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**Emotional Intelligence, Teamwork and Knowledge
Management: A Causal Model on Public Service
Motivation among Healthcare Workers in Region XI**

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Emotional Intelligence, Teamwork and Knowledge Management: A Causal Model on Public Service Motivation among Healthcare Workers in Region XI

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Purpose: Public service motivation, a pivotal factor in driving healthcare professionals to contribute to societal welfare, faces significant threats (Perry & Vandenberg, 2015; Perry & Ritz, 2022). Globally, healthcare workers grapple with issues like staff shortages, excessive work hours, and escalating stress levels, culminating in burnout and a potential decline in service quality (Buchan, 2020; Agence France-Presse, 2021; Mendoza, 2021; Irandoost et al., 2022; Vejdani, 2021). It is for this reason that this study is conducted to establish a structural equation model of public service motivation by developing a theoretical framework explaining the relationships between various factors contributing to public service motivation, such as emotional intelligence, teamwork, and knowledge management.

Materials and Methods: Four hundred forty-three healthcare workers were selected through proportional stratified sampling. A validated and approved adapted survey questionnaire was disseminated through google form. This study was a quantitative, descriptive research project using structural equation modeling approach. Understandably, the data analysis used mean and standard deviation, Pearson r, multiple regression analysis, and structural equation modeling techniques to test the proposed theoretical framework and identify the relationships between the different constructs. IBM SPSS was utilized to analyze the data.

Findings: The healthcare workers have a high level of emotional intelligence, teamwork, knowledge management, and public service motivation. There is a significant correlation between the exogenous and endogenous latent variables. In the context of this study on Public Service Motivation, Model 5 has been designated as the best-fit model based on rigorous statistical validation and theoretical consistency. Under

emotional intelligence, Appraisal and Expression in the Self and Regulation of Emotion remained. In Teamwork, Mutual Support and Team Structure remained. In Knowledge Management, Training and Mentoring, Knowledge Capture, Incentives, Leadership, and Policies remained, and under Public Service Motivation, Selfsacrifice, and Commitment to Public Interest remained in the model. Therefore, the findings of the study would be not only for the government health care workers but for the private as well.

Recommendations: Healthcare workers must be provided with training programs focused on improving emotional intelligence which can equip them with the skills to understand better and manage their emotions, improving job satisfaction and motivation; regular teambuilding activities to enhance collaboration, improve communication, and foster a supportive work environment; and create a knowledge-sharing system, promoting continuous learning, and providing regular training updates. In addition, they must be a system to Recognize and reward healthcare professionals for their efforts and promoting a healthy work-life balance, providing mental health resources, and ensuring manageable workloads to help maintain their high motivation levels. In Portugal, it is valuable for healthcare workers to attend to training programs to capacitate them as professionals (Amaral et al., 2022). Finally, policy makers must revisit existing systems and practices on public service motivation to be able to assess what needs to be developed for policy improvement.

Keywords: *Public Administration, Emotional Intelligence, Teamwork, Knowledge Management, Public Service Motivation, Healthcare Workers, Structural Equation Model, Philippines*

JEL Classification: H83; I18

1.0 INTRODUCTION

Public service motivation (PSM) is critical in the healthcare sector. This unique motivational factor, prevalent in professions serving the public, has significant implications for job satisfaction and performance, particularly in high-stakes areas like emergency medical services (Stefurak, Morgan and Johnson, 2020). Healthcare professionals with a high degree of PSM often feel more effective at their jobs and perform better, increasing job satisfaction (IntraHealth Librarian 2014). Healthcare professionals with a high degree of PSM often feel more effective at their jobs and perform better, increasing job satisfaction (IntraHealth Librarian 2014).

Relatedly, well-being and assurance of healthy lives of every Filipino is the third agenda in the Sustainable Development Goals (Salvacion, 2022). Public Service Motivation is essential among healthcare workers and if healthcare workers are highly motivated, they will help realize the third SDG - well-being and ensure the healthy lives of the Filipinos. A highly motivated healthcare sector will be instrumental in the access to healthcare in the Philippines.

Several factors, including emotional intelligence, teamwork, and knowledge management, significantly impact public service motivation in healthcare. High emotional intelligence enables healthcare workers to manage the emotional demands of their work more effectively, enhancing their motivation to serve (Chavez et al., 2022; Suleman et al., 2020.; Levitats & Vigoda-Gadot, 2017). Teamwork also fosters a sense of purpose and satisfaction, further boosting this motivation (Driskell, Salas & Driskell, 2018; McDaniel & Salas, 2018; Salas, Reyes & McDaniel, 2018; Sułkowski et al., 2020). Additionally, effective knowledge management allows for efficient job performance, positively influencing public service motivation (Antunes & Pinheiro, 2020; Martins et al., 2019; Ode & Ayavoo, 2020).

