurse	8 (2.5)
	Nursing Director	6 (1.9)
	Unit Manager	3 (0.9)
	Other roles	24 (7.6)
Nationality	Arab	187 (60.3)
	Asian	106 (34.2)
	African	16 (5.2)
	Western	1 (0.3)
Marital Status	Single	150 (47.9)
	Married	154 (49.2)
	Divorced	7 (2.2)
	Widowed	2 (0.6)
Education	Diploma	27 (8.5)
	Bachelor	242 (76.6)
	Master	45 (14.2)
	PhD	2 (0.6)
Working Unit	In-patient	208 (65.8)
	Outpatient	45 (14.2)
	Administration	41 (13.0)
	Other	22 (7.0)
Work Experience	4 years	107 (33.9)
	5-10 years	85 (26.9)
	11-15 years	58 (18.4)
	16-20 years	43 (13.6)
	21-25 years	16 (5.1)
	26+ years	7 (2.2)

Most participants were Arab (60.3%) or Asian (34.2%). Marital status was nearly equally divided between single (47.9%) and married (49.2%) individuals. The majority held a bachelor's degree (76.6%) and most worked in inpatient units (65.8%). Work experience levels varied, though one-third of participants reported exactly 4 years of experience (33.9%), with progressively fewer individuals represented in higher experience categories (Table 1).

Meaning, competence, self-determination and impact were all moderately to strongly correlated with total psychological empowerment (r values ranging from 0.738 to 0.869). Table 2 shows Managerial creativity was positively associated with each empowerment dimension, with the strongest correlation observed with impact (r = 0.518). The total psychological empowerment scores (Figure 1) also showed a meaningful positive correlation with creativity (r = 0.568).

The regression model in Table 3 significantly predicted managerial creativity (R^2 = 0.374, p <0.001). Among the empowerment dimensions, competence (β = 0.344, p = 0.000) and impact (β = 0.289, p = 0.000) were significant positive predictors. Meaning showed a borderline non-significant effect (β = 0.119, p = 0.055), while self-determination did not significantly predict creativity (β = –0.048, p = 0.294), see Figure 2.

Competence had the highest mean score (4.25±0.72), while impact showed the lowest but still high mean (3.98±0.75). Total empowerment averaged 4.10±0.63, indicating consistently strong empowerment perceptions. Managerial creativity also demonstrated a high average score (4.21±0.66), suggesting that participants generally viewed themselves as creative in their managerial roles (Table 4, Figure 3).

Table 2: Correlation Analysis Between Psychological Empowerment and Managerial Creativity

Variable	Meaning	Competence	Self-Determination	Impact	Total PE	Creativity
Meaning	1	0.607**	0.535**	0.415**	0.762**	0.426**
Competence	-	1	0.524**	0.387**	0.738**	0.489**
Self-Determination	-	-	1	0.610**	0.869**	0.393**
Impact	-	-	-	1	0.801**	0.518**
Total Psychological Empowerment	-	-	-	-	1	0.568**
Managerial Creativity	-	-	-	-	-	1

Correlation is significant at the 0.01 level (2-tailed).

Table 3: Multiple Regression Analysis Predicting Managerial Creativity

Predictor	β	t	p-value
Constant	,	4.199	0.0001
Psychological Empowerment Meaning	0.119	1.924	0.055
Psychological Empowerment Competence	0.344	5.095	0.000
Psychological Empowerment Self-Determination	–0.048	–1.052	0.294
Psychological Empowerment Impact	0.289	6.889	0.000

Model Summary: R^2 = .374, F (4, 311) = 46.524, p=0.0001

Table 4: Descriptive Statistics of Psychological Empowerment Dimensions and Managerial Creativity (N = 316)

Variable	Mean±SD	Minimum	Maximum
Psychological Empowerment - Meaning	4.12±0.68	2.1	5.0
Psychological Empowerment - Competence	4.25±0.72	2.3	5.0
Psychological Empowerment - Self-Determination	4.05±0.70	2.0	5.0
Psychological Empowerment - Impact	3.98±0.75	1.9	5.0
Total Psychological Empowerment Score	4.10±0.63	2.5	5.0
Managerial Creativity	4.21±0.66	2.4	5.0

