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Correlation between Productivity and Relationship with Co-Workers and Supervisors among Selected Nurses in Quezon City

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Abstract

In the recent Covid-19 pandemic, there has been an increase in the rate of healthcare workers who experience burnout, thus decreasing their work productivity. However, few studies tackle how co-worker support among healthcare workers in the Philippines affects their productivity. This research aimed to identify the effect of co-workers' support on the job productivity of the employees in a government-owned hospital specializing in cardiology. This study identified the relationship between co-workers' support, co-workers' relationship, and relationships with the board of directors or bosses and its effect on the job productivity of the nurses using a convenience sampling technique. The study used descriptive-correlational analysis to examine 100 respondents from the survey and utilized the Social Capital Theory to discuss further and analyze the effects of the variables. It was found that there is a direct low relationship between the productivity of nurses and co-workers and supervisor support. Therefore, the researchers recommend that the hospital shall ensure an open communication line between supervisors and the employees. There is also the need for future research to delve deeper into the nurses' experiences, using a qualitative method to reveal additional data and knowledge on the above field.

Keywords: human resources, nurses, co-workers' relationships, co-workers' support, job productivity

INTRODUCTION

The past few years have been a challenge for nurses, together with their co-workers, to work on-site despite the threat of COVID-19 together with their co-workers. The amount of stress and burnout of nurses has increased during the recent pandemic due to factors such as psychological, health, and physical exhaustion, which affected how medical workers respond to patients during the pandemic (Ulfa & Azuma, 2022). With this, the pandemic has made it clear that the study of workplace relationships and support played an important role in better understanding the employees and their actions at work.

A government-owned hospital located in Quezon City with advanced medical facilities is said to be one of the leading cardiology hospitals in the country, having over two thousand employees, with workplace relationships between co-workers as a major variable. Co-worker relationships/support refers to the varying connections or relationships between individuals working under an organization that is believed to affect the employee's work productivity. Several studies have already focused on the effects of co-worker support on the productivity of employees as well as nurses.

Previous researchers investigated the effects of relationships on nurses' productivity in hospitals located in different countries, such as the United States, Australia, Vietnam, and Ghana. One particular study has been conducted on how workplace relationships affected nurses' productivity and well-being in American and Australian hospitals (Brunetto et al., 2013). Another study investigated the effects of healthy workplace relationships on the

working behaviors—which affects performance—of the nurses of hospitals in Vietnam (Tran et al., 2018), while another study tried to determine the role of co-worker support in job stress and workload management of Ghanaian nurses (Kokoroko & Sanda, 2019). Moreover, a systematic review was done to investigate how the unacceptable behavior of co-workers in the healthcare field affects the employees' performance and the outcome of their patients (Guo et al., 2022).

These studies indicated that workplace relationships have greatly affected the aforementioned nurses' well-being and productivity. However, compared to those large countries, the nurses in the Philippines, as well as other healthcare workers, have entirely different work ethics and values. One study on the work values of Filipino college students discovered that the work values (which refer to the business ethics and personal work preferences of an individual) chosen by most of the respondents are the interpersonal relationships that they have. It is well known that Filipinos place high value in their relationships, and alongside other Asian countries, they tend to focus on the group rather than the individual. Filipinos are driven, affected, and supported primarily by their families, placing great importance on their families' support (Llenares et al., 2021). Aside from that, one common characteristic of Filipinos is the term *"pakikisama"* which signifies the need for people to get along with other individuals (Tablan, 2021). Due to the differences in healthcare workers in various countries, the researchers aim to determine the relationship between the nurses' productivity and relationships with their co-workers and supervisors.

In this study, the researchers strove to determine the effects of co-worker support on the productivity of nurses working at the hospital. In order for the researchers to be guided in conducting their study, the following hypotheses were formulated to be tested in the study:

Ho$_1$. There is no significant relationship between nurses' productivity and relationships with co-workers.