Furthermore, emotional intelligence, teamwork, and knowledge management influence public service motivation. Studies indicate that emotional intelligence is positively associated with compassion and public service motivation, emphasizing its role in shaping healthcare workers' service drive (Di Fabio & Saklofske, 2021; Brown et al., 2021; Suleman et al., 2020; Levitats & Vigoda-Gadot, 2017). Teamwork also enhances public service motivation by fostering a sense of purpose and fulfillment (McDaniels & Salas, 2018; Driskell, Salas & Driskell, 2018). In addition, effective knowledge management systems positively impact public service motivation by equipping healthcare workers with necessary resources for efficient performance (Chen & Hsieh, 2015; Park & Kim, 2018; Sułkowski et al., 2020; Driskell, Salas & Driskell, 2018).

Problem Statement

Although an expanding body of research explores the links between emotional intelligence, teamwork, knowledge management, and public service motivation in healthcare, specific research gaps persist. Specifically, there is a dearth of studies investigating the cumulative impact of these three elements on public service motivation. While existing research has delved into the individual relationships between these variables, a more comprehensive examination of their interactive effects on public service motivation is warranted. This would provide a more nuanced understanding of the intricate dynamics among healthcare workers.

Objectives of the Study

This study is focused on the healthcare workers. First, describe the emotional intelligence level of healthcare workers in Region XI regarding appraisal and expression of emotion in the self, appraisal and expression of emotion in others, regulation of emotion, and utilization of emotions. Second, to describe the level of teamwork among healthcare workers in Region XI in terms of team structure, leadership, situation monitoring, mutual support, and communication. Third, to assess the level of knowledge management among healthcare workers in Region XI in terms of policies, leadership, incentives, knowledge capture, training and mentoring, and knowledge sharing. Fourth, to assess the level of public service motivation among healthcare workers in Region XI regarding attraction to policy making, commitment to the public interest, compassion, and self-sacrifice. Fifth, to determine the significance of the relationship between and among the exogenous and endogenous variables; Sixth, to determine the exogenous variable that best predicts public service motivation among healthcare workers. Seventh, to establish a best-fit structural model for public service motivation.

2.0 LITERATURE REVIEW

Theoretical Framework

While no single theory explicitly assumes the relationships between emotional intelligence, teamwork, knowledge management, and public service motivation, several theories can provide practical frameworks to help explain and understand these complex relationships. Here are a few examples: social exchange, self-determination, and transformational leadership theories.

Social exchange theory. Social exchange theory is a social-psychological concept that explains the give-and-take relationships between individuals or groups. It posits that social interactions involve an exchange of rewards and costs and that individuals are motivated to maintain relationships that offer more rewards than costs. This theory suggests that individuals engage in social exchanges with others in order to maximize their rewards and minimize their costs (Blau, 1964; Homans, 1958). In the workplace context, social exchange theory suggests that employees tend to engage in positive behaviors, such as teamwork and knowledge sharing, when they perceive that their colleagues or organization will reciprocate their efforts. If workers socialize personally and professionally, it can create a healthy workplace which can prolong one's presence to work.

Self-determination theory. Self-determination theory is a framework that describes the factors that motivate individuals to engage in certain behaviors. According to this theory, three basic psychological needs drive individuals: autonomy, competence, and relatedness (Deci & Ryan, 2008; Deci & Ryan, 2012; Ryan & Deci, 2000). For example, people are motivated to engage in a behavior when they have autonomy and control over it. Similarly, individuals who feel competent and effective in their actions and feel connected to others are motivated to engage in that behavior (Di Fabio & Saklofske, 2020, 2021; Ryan & Deci, 2017). In the context of this study, selfdetermined workers are motivated to perform with excellence at work.

Transformational leadership theory emphasizes the worth of leaders inspiring and motivating their followers to achieve shared goals and reach their full potential. Leaders who exhibit transformational leadership behaviors are role models who empower their followers to take ownership of their work and develop their skills and abilities (Jensen & Bro, 2018). In addition, this theory suggests that leaders who inspire and motivate their followers can enhance their performance and job satisfaction (Bass & Avolio, 1994; Bass & Riggio, 2006). In the context of this study, workers who serve as leaders at work can encourage others be outstanding and be role models too in their field of work. Their character could be inspiring that enables other workers to be the best in their chosen field.

