The Effects of Intrapersonal, Intragroup, and Intergroup Conflict on Team Performance Effectiveness and Work Satisfaction

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Although numerous studies have focused on conflict management, few have considered the effects of unit technology and intrapersonal, intragroup, and intergroup conflict on team performance effectiveness and work satisfaction. The model was tested using a nonexperimental design. Path analysis using multiple regression was used to test the model. The nonrandom sample consisted of 141 nurses employed on 13 inpatient units at a state-supported, 597-bed academic medical center in a southeastern city. Findings indicated that intrapersonal conflict had a direct negative impact on intragroup conflict and work satisfaction. Intragroup conflict had direct negative effects on work satisfaction and team performance effectiveness. Unit technology had a direct negative impact on work satisfaction. Findings have implications for administrators to implement strategies to decrease a stressful work environment and increase team-building activities. **Key words:** intrapersonal conflict, intragroup conflict, intergroup conflict, skill mix, team performance effectiveness, tenure, unit size, unit technology, work satisfaction, work stress

Health Care organizations are undergoing major changes because of social, consumer-related, governance, technology, and economic pressures. As Gardner noted, conflict is inevitable in any change. However, in clinical environments, conflict among health care professionals is counterproductive to patients, and it has a major impact on managers. According to a study by the American Management Association, nursing managers spend an average of 20% of their time dealing with conflict, and conflict management skills are rated as important as or even more important than planning, communication, motivation, and decision making. There is some evidence that conflict is negatively related to job satisfaction. However, no studies have focused on the effects of intrapersonal, intragroup, and intergroup conflict on job satisfaction. Therefore, this research was designed to determine the effect of types of conflict on job satisfaction and team performance effectiveness. Specifically, the investigation tested a model that examined relationships among selected personal and contextual variables, and intrapersonal, intragroup, intergroup conflict, team performance effectiveness, and work satisfaction. The study was part of a larger study of antecedents and effect of conflict, which is published elsewhere.

**CONCEPTUAL FRAMEWORK**

The model that guided the research was a synthesis of the models of Pondy, Robbins, Filley, and Wall and Callister (Figure 1).
Conditions that occurred before conflict were identified as antecedents and categorized as personal or contextual variables. Personal variables included age, education, tenure in the nursing unit, and experience. Rahim and Bonoma have pointed to task structure and group composition and size as sources of conflict. Therefore, unit size, skill mix, and unit technology were examined as contextual antecedents of conflict. Exogenous variables were viewed as influencing intrapersonal conflict, which in turn influenced the other variables in the model.

DEFINITION AND TYPES OF CONFLICT

Conflict was defined, following Deutsch, as a clash or struggle that occurs when a real or perceived threat or difference exists in the desires, thoughts, attitudes, feelings, or behaviors of two or more parties. The forms of conflict are highly diverse. Rahim and Bonoma have identified four potential loci of organizational conflict: intrapersonal conflict, or conflict within an individual, and interpersonal conflict, including intragroup conflict, intergroup conflict, and interorganizational conflict. This research focused on intrapersonal, intragroup, and intergroup conflict.

Intrapersonal conflict

Intrapersonal conflict occurs within the individual and involves an internal struggle to clarify contradictory values. According to Zey-Ferrell, intrapersonal conflict exists in cognitive and affective realms. An individual may perceive that he or she is in conflict with the organization or other employees, but the conflict exists only in that person’s mind. However, Price notes that intrapersonal conflict can be the underlying cause of interpersonal conflict.

At the intrapersonal level, Kurt Lewin conceptualizes conflict as a situation in which oppositely directed, simultaneously occurring forces of about equal strength occur in a person. Perceived incompatibilities or incongruencies frequently occur when an organizational participant is required to perform a task that does not match his expertise, interests, and values. Conflict also occurs if there is a significant mismatch between the role a
person expects to perform and the role that is expected of him or her by the organization. The latter situation has been termed role conflict by some researchers, but is defined by Rahim and Bonoma as intrapersonal conflict. There are five sources of intrapersonal conflict. The first is misassignment and goal incongruence, or the frustration experienced by an individual who does not have the appropriate expertise, aptitude, and commitment. The second source of intrapersonal conflict is inappropriate demand on capacity: if a person cannot properly satisfy all the demands of his or her position even by working at the maximum capacity, then demands overload the situation. On the other hand, if the person’s capacity exceeds the demands of the position, then the person will not find his work challenging. Organizational structure, supervisory style, and position in the organization are other sources of intrapersonal conflict.