Ho$_2$. There is no significant relationship between nurses' productivity and their relationship with their supervisors.

Ho$_3$. There is no significant relationship between nurses' productivity and co-worker support.

LITERATURES

Co-worker Support. Having a helping hand, especially when at work, could go a long way to make our daily lives on the job better and worthwhile; co-worker support has been defined in various ways. Co-worker support may refer to work-related assistance. Co-worker support, which refers to the interactions among peers in a workplace (Suvini & Batagoda, 2021), is the belief of employees that their co-workers would be willing to extend to them quality work-related assistance (Avcı, 2017; Baker & Kim, 2021). It could be a means of heightening sensations of members of an organization's self-efficacy (Muthoka, 2017), a way to give them support to carry out their jobs (Ahmed et al., 2019; Voung, 2022), as well as helpful social interactions in the workplace (Kokoroko & Sanda, 2019).

Work Productivity. Work productivity is an important aspect of business that affects the whole company. This aspect greatly correlates to employees' work, affecting how they perceive and are motivated to accomplish goals. Work productivity is the efficiency of the employee based on labor value, consumed capital, and the profit that the company gets from it (Hanaysha, 2016). This is said to be affected by employee stress, which lowers productivity (Bui, 2021). With this, work productivity can lead companies to success.

Workplace Relationships. Amjad et al. (2015) define workplace friendship as "nonexclusive voluntary workplace relations that involve mutual trust, commitment, reciprocal liking, and shared interests and values." Various studies conducted in this respect have indicated that

workplace relationships directly affect a worker's ability to work & produce. Workplace relationships are unique interpersonal relationships with important implications for the individuals in those relationships and the organizations in which the relationships exist and develop" (Gaur & Ebrahimi, 2013). The so-called workplace connection is sharing information by individuals and organizations to achieve their objectives (Tran et al., 2018). Co-worker assistance greatly facilitates employee performance by improving their psychological health at work (Ahmed et al., 2019).

Job Performance. Job performance is the ability to fulfill job well and can also be defined as the workers' productivity (Jacobs et al., 2013; as cited in Dousin et al., 2019). It is a work behavior and attitude that determines the result of an employee achieving their duties within a certain period while still providing high-quality performance. Job performance can also be seen as employee engagement and job productivity. When workers are engaged in their work, their commitment and involvement in the organization increases as their sense of responsibility leads their work quality to success (Anitha, 2014). Furthermore, the researchers in this study define job performance as employee engagement and productivity.

METHODS

Population and Sampling. The study's population consisted of all the nurses working at the hospital (name of the hospital cannot be disclosed due to ethics consideration). There is no bias in participant selection. The convenience sampling technique, or opportunity sampling, was used to obtain the required respondents for this study. Convenience sampling is a non-probability sampling technique that involves choosing people who are easily available but meet the required sample size. This strategy is especially beneficial when time and resources are limited and thus allows for easy collection of information. The study's proponents agreed that 100 respondents were sufficient enough for the study to find the effect of co-workers' support

on the employees' productivity. This number of respondents is believed to be sufficient for the study because a similar study in Slovakia about obstetrics/gynecology nurses' and midwives' work-related stress as indicators has employed the same sampling size for their data gathering (Banovcinovaa & Baskova, 2014).

Instrumentation. The researchers utilized an online survey questionnaire given to the hospital's nurses. The survey questionnaire had a total of thirty-three (33) questions divided into five (5) categories: Basic Information (6), Network (3), Productivity (3), Relationship with Coworkers (10), and Relationship with Supervisor, four (4) of which were recognition type while the others utilized both recognition and completion type. It was submitted for validation and validated by an expert, proving its credibility for research use. Additionally, the researchers conducted a pilot test by giving out the validated online survey through Google Forms to 30 respondents from the chosen population. This was done to verify if the instrument's variables, which are Co-worker Relationships, Relationships with their Supervisors, and Relationships with the Board of Directors or Bosses. Moreover, using Cronbach's Alpha, the researchers tested the viability of the questions per variable. Results revealed that two of the variables are "good", which resulted to 0.81 while the other is "acceptable" which is 0.65.

