

The Effects of Empowerment on Health Care Worker Performance During the COVID-19 Pandemic in Saudi Arabia

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Background and Objectives: In this study, we assessed the potential impact of employee empowerment on health care workers' performance during the novel coronavirus SARS-CoV-2 (COVID-19) pandemic. In particular, we aimed to determine the empowerment practices that would have the greatest positive effect on employee performance. Understanding the relationship between performance and empowerment can help health care providers better manage worker stress during any global crisis. This understanding is crucial in guiding policies and interventions aimed at maintaining health care workers' psychological well-being and their overall performance. **Methods:** This cross-sectional study evaluated the relationship between employee empowerment and performance, determining the best empowerment practices for health care leaders to utilize. Frontline health care workers ($n = 100$) selected using convenience and snowball sampling completed the survey between March 15 and 31, 2020. This is the period when the pandemic just started to accelerate in Saudi Arabia. We conducted Pearson's correlation analysis to assess whether there was a relationship between performance and health care workers' empowerment practice, and stepwise linear regression analysis to investigate the impact each of these empowerment practices on health care workers' performance. **Results:** Our results indicate that health care workers' performance can be expected to increase the most through 2 empowerment practices: giving employees the discretion to change work processes and offering performance-based rewards ($R^2 = 0.301$, $P < .05$). **Conclusion:** Our findings suggest that health care leaders must invest in these 2 practices to better equip frontline health care workers. During a global crisis, additional discretion granted to employees helps reduce their anxiety and burnout and hence empowers them with the flexibility to adapt to unforeseen circumstances and improve the quality of their interactions with health service recipients.

Key words: anxiety, burnout, COVID-19, empowerment, frontline health care workers, performance, quality improvement

The role of empowerment has been a central theme for health care workers (HCWs).¹⁻⁴ The empowerment of HCWs can be implemented by organizations wishing to improve employee performance. There are 4 main employee empowerment practices: providing information about goals and performance; offering rewards based on performance; providing access to job-related knowledge and skills; and granting the discretion to change work processes.⁵

The increase in novel coronavirus SARS-CoV-2 (COVID-19) infections and the subsequent admission of patients have overwhelmed all frontline HCWs at public health care facilities across Saudi Arabia. Doctors and

nurses are overworked.⁶ The COVID-19 pandemic has caused high levels of uncertainty, anxiety, and stress.⁶ Taking care of infected patients has been a primary challenge during this pandemic; it poses a serious risk for HCWs in intensive care units because of constant contact with infected patients for extended periods of time.^{7,8} Widespread COVID-19 infections have been reported among HCWs, resulting in considerable social and psychological pressures on these workers. During the severe acute respiratory syndrome (SARS) and the Middle East respiratory syndrome (MERS) outbreaks, HCWs reported concerns about their own and their families' health and revealed painful experiences of fear, anxiety, and even social prejudice and stigma.⁹ Moreover, HCWs will face job burnout, psychological pressure, anxiety, and depression even after the mitigation of the outbreak.¹⁰ Posttraumatic stress disorder has been found to be fairly common among survivors of infectious diseases,¹¹ but early psychological interventions targeting this vulnerable group may be beneficial.¹² Therefore, it is imperative that health care leaders provide the necessary support to HCWs to address this serious health care problem.

The empowerment of HCWs may equip them to better deal with these stressful situations. Empowerment plays a significant role in countering burnout and stress. Boudrias and colleagues¹ revealed that high levels of empowerment accentuate the effects of

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change-related resources on reducing emotional exhaustion. Because managerial empowerment has beneficial effects, organizations can rely on various strategies to enhance it.¹ During a global crisis, HCWs must be constantly informed of changes in the dynamics of service provision. Moreover, using both financial rewards and nonfinancial incentives, HCWs may be motivated and rewarded for their efforts to cope with these changes.¹³

In this study, we assessed the effects of managerial empowerment on HCWs' performance during a global health crisis. In particular, we aimed to determine the best empowerment practices for improving employee performance during a health crisis. Understanding the relationship between performance and empowerment can help health care organizations better manage health care stressors during any global crisis. This step is crucial in guiding policies and interventions aimed at maintaining HCWs' psychological well-being and hence their overall performance.

When the World Health Organization (WHO) International Health Regulation Emergency Committee declared COVID-19 to be an international public health emergency on January 3, 2020, there was an increase in stress and burnout among HCWs.¹⁴ Such high levels of risk-related anxiety and stress can affect frontline HCWs' overall performance.^{12,15} In this study, we hypothesized that empowering frontline HCWs with COVID-19–related information during this crisis will help mitigate their stress, anxiety, and burnout and will consequently improve their overall performance.