**Intragroup conflict**

Intragroup conflict refers to disagreements or differences among the members of a group or its subgroups with regard to goals, functions, or activities of the group. Sources of intragroup conflict are leadership style, task structure, group composition and size, cohesiveness and “groupthink,” and external threats and their outcomes.

**Intergroup conflict**

Intergroup conflict refers to disagreements or differences between the members of two or more groups or their representatives over authority, territory, and resources. Lawrence and Lorsch suggested that intergroup conflict is common in an organization. Such conflict is generated from system differentiation, task interdependence, scarce resources, jurisdictional ambiguity, and separation of knowledge from authority.

**Work satisfaction**

Blågen’s meta-analysis revealed that job satisfaction was most strongly associated with job stress \((r = -0.61, p < 0.01)\). Irvine and Evans’ meta-analysis also found that stress was moderately correlated with job satisfaction \((r = -0.39, p < 0.05)\). Conflict has been identified as a source of stress. It is one of the factors that makes the environment either positive or negative for professional nurses. Because conflict is a source of stress, conflict may be associated with job satisfaction. However, few studies have examined the relationship between conflict and job satisfaction. Gardner noted that before her study, the relationship between conflict and job satisfaction had not previously been tested. The Gardner study examined the levels and types of conflict perceived by new graduate nurses in their first year of work and investigated the relationships among conflict, job satisfaction, performance, and turnover. The study found that increased conflict was associated with lower levels of satisfaction. However, the sample included only new graduate nurses \((n = 97)\). Therefore, the article here examined the relationships among types of conflict and job satisfaction.

**Team performance effectiveness**

As nurses increasingly turn to teamwork to accomplish duties and responsibilities, they are discovering that teamwork can also be a source of conflict. Team performance effectiveness (TPE) has been examined as a correlate of satisfaction in three studies. However, the relationships among intrapersonal conflict, intergroup conflict, and perceptions of team performance effectiveness have not been examined. This investigation explored the relationships among types of conflict, perceptions of team performance effectiveness, and work satisfaction.
METHOD

The study was conducted on 13 inpatient units at a state supported 597-bed academic medical center in the southeastern United States. The 13 units in the study included four medical units, four surgical units, a hospice unit, a renal unit, a neurological intensive care unit, a surgical intensive care unit, and a wound care unit. The average unit had 17 beds, with 68% RNs on the staff, and patients characterized by high variability, uncertainty, and instability as measured by the Technology Scale. Registered staff nurses who had been employed in their positions on these units for at least 6 months were eligible to participate; 287 RNs constituted the sample.

Questionnaires were distributed to nurses through interdepartmental mail, with written instructions. As a token of appreciation, a lottery ticket was attached to the informed consent form. To maximize the response, follow-up letters were sent to those who had not responded 1–2 weeks after the initial distribution of questionnaires, and a second questionnaire and letter were sent during the fourth week. A cartoon reminder was sent during the fifth week, and a final letter was sent during the sixth week.

VARIABLES AND THEIR MEASUREMENT

In this section, measurement of skill mix and unit size, unit technology, intrapersonal, intragroup, and intergroup conflict, team performance effectiveness, and work satisfaction will be described. The psychometric properties of each instrument will be included in the discussion.

Skill mix and unit size

Skill mix was measured by the proportion of total nursing staff members who were RNs on participating units. All nursing staff members employed on the unit were included in the calculation. Unit size was measured by the number of beds staffed. Nurse managers were asked to provide information about skill mix and unit size.

Unit technology

Unit technology was measured by the Technology Scale, a 12-item scale developed by Overton and colleagues and revised by Mark and Hagenmueller. This instrument incorporates dimensions of patient instability, variability, and uncertainty, measured on a 5-point Likert scale. Instability is the frequency of and magnitude of changes in patients' conditions. Variability is the degree to which nurses are required to deal with patients who have diverse problems. Uncertainty reflects the difficulty in identifying a clear and consistent relationship between a nursing action and a patient outcome. Higher scores indicate that a higher proportion of patients on the unit have conditions that are unstable, variable and uncertain. Internal consistency reliability for the scale was .78.