Data Analysis. The study used a descriptive and correlational analyses as the researchers primarily aimed to know the correlation between productivity and their relationship with co-workers and supervisors. The correlation analysis utilized Pearson's correlation to measure the degree of relationship between productivity and its relationships with co-workers and supervisors. However, the findings between the variables did not imply causation and only established that a particular relationship exists. A previous study by Avci (2017) used a descriptive survey to find the frequency and correlation to determine the relation between co-worker support, work-life quality, and well-being. Additionally, another previous study conducted by Bui (2021) used

descriptive analysis to analyze the respondents' means, standard deviations for continuous variables, and frequency and percentages for categorical responses, and also used Pearson's correlation to assess the relationship between stress and productivity. Therefore, this research utilized this type of analysis to convert raw data from the surveys to find the patterns and relationships between co-workers and supervisors on productivity by nurses in this hospital.
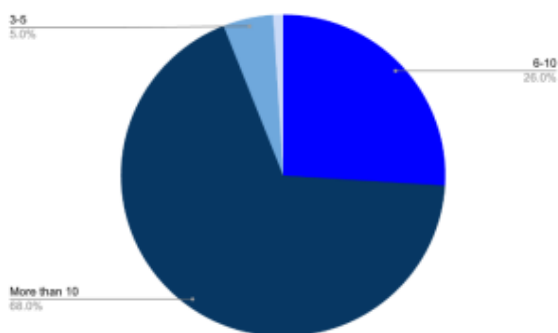
RESULTS

Figure 1
Frequency and percentage distribution of respondents' daily communication or interaction.

Majority of the nurses interact with more than ten (10) people, taking up 68% of the total respondents. Furthermore, 26% of the respondents interact with six (6) to ten (10) people, and 5% interact with three (3) to five (5) other nurses. Lastly, the remaining 1% indicated that they only interact with one (1) to two (2) people on a daily basis. Thus, the results revealed that a large portion of the respondents regularly interact with more than ten (10) people, signifying a high daily interaction among co-workers in the workplace.
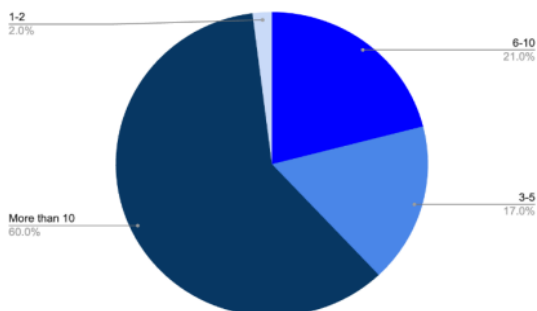

Figure 2
Frequency and percentage distribution of respondents' consideration of co-workers to be a close network or support system.

As presented in Figure 2, 60% of the respondents indicated that they consider more than ten (10) co-workers to be part of their close network or support system. Moreover, 21% consider six (6) to ten (10) people to be part of their close network and 17% consider three (3) to five (5) co-workers to be a part of it. Lastly, a mere 2% of the respondents consider one (1) to two (2) people to be a part of their support system. These results revealed that their close networks are relatively large because the majority of the respondents consider more than ten (10) of their co-workers to be a part of their close network or support system.
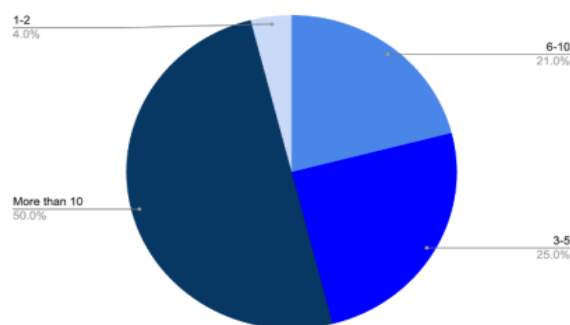

Figure 3
Frequency and percentage distribution of respondents' consideration of co-workers that are well enough to seek advice from if needed.

