Conflict Management Strategies Utilized by Nurse Managers and its Relationship to Vertical Dyad Linkage with Nurses

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ABSTRACT

Background: Conflict management skill is an essential skill for an effective nurse leader. As inappropriate use of conflict resolution skills leads to degeneration of communication and poor working relationships particularly between nurse leader and their staff nurses. Aim: the current study aimed to determine the relationship between conflict management strategies used by head nurses, and the quality of vertical dyad linkage at Port Said hospitals. Subjects and Methods: A descriptive correlational design was applied in this study on 31 head nurses and 203 staff nurses working in Port Said General Hospital and Port Said Health Insurance Hospitals, using two tools; the first was Thomas-Kilmann conflict mode instrument to assess head nurses' preferred conflict resolution strategies, and the second was vertical dyad linkage scale from staff nurses point of view. Results: The results of the present study showed more than two-thirds of head nurses (67.7%) used accommodating strategy as a primary method to resolve conflict, followed by compromising strategy used by 51.6% by them to resolve conflict and less than two third (64%) of staff nurses had a neutral relation with their head nurses. Conclusion: Based on the results of the present study, it can be concluded that, there was no statistically significance relation between conflict management strategies used by head nurses, and the quality of vertical dyad linkage in Port-Said hospitals. It was recommended that head nurses should use conflict management styles depending on the situation. In addition to, develop an in-group relationship with as many staff nurses as possible.

Keywords: conflict, conflict management, head nurses, staff nurses, vertical dyad linkage.
INTRODUCTION

Conflict is central to all human interaction, as it simply codifies the deep and abiding understanding of the fundamental diversity of the human experience (Porter-O’Grady & Malloch, 2018). Health care organizations are not exempt (Mason, Leavitt & Chaffee, 2014). Indeed, it is one of the highest conflict environments (Borkowski, 2016). Weiss & Tappen (2015) confirmed that conflicts are a daily occurrence in the life of nurses. Thus, Barr & Dowding (2016) claimed that nurse managers spend more time dealing with this conflict. Therefore, health leaders must master conflict management styles and techniques (Ledlow & Stephens, 2018).

Conflict has been defined by Aamodt (2016) as the psychological and behavioral reaction to a perception that another person is keeping you from reaching a goal, taking away your right to behave in a particular way, or violating the expectancies of a relationship. In addition, Griffin (2016) defined conflict as a disagreement among two or more individuals, groups, or organizations. This disagreement may be relatively superficial or very strong. It may be short lived or exist for months or even years, and it may be work related or personal.

In categorizing conflict, conflict has five categories; these categories are named intrapersonal, interpersonal, intragroup, intergroup and inter-organizational conflict (Borkowski, 2016). Intrapersonal conflict occurs within oneself and is expected when an individual performs a task that does not meet his or her personal goals. While interpersonal conflict occurs between two individuals disagree in a given matter. Intratatus conflict occurs within the group and usually occurs when there are differences in goals, tasks, and procedures. Meanwhile, intergroup conflict occurs between professional groups or different departments. Interorganizational conflict occurs between two or more organizations (Gaylor, 2017).

Staff nurses regularly experience conflict during the course of their work (Chang & Daly, 2016). Handling those conflicts is an important part of their nurse leaders' work (Pedler, Burgoyne & Boydell, 2013). Inappropriate use of conflict resolution skills can increase stress, limit innovation and lead to negative impact on patient care. Moreover, it leads to degeneration of communication and poor working relationships particularly between nurse leader and their staff nurses (Stanley, 2017). On the other hand, Ihidero
(2011) proved that developing constructive and proactive conflict management practices by the leaders is a cue for high exchange relation with their staff. This quality of the exchange relationship between nurse leaders and their staff is represented by vertical dyad linkage (Lussier & Achua, 2016).

Vertical dyad linkage model was proposed by Graen and Cashman (1975) (Schedlitzki & Edwards, 2014). The theory originally took its name from the relationship between two people (a dyad), the position of the leader above the subordinates (vertical) and the interrelated behavior between them (linkage) (Levine & Hogg, 2010; Aamodt, 2016). Graen’s concept of the vertical dyad refers to the relation between the supervisor and an individual subordinate (Miner, 2015). Over time, the relationship reflects the social exchange between leader and follower so the name of the theory becomes leader-member exchange (Jex & Britt, 2014). In that sense, vertical dyad linkage also called leader-member exchange (LMX) theory (Roe, 2017).