Intrapersonal conflict

Rahim Organizational Conflict Inventory I (ROCI-I), containing factorially independent scales for measuring intrapersonal, intragroup, and intergroup conflict was used to measure intrapersonal conflict. The scale consists of 24 items, 8 items for measuring each type of conflict. Items for the instrument were selected through factor analysis of data collected from three successive samples (n = 635) and feedback from subjects. Data on the final instrument from a national sample of 1188 executives and a collegiate sample of 266 students provided substantial evidence of reliability and validity of the scales. The test-retest reliabilities, computed from 89 master's of business administrative degree and undergraduate students, who filled out the ROCI twice at an interval of 1 week, ranged from .78 to .85 (p < .0001). Cronbach's alpha for the three scales was (1) intrapersonal .82, (2) intragroup .81, and (3) intergroup .79.

Only items measuring intrapersonal conflict were used. Examples of items are "My job
is challenging," and "My skills are fully used on the job." Items are answered using a 5-point Likert-type scale.

Intragroup and intergroup conflict

Intragroup conflict was measured by the Cox Conflict Scale,\textsuperscript{27} an investigator-developed scale designed to tap overt behaviors and opposition processes within and between groups. The scale consists of 28 items in two sections. In section 1, respondents are asked to consider their immediate work group when responding to items; in section 2, respondents consider other groups, divisions, departments, or sections in the parent organization. Items are answered using a 6-point Likert scale (1 = strongly agree; 6 = strongly disagree), and higher scores indicate a higher perception of conflict. Items indicating absence of conflict are reverse-scored.

The scale was pilot tested with 185 nurses in a community hospital located in the Mid-Atlantic region. Using principal components analysis with varimax rotation, two factors were extracted, accounting for 43.1% of the variance in intragroup and intergroup conflict. Coefficient alpha for the scale was .94.

Effectiveness of team performance

Effectiveness of team performance on the unit was measured by a 6-item Team Performance Effectiveness scale,\textsuperscript{22} which asks nurses to rate their unit’s performance on a 5-point Likert scale (5 = very much above average; 1 = very much below average). The following dimensions of team performance are rated: (1) quality of patient care provided by nurses, (2) the efficiency with which the unit’s nurses work, (3) the unit’s morale, (4) spirit of teamwork, (5) interpersonal relations, and (6) willingness to chip in if the unit is understaffed. Weisman and colleagues\textsuperscript{22} reported that Cronbach’s alpha was .88.

Work satisfaction

The Work Satisfaction Scale\textsuperscript{28} indexes organizational satisfaction at all levels of hospital nursing. The items in the Work Satisfaction Scale were derived from Slavitt, Stamps, Piedmont, and Haase’s Revised Attitude Scale to measure Occupational Satisfaction of Hospital Nurses.\textsuperscript{29} The Slavitt and colleagues’ scale includes seven factors related to job satisfaction within health care settings: pay, autonomy, task requirements, administration, doctor-nurse relationship, interaction, and professional status. Internal consistency reliability for the scale was .91; subscale reliabilities ranged from .70 to .85.

Based on a 5-year testing program, 32 items were selected by Hinshaw and Atwood\textsuperscript{28,30} from the Slavitt and colleagues\textsuperscript{29} Work Satisfaction Scale to study anticipated turnover among nurses. Five of Slavitt’s seven subscales were used: payer reward, professional status, interaction/cohesion, administration, and task requirements. The Work Satisfaction Scale was administered to nursing staff (63% RNs, 37% licensed practical nurses, and nurse assistants) in 15 urban and rural hospitals throughout Arizona.\textsuperscript{28,30} Coefficient alpha for the subscales ranged from .69 (professional status) to .87 (payer reward). Cronbach’s alpha for the total scale was .87.

FINDINGS

Descriptive statistics are presented in Table 1. In general, nurses had high perceptions of unit technology and high perceptions of team performance effectiveness. They had low perceptions of intrapersonal, intergroup, and intragroup conflict and were satisfied with their work.