A large portion of the respondents revealed that they know more than ten (10) of their co-workers well enough to seek advice or assistance when needed. The second most frequently chosen option is three (3) to five (5) people, which took up 25% of the respondents. Moreover, 21% of the respondents indicated that they know six (6) to ten (10) people well enough to do so. The choice with the least number of responses, with only 4%, is one (1) to two (2) people. These results indicated that the majority of the nurses that answered the survey know more than ten (10) of their co-workers well enough to seek advice or assistance when needed, presenting a healthy and positive relationship between them.

Table 1

Nurses' productivity and their relationship with co-workers

Variable	r-value	Description	p-value	Alpha	Decision	Remarks
Nurses' productivity and their relationship with co-workers	.397	Direct Low Relationship	.000	.05	Reject Ho$_1$	Significant

Table 1 presents how nurses' productivity correlates to their relationship with their co-workers. The findings indicated a direct low relationship between these variables (r = .397). Additionally, the results showed significant statistical evidence (p<.05) to reject the null hypothesis between nurses' productivity and their relationships with co-workers. As the results only indicates a direct low relationship, still relationship exists between nurses' productivity and their relationship with co-workers, indicating that their productivity may be influenced by these kinds of relationships. This finding was strongly supported by previous research, like that of Bergbom & Kinnunen (2014), which emphasized the role of social support from co-workers in improving well-being and productivity directly and indirectly. Gaviola (2021) also discussed the beneficial effects of co-worker relationships on performance, indicating a positive impact on nurses' productivity when they have supportive and positive relationships with their colleagues. These studies collectively supported the idea that positive co-worker relationships play a significant role in increasing nurses' productivity.

Table 2

Nurses' productivity and their relationship with supervisors

Variable	r-value	Description	p-value	Alpha	Decision	Remarks
Nurses' productivity and their relationship with supervisors	.238	Direct Low Relationship	.017	.05	Reject Ho$_2$	Significant

Table 2 shows the correlation between the productivity of nurses and their relationship with their supervisors. Results showed a direct low relationship with the two mentioned variables (r=.238). Additionally, enough statistical evidence has been found to imply a direct low relationship between the productivity of nurses and their relationships with their supervisors, thus rejecting the null hypothesis

(p<.05). With the given results, it can be suggested that the nurses' level of productivity may be associated with their relationship with their supervisors.

This finding is supported by a study on the impact of determinants of engagement on employee performance (Anitha, 2014), wherein engagement is more likely to occur when leaders are inspiring and when they consider their employee's output and work as meaningful and essential. The results of these studies, along with the study of Yang et al. (2019), state that supervisor support improves distributive justice and supports the idea that good supervisor support increasingly improves the performance of employees.

Table 3

Nurses' productivity and co-worker support

Variable	r-value	Description	R squared	p-value	Alpha	Decision	Remarks
Nurses' productivity and co-worker support	.321	Direct Low Relationship	.103 or 10.3%	.001	.05	Reject Ho$_3$	Significant

Table 3 reveals the correlation between nurses' productivity and their co-worker support. Results showed sufficient evidence of a direct low correlation between the level of productivity of the nurses and their co-worker support (r=.321, p<.05). Therefore, it can be concluded that the level of the nurses' productivity is affected by how much co-worker support they have from their colleagues (10.3%). The findings above are aligned with the study conducted by Suvini and Batagoda (2021) indicating that peer support, synonymous with co-worker support, has a big impact on employee productivity. Furthermore, Anjum et al. (2018) study on job productivity in toxic environments concluded that a toxic work environment increases job burnout, thus decreasing employees' productivity. The study's results support this research's findings because it states that their environment—their co-workers—affects their productivity.