Vertical dyad linkage or LMX theory has been defined by Korniewicz (2015) as the process which focuses on the relationship formed between the leader and their followers. On the same line, Chmiel, Fracaroli & Sverke (2017) view vertical dyad linkage as a theory focuses on the quality of the relationship between the leader and the followers. While Johnson & Rossow (2018) described vertical dyad linkage as the situation in which leader–group interactions, judgments, and opinions are formed.

Vertical dyad linkage separates nurses into two categories; high- and low-exchange relationships. High-exchange relationship nurses tend to have expanded roles and more competent, so such nurses tend to get more benefits, including desirable assignments, tangible rewards, and better schedules. While, low-exchange relationship nurses tend to stay within their defined roles and do little more than what is required, so they less likely to receive extra benefits or professional or personal support (Van Wart, 2017).

Significance of the study:

Conflict is a part of everyday experience and health care organizations must find ways of managing conflict and developing effective working relationships to create healthy work environments (Huber, 2014). Unfortunately, some supervisors are uncomfortable with conflict and tend to avoid dealing with the issues while hoping that
the conflict will go away, furthermore handling conflict appropriately have an instant replay of human relations involves the development and maintenance of sound job relationships with their staff (Greer & Plunkett, 2007). Stewart (2010) added that choice the appropriate conflict management style can preserve the quality of a dyadic leader-member exchange relationship. So, this study aims to determine the relationship between conflict management strategies used by head nurses, and the quality of vertical dyad linkage at Port Said hospitals.

**AIM OF THE STUDY:**

The aim of the current study was to determine the relationship between conflict management strategies used by head nurses, and the quality of vertical dyad linkage at Port Said hospitals.

**Research questions:**

1- What are the most preferred conflict management strategies among head nurses?

2- What is the level of quality of vertical dyad linkage between head nurses and staff nurses in Port Said hospitals from staff nurses' point of view?

3- Is there a relation between conflict management strategies used by head nurses, and the quality of vertical dyad linkage at Port Said hospitals?

**SUBJECTS AND METHODS:**

**Study design:**

A descriptive correlational research design was used for the current study.

**Settings:**

The present study was carried out at four hospitals; three of them affiliated to the Ministry of Health, these are Port Said general hospital, El-Zohour central hospital, Port Fouad general hospital and the fourth hospital affiliated to health insurance hospital namely El-Tadamon hospital.
Subjects:

Convenient sample was used. The subjects of this study included two groups; they were all head nurses who were working in the study settings with total number thirty-one (31) head nurses, and all their staff nurses who were subordinates for the mentioned head nurses with total number two hundred and three (203) staff nurse, who accepted to participate were included in the study and they had at least one year of experience in nursing.

Tools of data collection:

Two tools were used to collect data for this study.

Tool (I): Thomas-Kilmann Conflict Mode Instrument (TKI): -

This tool was developed by Thomas and Kilmann (1974) and adopted from Abd El-Aziz (2009) to assess head nurses’ preferred conflict resolution strategies. It consists of two parts:

Part (I): This part included head nurses’ personal characteristics as, hospital name, department name, age, gender, level of education, and years of experiences.

Part (II): This part is self-assessment tool comprises 30 pairs of forced choice responses ("A" and "B" statements) which addressed five styles of responding to conflict, avoiding (12 items), accommodating (12 items), competing (12 items), compromising (12 items) and collaborating (12 items). For each item, the head nurses were asked to choose from (a) or (b) paired statements according to which of two statements is most characteristic of their behavior.

Scoring System:

According “Thomas-Kilmann Conflict Mode Instrument scoring sheet”. Each conflict strategy has represented a total of 12 times hence, the range of possible scores on any strategy range from 0 (for every low use) to 12 (for very high use). Raw scores are calculated by counting the number of times each mode is chosen (Thomas and Kilmann ,1974). Scores are grouped into three categories as the following table.
Table (1): scoring system of conflict resolution strategies by head nurses:

<table>
<thead>
<tr>
<th>Usage</th>
<th>competing</th>
<th>collaborating</th>
<th>compromising</th>
<th>avoiding</th>
<th>accommodating</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>8 to 12</td>
<td>10 to 12</td>
<td>9 to 12</td>
<td>8 to 12</td>
<td>7 to 12</td>
</tr>
<tr>
<td>Neutral</td>
<td>4 to 7</td>
<td>6 to 9</td>
<td>5 to 8</td>
<td>5 to 7</td>
<td>4 to 6</td>
</tr>
<tr>
<td>Low</td>
<td>0 to 3</td>
<td>0 to 5</td>
<td>0 to 4</td>
<td>0 to 4</td>
<td>0 to 3</td>
</tr>
</tbody>
</table>

Tool (II): Vertical Dyad Linkage scale (LMX-multidimensional scale):

This scale was introduced by Liden & Maslyn (1998) and was adopted from Alshamasi (2012) to assess to measure the quality of vertical dyad linkage. It consists of two parts:

**Part I:** Included staff nurses’ personal characteristics as age, gender, marital status, level of education and years of experiences.