Age, education, experience, tenure, number of beds per unit, percentage of RNs in total staff, and unit technology were only weakly correlated with intrapersonal conflict, intragroup conflict, intergroup conflict, team performance effectiveness, and work satisfaction, though the relationships between tenure and intragroup conflict ($r = .19, p < .05$) and between tenure and intergroup conflict ($r = .33, p < .01$) were stronger (Table 2). Nurses
Table 1. Descriptive statistics for model variables—Correlation of exogenous variables and endogenous variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>SD</th>
<th>Possible range</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit technology</td>
<td>47.56</td>
<td>7.49</td>
<td>12-60</td>
<td>22</td>
<td>59</td>
</tr>
<tr>
<td>Skill mix (% RNs)</td>
<td>68</td>
<td>10</td>
<td>N/A</td>
<td>51</td>
<td>83</td>
</tr>
<tr>
<td>Size (number of beds)</td>
<td>17.38</td>
<td>8.11</td>
<td>N/A</td>
<td>6</td>
<td>30</td>
</tr>
<tr>
<td>Intrapersonal conflict</td>
<td>15.46</td>
<td>4.31</td>
<td>5-35</td>
<td>7</td>
<td>31</td>
</tr>
<tr>
<td>Intergroup conflict</td>
<td>97.57</td>
<td>22.51</td>
<td>28-168</td>
<td>57</td>
<td>156</td>
</tr>
<tr>
<td>Team performance</td>
<td>20.09</td>
<td>4.57</td>
<td>6-30</td>
<td>9</td>
<td>30</td>
</tr>
<tr>
<td>Work satisfaction</td>
<td>96.45</td>
<td>11.56</td>
<td>32-160</td>
<td>60</td>
<td>132</td>
</tr>
</tbody>
</table>

who worked on units with a higher percentage of RNs in the staff had higher perceptions of team performance effectiveness than other nurses. Unit technology was negatively correlated with work satisfaction ($r = -0.27, p < .01$); that is, nurses were less satisfied on units with high uncertainty, instability, and variability.

ANALYSIS OF THE MODEL

Age, education, and experience had no effect on other variables in the model. Tenure had a direct positive effect on intergroup conflict ($b = .22, p < .01$) (Figure 2). Skill mix, measured by the percent of RNs in total staff, had a direct positive effect on team performance ($b = .47, p < .000$), and unit size also had a positive effect on team performance ($B = .27, p < .01$). Unit technology had a direct negative effect on work satisfaction ($b = -.31, p < .000$).

**Intrapersonal conflict**

Intrapersonal conflict had a direct positive effect on intragroup conflict ($b = .55, p < .000$) and a direct negative effect on work satisfaction ($b = -.37, p < .000$). Intragroup conflict had a direct negative effect on work satisfaction ($b = -.31, p < .000$). To determine whether intragroup conflict enhanced or buffered the effect of intrapersonal conflict on work satisfaction, the product of the path coefficients to work satisfaction from

Table 2. Correlation of exogenous variables with endogenous variables

<table>
<thead>
<tr>
<th>Exogenous variables</th>
<th>Intrapersonal conflict</th>
<th>Intragroup conflict</th>
<th>Intergroup conflict</th>
<th>Team performance effectiveness</th>
<th>Work satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.09</td>
<td>.04</td>
<td>.04</td>
<td>-.04</td>
<td>.12</td>
</tr>
<tr>
<td>Education</td>
<td>.10</td>
<td>.06</td>
<td>.11</td>
<td>-.10</td>
<td>-.06</td>
</tr>
<tr>
<td>Experience</td>
<td>.08</td>
<td>.08</td>
<td>.09</td>
<td>-.07</td>
<td>.15</td>
</tr>
<tr>
<td>Tenure</td>
<td>.09</td>
<td>.19*</td>
<td>.33**</td>
<td>.00</td>
<td>-.05</td>
</tr>
<tr>
<td>Number of beds</td>
<td>-.04</td>
<td>-.14</td>
<td>-.16</td>
<td>-.05</td>
<td>15</td>
</tr>
<tr>
<td>Percent RNs</td>
<td>-.01</td>
<td>.03</td>
<td>.13</td>
<td>.21*</td>
<td>-.05</td>
</tr>
<tr>
<td>Unit technology</td>
<td>-.08</td>
<td>.08</td>
<td>.17</td>
<td>.00</td>
<td>-.27**</td>
</tr>
</tbody>
</table>

*p < .05

**p < .01
intrapersonal conflict, through intragroup conflict \((0.35 \times -0.31 = -0.11)\), was added to the coefficient of the path to work satisfaction from intrapersonal conflict \((-0.37 + -0.11 = -0.48)\). The impact of intragroup conflict enhanced the effect of intrapersonal conflict on work satisfaction.

**Intragroup conflict**

There was a significant direct positive path between intragroup conflict and intergroup conflict \((b = 0.55, p < .000)\), and a significant direct negative path occurred between intragroup conflict and team performance effectiveness \((b = -0.54, p < .000)\). As noted previously, there was a direct significant negative path between intragroup conflict and work satisfaction \((b = -0.31, p < .000)\). There were no significant direct paths between intergroup conflict and team performance effectiveness or between intergroup conflict and work satisfaction. However, there was a significant direct positive path between team performance effectiveness and work satisfaction \((b = 0.25, p < .01)\). To determine if team performance effectiveness buffered or enhanced the impact of intragroup conflict on work satisfaction, the product of the path coefficients to work satisfaction through team performance effectiveness \((-0.54 \times 0.25 = -0.14)\) was added to the path coefficient to work satisfaction from intragroup conflict \((-0.31 + -0.14 = -0.45)\).