DISCUSSION

More than half of the nurses who participated in this survey from the specialty hospital work

twelve (12) to fourteen (14) hours per day. However, most still consider themselves productive and satisfied with their jobs. Most nurses have more than ten (10) co-workers with whom they interact daily and consider to be a part of their close network. More than half of the respondents consider three (3) to five (5) co-workers as individuals they know well enough to seek advice. The productivity of nurses and co-worker support has a direct low relationship, suggesting that nurses' productivity is marginally affected by the support they get from their co-workers. The productivity of nurses has a direct low relationship with their relationship with their supervisor, indicative of the significant impact the supervisors have on the productivity of nurses. Productivity and co-worker support of nurses have a significant direct low relationship, implying that the productivity of nurses is affected by the amount of support they get from their co-workers.

Recommendations. The study revealed a positive correlation between the productivity of nurses and their relationship with co-workers and supervisors. Thus, the researchers made the following recommendations:

1. The hospital's human resources department should provide more activities that could further enhance the relationship of their nurses to one another. Furthermore, they should provide space and time for the nurses to enhance camaraderie and cooperation further.

2. Supervisors should ensure an open communication line and connections with the team to improve their relationship with their subordinates.

3. For future researchers, full knowledge of the research application process for the chosen locale must be done before continuing to write the research paper.

4. Future studies must conduct a similar quantitative survey using probability sampling to ensure unbiased responses.

5. A similar study must also be conducted to provide a more specific hierarchy of samples (i.e., based on the number of years of experience as a nurse). This research could reveal how diverse levels of experiences impact the organizational dynamics and, in turn, affect the productivity of nurses.

6. A similar study using the qualitative research method must also be conducted to tackle nurses detailed and personal experiences regarding the effect of co-workers' support on their productivity.

REFERENCES

Ahmed, U., Majid, A., Al-Aali, L., & Mozammel, S. (2019). Can meaningful work really moderate the relationship between supervisor support, co-worker support and work engagement? Management Science Letters, 9(2), 230.

https://www.growingscience.com/msl/Vol9/msl_2019_28.pdf

Anitha, J. (2014). Determinants of Employee Engagement and Their Impact on Employee Performance. International Journal of Productivity and Performance Management, 63(3), 308–23. https://doi.org/10.1108/ijppm-01-2013-0008

Avcı, N. (2017). The relationship between co-worker support, quality of work life and wellbeing: An empirical study of hotel employees. Uluslararası Yönetim İktisat ve İşletme Dergisi, 13(3), 578–58. https://doi.org/10.17130/ijmeb.2017331328

Baker, M.A. & Kim, K. (2021). Becoming cynical and depersonalized: how incivility, co-worker support and service rules affect employee job performance. International Journal of Contemporary Hospitality Management, 33(12), 7–8. https://doi.org/10.1108/IJCHM-01-2021-0105

Banovcinova, L. & Baskova, M. (2014). Sources of work-related stress and their effect on burnout in midwifery. Procedia - Social and Behavioral Sciences, 132(1), 248–254. https://doi.org/10.1016/j.sbspro.2014.04.306

Bergbom, B. & Kinnunen, U. (2014). Immigrants and host nationals at work: Associations of co-worker relations with employee well-being. International Journal of Intercultural Relations, 43(1), 165–176. https://doi.org/10.1016/j.ijintrel.2014.08.002

Brunetto, Y., Xerri, M., Shriberg, A., Farr-Wharton, R., Shacklock, K., Newman, S., & Dienger, J. (2013). The impact of workplace relationships on engagement, well-being, commitment and turnover for nurses in Australia and the USA. Journal of Advanced Nursing, 69(12), 2786–2799. https://doi.org/10.1111/jan.12165

Bui, T. (2021). Workplace Stress and Productivity: A Cross-Sectional Study. Kansas Journal of Medicine, 14(1), 42-45. https://doi.org/10.17161/kjm.vol1413424