3.0 MATERIALS AND METHODS

The population of this study consisted of healthcare professionals working at Southern Philippines Medical Center (SPMC) in Davao City and Davao Regional Medical Center (DRMC) in Tagum City. A proportional stratified sampling technique was used to select the sample, ensuring the results represented the population. On a percentage ratio basis, the sample population was 443, distributed as follows: 274 participants were selected from Southern Philippines Medical Center (SPMC) and 169 from Davao Regional Medical Center (DRMC). This distribution reflected the total population at each center (SPMC=2559; DRMC=1550; total=4109 doctors, nurses, and midwives).

A proportional stratified sampling was used in the selection of the respondents. In proportional stratified sampling, respondents are chosen in part according to the original distribution in a given population (Rahman et al., 2022). The Human Resource Management Officer assisted in identifying the respondents. Only those with permanent status of employment were included. Those under job order, casual and temporary employment were excluded in this study. This study used adapted sets of a questionnaire developed by the following authors: the validated *Schutte Self Report Emotional Intelligence Scale* (Musonda, Shumba and Tailoka, 2020) for emotional intelligence; the *Teamwork Perceptions Questionnaire (TPQ)* (Battles & King, 2010) for teamwork; *Knowledge Sharing Questionnaire (KSQ)* (Algahtani, 2019) for knowledge sharing; and *Public Service Motivation Measurement (PSMM)* (Budiyanti, Yamin & Patiro, 2019).

The 5-point likert scale was adopted in this study to convey the respondents' level of agreement and disagreement on statements that were modified to conform to the work settings of SPMS and DRMC. The scale adopted was 4.20-5.00, which means that the measures are always manifested; 3.40-4.19, which means that the measures are often manifested; 2.60-3.39, which means that the measures are sometimes manifested, 1.80-2.59, which means that the measures are seldom manifested; and 1.00-1.79, which means that the measures are never manifested.

This study was a quantitative, descriptive research project using structural equation modeling approach. A descriptive study is one that does not manipulate or alter the collected information. Some authors refer to descriptive research as "correlational" or "observational" studies (Doyle et al., 2020; Hermans, 2019). This study also utilized a cross-sectional design, in which the researcher collected data at a specific point in time (Setia, 2016; Wang & Cheng, 2020). The researcher then invited participants to complete the questionnaire online via google forms.

After the data collection, Structural Equation Modeling (SEM) was used in this study to analyze the complex relationship between variables. SEM was beneficial in this research because it tested complex theoretical models that involved multiple variables and relationships. SEM was a powerful tool for this study because it tested complex theoretical models and helped understand the relationships between multiple variables (Civelek, 2018; Mueller & Hancock, 2019). The data was presented through tables with narratives describing the results of the study.

Finally, the procedure for data collection involved approval of the Heads of SPMC and DRMC allowing the conduct of the study after the approval of the University of Mindanao Ethics Review Committee with protocol number 2023-363 dated July 8, 2023.

4.0 RESULTS AND DISCUSSION

The emotional intelligence of healthcare workers is described as high. The result shows that healthcare workers in Region XI are generally proficient in managing emotional tasks and navigating social complexities in their professional environment. High Emotional Intelligence (EI) among healthcare workers can result in better patient outcomes, enhanced teamwork and communication, and lower levels of stress and burnout (Sharp, Bourke & Rickard, 2020). A review of related literature shows that healthcare professionals with high emotional intelligence better understand and respond to patients' emotional states, leading to more effective patient care. They can empathize with patients, build solid therapeutic relationships, and deliver care sensitive to patients' emotional needs (Clarke et al., 2017; Smith et al., 2009).

The *teamwork* of healthcare workers is high. This reveals that healthcare workers in Region XI work well together to provide quality patient care. Robust teamwork and collaboration are imperative to ensure safe and effective healthcare delivery within individual units and across various organizational, disciplinary, and technical spheres (Donovan et al., 2018; Rosen et al., 2018). The sentiment expressed in the study by Fox et al. (2018) underscores the importance of integrating teamwork training early in the educational journey of healthcare professionals. Embedding such training from the onset equips students with essential collaborative skills and sets the stage for a culture of inter-professionalism. This early intervention is critical for developing a workforce adept in technical skills and the relational competencies required for effective interprofessional collaboration, ultimately contributing to safer and more efficient healthcare systems.

The knowledge management of healthcare workers is high. The consistently high mean scores for all domains show that healthcare workers in Region XI generally adhere to Knowledge management. Knowledge management plays a critical role in shaping social exchange relationships, facilitating the dissemination and exchange of expertise among individuals and groups within an organization. The consistently high mean scores for each domain suggest that healthcare workers in Region XI generally adhere to Knowledge management. Knowledge management plays a critical role in shaping social exchange relationships, facilitating the dissemination and exchange of expertise among individuals and groups within an organization.