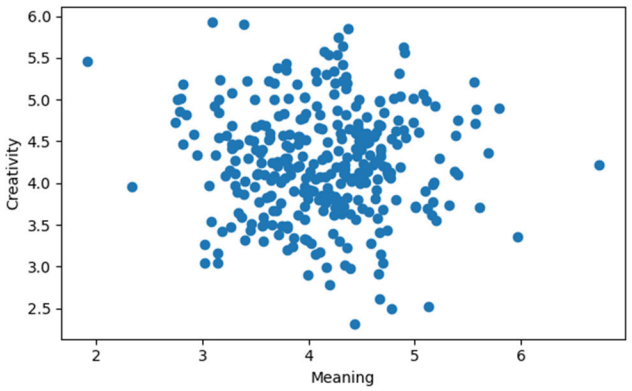

Figure 1: Meaning vs Managerial Creativity

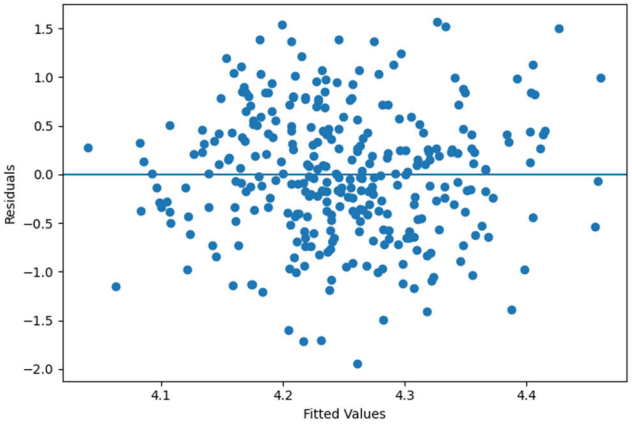

Figure 2: Regression Residual Plot

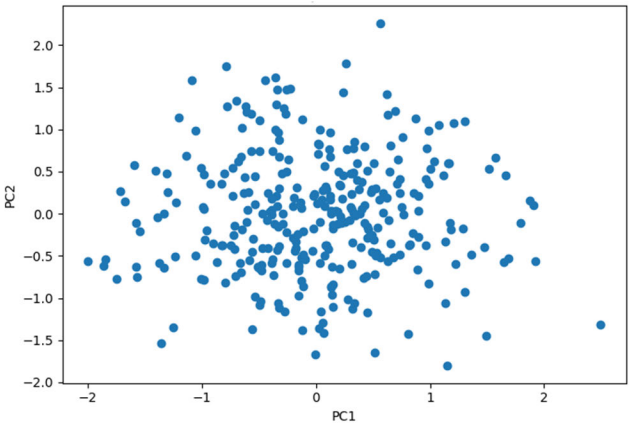

Figure 3: PCA Plot of Empowerment Dimensions

DISCUSSION

This study examined how psychological empowerment influences managerial creativity among healthcare workers within a major health cluster in Riyadh. In general, the results illustrate a very strong tendency, as the more workers feel capable, influential and significantly involved in the work, the more creative they work as managers. Or put differently, creativity will not emerge due to inspirational talks or a statement of vagueness in the form of innovation culture when people actually feel that they are competent and powerful in their positions. Their findings also revealed that psychological empowerment was always high in all the four dimensions, with competence and meaning being the highest. This is in line with the demographic characteristics of a young and highly educated and largely nursing workforce with many of them working in complex clinical environments which need autonomous decision making. The high correlations among all dimensions of empowerment indicate the notion that empowerment is not an unintegrated process; when an individual dimension gains momentum, the other dimension would follow. Total psychological empowerment also showed moderate-to-strong positive relationship with managerial creativity and it is in the middle of importance in prompting creative behaviors in healthcare settings [12]. In the regression model, competence and impact were found to be the most important predictors of managerial creativity. It implies that employees come up with more innovative ideas when they do not only believe that they can but also think that they are actually influencing the results. The given two predictors probably represent the main psychological requirements in the stressful hospital setting: the belief that one can do something and the feeling that one can make a difference. Although the direction of the meaning is positive, it was not found to be significant [13]. This could point out that purpose may not matter but it does not directly translate into creative output unless it is combined with perceived capability and influence. Neither self-determination nor creativity were significantly predicted by the former so that the prevalent view of autonomous innovation is not entirely accurate. Apparently, autonomy minus the belief of competence or influence might not suffice in triggering the creative behavior among healthcare workers [14]. The results are in line with the past studies that have found that empowered employees are more likely to be more creative, more problem solving and more willing to defy ineffective routines. The relationship between empowerment and creativity has proved to be positive over many organizational environments and the recent findings lead the relationship to a massive healthcare system whereby creativity is growing more and more vital to process enhancement, patient safety and efficient workflow. The greater predictive reading of competence / influence also reflects previous studies in which it is argued that the perception of being skilled and influential is easier to act on in relation to creativity compared to more abstract psychosocial variables [15]. Combined, the results support the idea that psychological empowerment is not merely an HR buzzword but a structural imperative of the contemporary healthcare in the area of creativity. The facts indicate that empowerment of the healthcare workers does not only have a positive impact on the personal wellbeing but also on the ability of the organizations to innovate. Empowerment framework reinforcement can thus form a feasible avenue to hospitals aiming to enhance performance, flexibility and responsiveness to issues among their managerial workforce [16,17].

CONCLUSIONS

It is concluded that psychological empowerment significantly influences managerial creativity among healthcare workers, with competence and perceived impact emerging as the strongest predictors of creative behavior. The study demonstrates that when healthcare employees feel capable and believe their actions meaningfully shape outcomes, they are more likely to engage in innovative thinking and problem-solving. Although meaning and self-determination contribute to overall empowerment, their direct effects on creativity were less substantial, indicating that not all empowerment dimensions exert equal influence.

Limitations

This study has several limitations that should be considered when interpreting the findings. First, the cross-sectional design limits the ability to establish causal relationships between psychological empowerment and managerial creativity, as both variables were measured at a single point in time. Second, the use of self-reported questionnaires may introduce social desirability and response bias, particularly in a professional healthcare setting where participants may overestimate their competence or creativity.

Third, the study was conducted within a single health cluster in Riyadh, which restricts the generalizability of the findings to other healthcare systems, regions or organizational cultures. Fourth, the sample was predominantly composed of nursing staff, which may limit the applicability of the results to other professional groups such as physicians or administrative leaders. Fifth, although the regression model explained a moderate proportion of variance in managerial creativity (37.4%), a substantial amount of unexplained variance remains, suggesting that other important factors, such as leadership style, organizational climate, workload and institutional support, were not included in the analysis. Finally, the study did not assess actual creative performance but relied on perceived managerial creativity, which may not fully reflect real-world innovation outcomes.

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