Dousin, O., Collins, N., & Kler, B. K. (2019). Work-Life Balance, Employee Job Performance and Satisfaction Among Doctors and Nurses in Malaysia. International Journal of Human Resource Studies, 9(4), 306–319. https://doi.org/10.5296/ijhrs.v9i4.15697

Gaur, M. & Ebrahimi, N. (2013). Understanding Workplace Relationships -With Special Reference to Superior-Subordinate Relationship -An Important Dimension Having Impact On The Success, Growth And Performance of the Employees And Organization. International Journal of Research and Development, 2(2), 2319-5479. url: shorturl.at/cefgv

Gaviola, J. R. H. T. (2021). Factors Affecting Job Satisfaction of Medical Technologists in Public Hospitals in Quezon City, Philippines. INTERNATIONAL JOURNAL OF PROGRESSIVE RESEARCH IN SCIENCE AND ENGINEERING, 2(10), 79-86.

Guo, L., Ryan, B., Leditschke, I. A., Haines, K. J., Cook, K., Eriksson, L., Olusanya, O., Selak, T., Shekar, K., & Ramanan, M. (2022). Impact of unacceptable behaviour between healthcare workers on clinical performance and patient outcomes: a systematic review. BMJ Quality Safety, 31(9), 679–687. https://doi.org/10.1136/bmjqs-2021-013955

Hanaysha, J. (2016). Improving employee productivity through work engagement: Evidence from higher education sector. January 2016 Management Science Letters, 6(1), 61-70. https://doi.org/10.5267/j.msl.2015.11.006

Kokoroko, E. & Sanda, M. A. (2019). Effects of Workload on Job Stress of Ghanian OPD Nurses: The Role of co-worker Support. Safety and Health at Work, 10(3), 341–346. https://doi.org/10.1016/j.shaw.2019.04.002

Llenares, I. I., Deocaris, C. C., & Deocaris, C. C. (2021). Work values of filipino college students. British Journal of Guidance Counselling, 49(4), 513–523. https://doi.org/10.1080/03069885.2021.1939267

Muthoka, M. K. (2017). Influence of employee relations practices on organisational performance of Public Healthcare Sector in Kenya. JKUAT Repository Home, 1(1), 1–249. http://ir.jkuat.ac.ke/handle/123456789/2435

Suvini, H. P. A. U. & Batagoda, C. K. (2021). Impact of Peer Support on Employee Productivity: Study of Executive Level Workers in Printed Media Organizations in Colombo District, Sri Lanka. Standing Committee on Applied Research and Knowledge Center, 5(1), 530–539. https://www.researchgate.net/profile/Ramakrishnan-Vivek/publication/355480536_Proceedings/links/61738f1f0be8ec17a915fce5/Proceedings.pdf#page=555

Tablan, F. (2021). Filipino virtue ethics and meaningful work. Humanities Bulletin, 4(1), 20–40. www.journals.lapub.co.uk/index.php/HB/article/view/1975

Tran, K. T., Nguyen, P.V., Dang, T.T.U., & Ton, T.N.B. (2018). The Impacts of the High-Quality Workplace Relationships on Job Performance: A Perspective on Staff Nurses in Vietnam. MDPI, 8(12), 1–6, 11–13. https://doi.org/10.3390/bs8120109

Ulfa, M., Azuma, M., & Steiner, A. (2022). Burnout status of healthcare workers in the world during the peak period of the COVID-19 pandemic. Frontiers in Psychology, 13. https://doi.org/10.3389/fpsyg.2022.952783

Yang, T., Lei, R., Jin, X., Li, Y., Sun, Y., & Deng, J. (2019). Supervisor Support, co-worker Support and Presenteeism among Healthcare Workers in China: The Mediating Role of Distributive Justice. Int. J. Environ. Res. Public Health, 16(5), 817. https://doi.org/10.3390/ijerph16050817