**Part II:** was utilized to measure the quality of vertical dyad linkage between head nurses and staff nurses from staff nurses point of view. It consists of 12 items subdivided under four dimensions (3 items per each dimension): which are related to affect, loyalty, contribution, and professional respect.

**Scoring System:**

Participants’ responses were collected a long five rating scale ranged from “Strongly disagree” to “Strongly agree” (1 to 5 respectively) for each statement. The total quality of vertical dyad linkage was considered low with a total score (12:24), and neutral with a score (25: 47) while, it considered high with a score (48: 60). Meanwhile, each domain, considered low with a score (3: 6), neutral with a score (7: 11) and high with a score (12: 15) (Liden & Maslyn, 1998).

**Pilot study:**

A Pilot study was carried out on 3 head nurses and 23 staff nurses who represent 10% of the total sample. They were selected randomly to test the clarity and applicability of tools before starting data collection and estimated the time needed to complete questionnaire, and they were excluded from the entire sample of research work to assure stability of the answers.
Field work:

The data were collected from all head nurses and their staff nurses in the study settings using self-instructions questionnaires. This process of data collection was carried out in the period started since beginning of November 2015 to the end of April 2016. Firstly, obtaining an official agreement from the directors of the studied hospitals was obtained. Also, meeting with the directors of nursing service was conducted by the researcher on an individual basis to explain the objectives of the study and to gain their cooperation. Data were collected by the researcher from head nurses at three days per week in the morning shift and their staff at three shifts after explaining the objectives of the study and how to complete the tool. Data were collected by the researcher over 6 month's period.

Ethical considerations:

A verbal consent was obtained from all the participants before collecting any data. Explanation of the study aim in a simple and clear manner was done. Also, the researcher assured the respondents about the anonymity of their answers, and that the information will be used for scientific research only and will be treated as confidential. Participants were informed about their right to withdraw from the study at any time without giving any reason.

Statistical Design:

Data entry and statistical analysis were done using SPSS 20.0 statistical software package. Data were presented using descriptive statistics in the form of frequency, percentages for qualitative data; means and standard deviations for quantitative data. Spearman coefficient test was used to correlate between shared governance and organizational commitment of nurse managers at Port Said hospitals. The statistical significance was considered at P-value ≤ 0.05 and highly significance at P ≤ 0.001.

RESULTS:

Study result indicates that 45.2% of head nurses were in the age group from 30 to less than 40 years. The majority of them was married and had a nursing diploma, and had one to ten years of experience in the current position as a head nurse. In relation to
personal characteristics of staff nurses, it was noticed that more than one half (55.2) of staff nurses falling between the ages of 25 to 40 years, and the vast majority (91.1%) of them were female. Also, 61.6% of them had a nursing diploma. Regarding total experience years in nursing, the highest percentage of them had experience ranged from one to less than ten years.

Table (1): portrays conflict management strategies used by head nurses. It was found that more than two-thirds of studied head nurses (67.7%) used accommodating strategy as a primary method to resolve conflict, followed by compromising strategy used by 51.6% used by them to resolve conflict.

Table (2): indicates vertical dyad linkage levels among head nurses and their staff nurses from staff nurses' point of view. According to the table, less than one third (29.1%) of studied staff nurses had a high-quality relationship with their head nurses.

Table (3): reveals a statistically significant negative correlation between avoiding strategy and competing strategy (p=0.001). The table also revealed that there was a statistically significant negative correlation between accommodating strategy and competing strategy (p=0.01). As well, there was statistically significant negative correlation accommodating strategy and collaborating strategy (p=0.023).

Table (4): represents that there was a negative statistically significant relationship between compromising strategies and professional respect in pre-program phase (p=−0.392).

Table (5): proves that there was no statistically significant relationship between conflict management strategies used by head nurses and quality of vertical dyad linkage between them and their staff nurses.
Table (1): Conflict management strategies used by head nurses (n=31).

<table>
<thead>
<tr>
<th>Conflict management strategies</th>
<th>High</th>
<th>Neutral</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Competing</td>
<td>0</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Collaborating</td>
<td>1</td>
<td>3.2</td>
<td>13</td>
</tr>
<tr>
<td>Compromising</td>
<td>16</td>
<td>51.6</td>
<td>15</td>
</tr>
<tr>
<td>Avoiding</td>
<td>7</td>
<td>22.6</td>
<td>14</td>
</tr>
<tr>
<td>Accommodating</td>
<td>21</td>
<td>67.7</td>
<td>10</td>
</tr>
</tbody>
</table>

Table (2): Vertical dyad linkage among head nurses and their staff nurses from staff nurses' point of view (n=203).