METHODS

The present study is a cross-sectional survey, a type of observational study that makes inferences about a specific topic at a certain time. The survey used in the study helped us collect data on HCWs' empowerment practices during a critical period to determine how these practices affect their overall performance. Our aim was to help health care authorities focus their attention and invest more on the most critical empowerment practices.

Recruitment

We selected participants using both convenience and snowball sampling, approaching frontline HCWs in our networks. The inclusion criterion was having a medical license to practice in any hospital or clinic in the Kingdom of Saudi Arabia. In our survey, we avoided pinpointing particular departments, as we intended to get an overview of all frontline HCWs. We explained the purpose of the study before the participants completed the survey questions. The survey was distributed between March 15 and March 31, 2020, via an electronic survey link sent through e-mail and social media platforms. During this time, the total number of confirmed COVID-19 cases in Saudi Arabia skyrocketed from 103 to 1563.¹⁶

Instruments and measurements

This section presents a brief description of the variables and statistical techniques used in the analysis.

Employee empowerment: We measured the level of empowerment among HCWs using Bowen and Lawler's⁵ instrument. This instrument has been found to be valid and reliable, as the Cronbach α for these scales range from 0.74 to 0.88 for all empowerment practices. According to Fernandez and Moldogaziev,¹⁷ employee empowerment is conceptualized as a function of information, reward, knowledge, and power. The questionnaire measures employees' perceptions of these 4 organizational practices. The information section has 4 ordinal questions measuring the ability for HCWs to access the knowledge and skills related to the work. The reward section also has 4 questions that aim to collect data about the impact of rewards on employee performance. The knowledge section consists of 4 questions about the impact of management/managers efforts to enhance employee performance and reach the organization's goals. As well, there are 3 ordinal questions measuring the ability and power to access the knowledge and skills related to the work. Employees indicated their agreement with each item on a 5-point scale (1 = strongly disagree to 5 = strongly agree).

Employee performance: We assessed the participants' performance during the critical period of the pandemic by adopting Pradhan and Jena's¹⁸ instrument. The reliability of this instrument is reported to be $\alpha = 0.80$. Employee performance consists of 3 latent dimensions: task performance; adaptive performance; and contextual performance.

The participants were asked 6 questions to measure the task performance dimension, 7 questions to measure the adaptive performance dimension (eg, "I used to cope well with organizational changes from time to time"), and 10 questions to measure the contextual performance dimension (eg, "I used to provide help to my coworkers when asked or needed"). Participants indicated their answers using a 5-point Likert scale (*strongly agree* to *strongly disagree*) to measure their overall performance.

Statistical analysis

The present study assessed the relationship between HCWs' empowerment practices (independent variables) and HCWs' performance (dependent variable) on the basis of the following hypotheses:

- H1:** There is a relationship between HCW performance and the use of the 4 main practices of empowerment.
- H2:** HCW empowerment has a statistically significant impact on HCW performance.

To test these 2 hypotheses, we applied different statistical and econometric techniques using the Statistical Package for the Social Sciences (SPSS 25.0). We used

Pearson's correlation analysis to assess whether there was a relationship between the performance variable and each HCW empowerment practice. We also performed a stepwise linear regression analysis to investigate the impact of empowerment practices on HCW performance. In addition, to ensure that there were no confounding variables that might have affected the relationship between empowerment practices and HCWs' performance, we used a *t*-test and a one-way analysis of variance (ANOVA).

RESULTS

Demographic characteristics of the participants

A total of 100 out of 130 participants completed the survey questionnaire (response rate: 77%; $n = 100$). All participants were frontline HCWs working in different departments. The gender distribution of the respondents was 49% ($n = 49$) male and 51% ($n = 51$) female. Most were younger than 40 years; 44% of the participants ($n = 44$) were between 20 and 30 years of age, and 48% ($n = 48$) were between 31 and 40 years of age. Most participants ($n = 51$) had 5 to 10 years of experience as frontline HCWs, and only 1% ($n = 1$) had more than 20 years of experience. The participants also represented 3 different managerial levels: 47% ($n = 47$) belonged to the middle level; 37% ($n = 37$) belonged to the junior level; and 16% ($n = 16$) belonged to the senior managerial level (Table 1).

In addition, we used a *t* test and a one-way ANOVA to ensure that the demographic characteristics of the participants did not impact the dependent and independent variables. The results of both tests (Supplemental Content Appendix A, available at: <http://links.lww.com/QMH/A68>) indicated that there were no statistically significant differences ($P < .05$) between demographic variables and empowerment practices and between demographic variables and HCWs' performance (Supplemental Content Appendix B, available at: <http://links.lww.com/QMH/A69>).