The *public service motivation* of healthcare workers is described as high. This means that healthcare workers in Region XI are highly motivated. Public service motivation significantly

fosters a service culture and professional ethics within healthcare institutions. When healthcare professionals are driven to serve their communities, it encourages a collaborative work environment, prioritizes patient-centric care, and upholds stringent ethical standards. This motivation is pivotal not only for the well-being of healthcare workers but also for the quality of care rendered and the overall operational effectiveness of healthcare organizations (Deng et al., 2019; Luu et al., 2019; Ritz, Vandenabeele & Vogel, 2021; Kim, 2021).

Moreover, all tests are significant, which rejected the null hypothesis affirming the study that emotional intelligence and public service motivation are positively associated, teamwork and public service motivation have linkage, and that there is a connection between knowledge management and public service motivation. In addition, a significant influence was found on emotional intelligence, teamwork and knowledge management on public service motivation on the healthcare workers in Region XI.

Most importantly, Model 5 was found to be the best-model fit for meeting all the criterion indices of the goodness of fit measures. The model revealed that all indices fit each criterion range for being greater than .95: p-value = .119, CMIN/DF = 1.300, RMSEA = 0.26, p-close = .976, TLI=.996, NFI=.991, CFI=.998, and GFI = 0.984. Therefore, this model best describes the public service motivation of healthcare workers in Region XI as provided for in Table 1. **Table 1: Summary of Goodness of Fit Measures of the Five Generated Models**

Model	Pvalue >0.05) .000	CMIN / DF (0<value<2)	GFI (>0.95)	CFI (>0.95)	NFI (>0.95)	TLI (>0.95)	RMSEA (<0.05)	P-close (>0.05)
1		10.214	.772	.843	.829	.819	.145	.000
2	.000	6.049	.853	.915	.900	.901	.107	.000
3	.000	3.602	.886	.956	.940	.949	.077	.000
4	.000	3.549	.888	.957	.942	.950	.076	.000
5	.119	1.300	.984	.998	.991	.996	.026	.976

Legend: CMIN/DF–Chi-Square/Degrees of Freedom

GFI–Goodness of Fit Index

RMSEA–Root Mean Square of Error Approximation

NFI–Normed Fit Index

TLI–Tucker-Lewis Index

CFI – Comparative Fit Index

5.0 CONCLUSION AND RECOMMENDATIONS Conclusion

The study reveals a high level of Emotional Intelligence, Teamwork, and Knowledge Management among Region XI healthcare workers. Emotional intelligence is crucial in healthcare settings, where professionals often deal with high-stress situations and need to empathize with patients. Also of relevance is Teamwork which is essential in healthcare, as it often involves collaborative efforts to provide patient care. Meanwhile, an effective Knowledge Management can ensure that healthcare professionals have access to the latest medical research and best practices.

Based on the data collected, there is a significant relationship between Emotional Intelligence, Teamwork, Knowledge Management, and Public Service Motivation. High Emotional Intelligence, effective Teamwork, and robust Knowledge Management likely contribute to the healthcare workers' high Public Service Motivation. This indicates that these elements are integral

to fostering motivation in public service roles, particularly in the healthcare sector. As found in this study, Emotional Intelligence, Teamwork and Knowledge Management significantly influence Public Service Motivation. Finally, there is a model of public service motivation among healthcare professionals.

Recommendations

Healthcare workers must be provided with training programs focused on improving emotional intelligence to equip them with the skills to understand better and manage their emotions, improving job satisfaction and motivation. This could involve regular training sessions on emotional intelligence skills, such as empathy, self-awareness, and effective emotional management. Conduct of regular team-building activities to enhance collaboration, improve communication, and foster a supportive work environment. This can lead to increased motivation and job satisfaction among healthcare professionals. The creation of a knowledge-sharing system as part of knowledge management can promote continuous learning, and provide regular training updates. Such practices can help healthcare professionals feel more competent, leading to increased motivation.

Recognizing and rewarding healthcare professionals for their efforts can also increase motivation. This could involve financial incentives and non-monetary rewards like public recognition, additional vacation time, or opportunities for professional development. Promoting a healthy work-life balance, providing mental health resources, and ensuring manageable workloads can also help maintain high motivation levels. Finally, policy makers must revisit existing systems and practices on public service motivation to be able to assess what needs to be developed for policy improvement. Further, research should be conducted to identify additional factors influencing public service motivation among healthcare professionals. This will allow for the development of more comprehensive strategies to enhance motivation in this sector.

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