<table>
<thead>
<tr>
<th>Vertical dyad linkage</th>
<th>High</th>
<th>Neutral</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
<td>No.</td>
</tr>
<tr>
<td>Affect</td>
<td>104</td>
<td>51.2</td>
<td>83</td>
</tr>
<tr>
<td>Loyalty</td>
<td>62</td>
<td>30.5</td>
<td>91</td>
</tr>
<tr>
<td>Contribution</td>
<td>69</td>
<td>34</td>
<td>89</td>
</tr>
<tr>
<td>Professional respect</td>
<td>113</td>
<td>55</td>
<td>67</td>
</tr>
<tr>
<td>Total vertical dyad linkage</td>
<td>59</td>
<td>29.1</td>
<td>130</td>
</tr>
</tbody>
</table>
Table (3): Correlation matrix between conflict management strategies used by head nurses (n=31).

<table>
<thead>
<tr>
<th>Conflict management strategies</th>
<th>Competing</th>
<th>Collaborating</th>
<th>Compromise</th>
<th>Avoiding</th>
<th>Accommodating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competing</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collaborating</td>
<td>.090</td>
<td>.631</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compromise</td>
<td>- .328</td>
<td>.072</td>
<td>-.215</td>
<td>.244</td>
<td>1</td>
</tr>
<tr>
<td>Avoiding</td>
<td>- .637</td>
<td>.001**</td>
<td>-.355</td>
<td>.050</td>
<td>.521</td>
</tr>
<tr>
<td>Accommodating</td>
<td>- .455</td>
<td>.01*</td>
<td>-.407</td>
<td>.023*</td>
<td>-.186</td>
</tr>
</tbody>
</table>

*: Statistically significant at p ≤ 0.05

Table (4): Correlation between conflict management strategies used by head nurses and mean score of vertical dyad linkage dimensions.

<table>
<thead>
<tr>
<th>Conflict management strategies</th>
<th>vertical dyad linkage domains mean scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Affect</td>
</tr>
<tr>
<td></td>
<td>r</td>
</tr>
<tr>
<td>Competing</td>
<td>-.078</td>
</tr>
<tr>
<td>Collaborating</td>
<td>-.258</td>
</tr>
<tr>
<td>Compromising</td>
<td>.046</td>
</tr>
<tr>
<td>Avoiding</td>
<td>-.096</td>
</tr>
<tr>
<td>Accommodating</td>
<td>.390*</td>
</tr>
</tbody>
</table>

*: Statistically significant at p ≤ 0.05
Table (5): Correlation between conflict management strategies used by head nurses and vertical dyad linkage.

<table>
<thead>
<tr>
<th>Conflict management strategies</th>
<th>Vertical dyad linkage score</th>
<th>r</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competing</td>
<td>-0.238</td>
<td>0.197</td>
<td></td>
</tr>
<tr>
<td>Collaborating</td>
<td>-0.045</td>
<td>0.808</td>
<td></td>
</tr>
<tr>
<td>Compromising</td>
<td>-0.115</td>
<td>0.457</td>
<td></td>
</tr>
<tr>
<td>Avoiding</td>
<td>0.066</td>
<td>0.624</td>
<td></td>
</tr>
<tr>
<td>Accommodating</td>
<td>0.264</td>
<td>0.151</td>
<td></td>
</tr>
</tbody>
</table>

*: Statistically significant at p ≤ 0.05

DISCUSSION:

Regarding conflict management strategies used by head nurses, the findings of the present study revealed that the most preferred conflict management strategy used by head nurses was accommodating strategy. This finding probably due to they try to avoid stress and tension which may arise from conflict situation and want to move away from the uncomfortable feelings of struggle. This finding was in accordance with Abudahi (2012) who studied conflict management strategies among nurses and demonstrated that accommodating strategy had the highest mean among nurses. In contrast, Abdel-Aleem (2013) found that the majority of nurse leaders used collaborating strategy as a primary method to resolve conflict.

In relation to compromising strategy, the present study illustrated that compromising strategy was highly used by head nurses and considered the second used strategy after accommodating strategy through pre-program phase. This may be due to head nurses seek a quick middle-ground position. In addition, it may be due to head nurses desire to create a climate of peace between their staff. In agreement with this result, a study in West Texas by Merritt (2003) reinforced that compromising style was dominated. Paradoxically, Maruyama (2007) in U.S.A found that participants were used methods other than compromising strategy to solve conflict.