Hypotheses

In the initial analyses, we aimed to test H1, which asserts that there is a relationship between HCW performance and the use of the 4 main empowerment practices. The results of the correlation analysis, presented in Table 2, supported this hypothesis. We noted a statistically significant positive correlation between HCW performance and giving HCWs the discretion to change work processes ($r = 0.520$, $P < .05$). In addition, we found moderately positive correlations between HCW performance and providing information about the HCWs' goals and performance ($r = 0.483$, $P < .05$), giving them rewards based on performance ($r = 0.488$, $P < .05$), and providing them access to job-related knowledge and skills ($r = 0.484$, $P < .05$).

While H1 asserts that there is an association between HCW empowerment and their overall performance, H2 aims to measure the impact of this association, stating the HCW empowerment has a statistically significant impact on HCW performance. By perform-

Table 1. Demographic Characteristics of the Participants

Characteristics	Percentage of Respondents
Gender	
Male	49
Female	51
Age	
20-30 y	44
31-40 y	48
41-50 y	7
>50 y	1
Education level	
Diploma	19
Bachelor's degree	73
Master's degree/PhD	8
Years of experience	
<5	34
5-10	51
11-20	14
>20	1
Managerial level	
Junior	37
Middle	47
Senior	16

ing stepwise linear regression analysis (Tables 3 and 4), we found that 2 useful subsets of HCW empowerment practices had a statistically significant effect on their performance. As shown in Table 3, model 1 indicates that the discretion to change work processes explains 27% of the variance in HCW performance ($R^2 = 0.270$, $P < .05$). However, model 2 indicates that when discretion to change work processes was combined with motivational rewards, 30% of the variance in HCW performance is explained ($R^2 = 0.301$, $P < .05$), as shown in Table 4. Comparing the 2 models, we noticed that model 2 provides a more significant fit to the data than model 1. Hence, we accepted H2. Our results indicate

Table 2. Relationship Between HCW Empowerment Practices and HCW Performance

HCW Empowerment Practices	HCW Performance	
	<i>r</i>	<i>P</i>
Information about goals and performance	0.483	.000
Rewards based on performance	0.488	.000
Access to job-related knowledge and skills	0.484	.000
Discretion to change work processes	0.520	.000

Abbreviation: HCW, health care worker.

Table 3. Model 1 of Stepwise Linear Regression Analysis

Variable	Model 1 Summary			ANOVA		Coefficients		
	<i>R</i>	<i>R</i> ²	Adjusted <i>R</i> ²	<i>F</i>	Sig.	<i>t</i>	Sig. (<i>P</i>)	β
	0.520	0.270	0.263	36.300	.000			
Constant						13.715	.001	2.893
Discretion to change work processes						6.025	.001	.306

Abbreviation: ANOVA, analysis of variance.

that empowering HCWs with the discretion to change work processes and giving financial rewards have the greatest impact on overall HCW performance. During the COVID-19 pandemic, these 2 empowerment practices (ie, providing discretion to change work processes and giving rewards based on performance) can have a statistically significant impact on HCW performance.

DISCUSSION

During a pandemic, frontline HCWs often experience anxiety, depression,⁶ mistrust, and helplessness.¹⁵ Such experiences can adversely affect their attitudes toward work and lead to stress, thereby deteriorating the organization's performance. Previous studies have shown that most HCWs experience risk-related anxieties and depression with the outbreak of any infectious disease, including the current COVID-19 pandemic,^{6,7,15} the previous SARS outbreak,^{10,11} and other respiratory infectious diseases.

Managerial implications

In the present study, we examined the relationship between the empowerment of HCWs and their overall performance. Understanding this relationship helps determine the best empowerment practices for frontline HCWs. In turn, these practices can help state guidelines and health care authorities better empower and engage frontline HCWs during the global pandemic. Our findings reveal that 2 empowerment practices have a major effect on HCW performance: giving HCWs the discretion to change work processes and providing them with rewards based on performance.

The additional discretion granted to employees provides them with the flexibility to adapt to unforeseen circumstances, to improve the quality of their interactions with health service recipients, and to make more

productive use of their time.¹⁷ The Safety Management and Resource Task (SMaRT) framework, established by researchers at the Mayo Clinic, is one of the most effective empowerment practices for granting HCWs the discretion to change work processes during the crisis.¹⁹

SMaRT, led by a physician chair and 2 administrative partners, consists of 22 members including: physicians and nurses from pediatric and adult medicine; experts from infection prevention and control (IPAC); the aerosol-generating procedure (AGP) workgroup; diagnostic testing stewardship (DTS); data governance; facilities (FAC); the supply chain; engineering; occupational health services (OHS); compliance and enterprise risk; patient experience; information technology; environmental services (ES); and the personal protective equipment (PPE) task force.

One of the main goals of SMaRT is to empower frontline HCWs who experience safety-related anxiety by providing them with consistent data-driven responses. To reinforce newly implemented safety measures, a SMaRT physician champion, identified in each outpatient department and division, can serve as a local safety expert by spreading the latest recommendations and guidelines. Champions can assemble a safety team within their respective practices that consists of a practice operations manager; a nurse supervisor; a desk supervisor; and a trainee responsible for conducting daily safety rounds to identify and solve safety issues locally, when possible. For unique or emerging concerns, champions can escalate issues to SMaRT to receive input from subject matter experts and tailored recommendations specific to the department's or division's needs. SMaRT not only helps educate and empower frontline HCWs but also enables rapid scaling and dissemination of best safety practices across campuses. SMaRT champions have access to a continually updated tool kit that includes the latest IPAC

Table 4. Model 2 of Stepwise Linear Regression Analysis

Variable	Model 2 Summary			ANOVA		Coefficients		
	<i>R</i>	<i>R</i> ²	Adjusted <i>R</i> ²	<i>F</i>	Sig.	<i>t</i>	Sig. (<i>P</i>)	β
	0.549	0.301	0.287	20.907	.000			
Constant						13.255	.000	2.806
Discretion to change work processes						2.968	.004	.206
Rewards based on performance						2.072	.41	.123

Abbreviation: ANOVA, analysis of variance.

guidelines; diagnostic testing and screening protocols; environmental assessment tools; COVID-19–specific educational material; appropriate PPE use; and stewardship requirements. HCWs are acutely aware of regional and international differences in PPE guidance and practices. Staff members report feeling safer about PPE when they have accurate information, and PPE guidance reflects their understanding of risk. The IPAC team is responsible for creating evidence-based guidelines for proper PPE use.¹⁹

Along the same lines, HCWs would benefit from the ability to enhance and prepare their work environment. One of the lessons learned during the 2003 SARS outbreak is that frontline HCWs gain tremendous benefits from making the work environment conducive to work (eg, by establishing a bathroom in the hospital premises where HCWs can take a bath before leaving for their homes). Such practical interventions that demonstrate tangible support from institutions could significantly reduce extraordinary stressors, such as the fear of spreading infection.²⁰

Involving frontline HCWs in planning and strategizing for the pandemic would sufficiently empower them to sustain their morale during the pandemic. In addition to being clinically effective in fighting the pandemic, involving HCWs in strategy could help boost their self-esteems, make them feel part of the team, build their trust, and promote positive outlooks toward their work. Moreover, it could decrease job-related stress; uncertainty; fear; anxiety; and depression among HCWs.¹⁵

Limitations and future work

Although the results are robust, the study has limitations that are common to most observational cross-sectional studies. In the present study, we chose a critical period in the COVID-19 pandemic to assess the relationship between HCW empowerment practices and HCW performance. Data collection was performed in the last 2 weeks of March when COVID-19 was spreading fiercely in Saudi Arabia. Thus, the number of participants (HCWs) who responded to us and completed the survey was very small (n = 100). The effect of employee empowerment on HCW performance during a pandemic can be better understood with a larger sample size.

Another limitation is that the assessment of employee empowerment by the degree of discretion to change work processes may not be entirely appropriate. This is because some given responses may better reflect other constructs, such as autonomy or organizational-level factors including the care delivery model, the degree of existing standardization of work processes, or other policy constraints/allowances. Indeed, frontline employees may be aware that strictly following the rules and regulations may result in a lower degree of job satisfaction and a higher degree of job burnout.²¹ In addition, if strict rules are always followed for task completion, the employees' abilities will be constrained and they will not gain the degree of empowerment that we seek.²²

Job standardization and employees' empowerment are inherently related²⁴; one direction for future work is to investigate the effect of job standardization on employees' empowerment and see how this would change the relationship between employee empowerment and employee performance. Practical and managerial implications for adopting employee empowerment practices were given in light of our findings to provide healthy environments for better performance and productivity. However, other unmeasured factors, such as self-efficacy, organizational commitment, public service motivation, and the role of psychological empowerment, may also affect HCW performance. The effects of these factors on HCW performance could be the focus of future studies.

CONCLUSION

In this cross-sectional study, we measured the relationship between employee empowerment and employee performance during the COVID-19 pandemic. We found that HCWs' performance can be expected to increase through 2 empowerment practices: giving HCWs the discretion to change work processes and providing them with rewards based on their performance. The results of our study suggests that giving frontline HCWs the discretion to change work processes is the best empowerment practice during the current global health crisis.

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