As well, the study findings indicated that competing strategy is the least preferred conflict management strategy used by head nurses. This finding indicated that head
nurses unaware and less skillful in using the power they had. This interpretation is supported by Thomas & Kilman (2010) who stated that low scoring in competing strategy means that head nurses feel powerless in situations. This result is supported by Yoder (2012) who reported that low percentage of studied head nurses were strong in using of competition style.

Concerning to vertical dyad linkage, the result of the study findings showed that most of nurses had a neutral quality of vertical dyad linkage with their head nurses. On the same way Davies, Wong & Laschinger (2011) asserted that nurses' ratings of vertical dyad linkage quality were moderate. This result was in contradiction with Alshamasi (2012) who reported that all employees evaluated their relationships with their managers as a high.

Regarding to vertical dyad linkage dimensions, the professional respect dimension was rated the highest of all the dimensions, which may signal the importance to nurses of working hard for manager they like and respect. This result not matched with those of Davies et al, (2011) who found that contribution dimension was rated the highest of all the dimensions.

According to the study findings, there was a statistically significant negative correlation between avoiding strategy and competing strategy. These results highlighted that head nurses who highly used avoiding strategy, used competing strategy with low level. This may a result of being competing is a conflict management style that shows a high degree of self-concern while avoiding is an unassertive strategy which head nurses does not pursue own concerns or those of the other. This finding was in accordance with Ergeneli, Karapinar, & Camgoz (2011) who found a significant negative relation between avoiding strategy and competing strategy. In contrast with these findings Lee (2008) who stated that competing was most related to avoiding style and using competing and avoiding style tend to be interchangeable.

Statistically significant negative correlation between head nurses using accommodating strategy and competing strategy was revealed in the current study findings. This result is parallel to Lian & Tui (2008) result in Malaysia who notified that competing was the least correlated style with all other styles and most often stands alone. On the same way Corn (2013); Saeed, Almas, Haq & Niazi (2014) explored statistically
significant negative correlation between supervisors using accommodating strategy and competing strategy.

As well, a statistically significant negative correlation between head nurse using accommodating strategy and collaborating strategy was shown in this study. As head nurses who used accommodating strategy with high level used collaborating strategy with low level. This result was congruent with Ergeneli et al, (2011) who observed a negative relationship between using accommodating strategy and collaborating strategy. Conversely, Lee (2008) viewed that collaborating and accommodating strategy was found to be in association with each other.

The result of this study showed that there was no statistically significant relationship between conflict management strategies used by head nurses and the quality of vertical dyad linkage among head nurses and their staff. This finding indicated that the quality of relation between head nurses and their staff not associated with using a definite strategy by head nurses but it associated with using the appropriate strategy by head nurses whatever it was. This interpretation was supported by Petryshyn (2012) who highlighted that, there is no right or wrong style when managing conflict, all have benefits and drawbacks. The fundamental importance in how conflict manages to consider the value of the relationship.

Related to this finding, Redmond, Jameson & Binder (2016) found that there was no significant relation between accommodating conflict management styles and relation quality with supervisors. This study results inconsistent with those of Green (2004) who found a significant relationship between conflict management styles used by leaders and the quality of vertical dyad linkage. As well, Shojaee, Tojari, Sari & Mohammadian (2012) against this result as they study the relationship between the styles of conflict management and the quality of dyad between managers and their staff and reported that there was significant difference between influences of five styles of conflict management on quality of relationship between managers and their staff.

CONCLUSION:

Based on the findings of the present study, it was concluded that the majority head nurses used accommodating strategy as a primary method to resolve conflict followed by
compromising strategy. Meanwhile, approximately less than two-thirds of staff nurses had a neutral quality of vertical dyad linkage with their head nurses. As well, there was no statistically significance relation between conflict management strategies used by head nurses, and the quality of vertical dyad linkage in Port-Said hospitals.

**RECOMMENDATIONS:**

1- Develop training programs on conflict management as managerial skills for nurse managers.

2- The hospital administrators have to establish selection criteria for nurse managers depend not only on years of experience but also on personality and management skills as negotiation and using conflict management skills.

3- Head nurses ought to use conflict management styles depending on the situation and create new ways in dealing with conflict.

4- Head nurses should develop an in-group relationship with as many staff nurses as possible and as small an out-group as possible

5- Staff nurses have to do what they can to establish a quality exchange relationship with the leader and become a member of the in-group; work hard, be loyal and share more than administrative duties.

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