Results indicated that, in fact, the negative effect of intragroup conflict on team performance effectiveness enhanced the effect of intragroup conflict on work satisfaction. Thus unit technology, intrapersonal conflict,
intriguing conflict, and team performance effectiveness were predictors of work satisfaction. Intrapersonal conflict enhanced the effect of intragroup conflict on work satisfaction and the negative association between intragroup conflict and team performance effectiveness enhanced effect of intragroup conflict on work satisfaction. Variables in the model explained 59% of the variance in satisfaction.

DISCUSSION

Unit size had a negative effect on intragroup conflict: nurses who worked on smaller units had higher perceptions of intragroup conflict. It makes sense that the stress of environmental turbulence on small specialty units might lead to increased conflict. Intrapersonal conflict had a positive effect on intragroup conflict: nurses who experienced more intrapersonal conflict also had higher perceptions of intragroup conflict. As Pricell has explained, intrapersonal conflict can be an underlying cause of interpersonal conflict. Certainly it makes sense that conflict within an individual would carry over into conflict within the group.

Intragroup conflict

Tenure had a positive effect on intragroup conflict (i.e., the longer the time on the unit, the higher the perception of conflict between groups in the organization). In contrast, other authors have found tenure and conflict to be inversely related: the potential for conflict seems to decrease with increase in tenure, suggesting that conflict will be greatest where group members are younger and turnover is high. However, in this study, tenure was associated with working on smaller units where environmental turbulence was higher. The environmental turbulence might help to explain the positive effect of tenure on intragroup conflict.

Intragroup conflict had strong negative effects on work satisfaction. This is consistent with Gardner's1 finding that increased conflict was associated with less satisfaction. High levels of intragroup conflict enhanced the negative effect of intrapersonal conflict on work satisfaction. It makes intuitive sense that individuals who experience high levels of both intrapersonal and intragroup conflict would be less satisfied than other nurses.

Work satisfaction

Intrapersonal conflict was the strongest predictor of work satisfaction. Nurses who experienced more intrapersonal conflict were less satisfied. This is consistent with the finding Irvine and Evans that role conflict had a moderately strong negative relationship to job satisfaction (r = -0.35, p < .05). Blegen’s17 meta-analysis indicated that nurses’ job satisfaction is most strongly related to stress: the higher the stress, the lower the satisfaction. Stress may occur if there is inappropriate demand on capacity or if there is misassignment and goal incongruence, and this would explain the effect of intrapersonal conflict on work satisfaction.

Nurses who worked on larger units had higher perceptions of team performance effectiveness, and nurses who worked on units with a high percent of RNs in total staff had higher perceptions of team performance effectiveness. This is consistent with the findings of Rahim’s study,9 which showed significantly less intragroup conflict in homogeneous groups than in heterogeneous groups. In addition, larger units may have less environmental turbulence than small specialty units.
that routinization had a moderately strong negative relationship \( r = -0.52, p < 0.05 \) to job satisfaction. It may be that nurses prefer nonroutine work to a point, but too much environmental turbulence associated with high variability, instability, and uncertainty has a negative impact on work satisfaction.

Team performance effectiveness had a significant positive effect on work satisfaction. Nurses who perceived higher levels of team performance effectiveness were more satisfied than other nurses. This is consistent with other studies in which team performance effectiveness was correlated with work satisfaction.\(^{21-23}\) However, intragroup conflict had a negative impact on team performance effectiveness. In other words, high perceptions of intragroup conflict were associated with low perceptions of team performance effectiveness, which enhanced the negative effect of intragroup conflict on work satisfaction. The combination of high perceptions of intragroup conflict and low perceptions of TPE enhanced the negative effect of intragroup conflict on work satisfaction.

In summary, in this study, intrapersonal conflict had a significant negative impact on work satisfaction, which was enhanced by high levels of intragroup conflict. Intragroup conflict also had a significant negative impact on work satisfaction, and this effect was enhanced by high levels of intragroup conflict and low levels of team performance effectiveness. Finally, unit technology had a significant negative impact on work satisfaction (i.e., nurses were less satisfied on units with high levels of uncertainty, instability, and variability).

**IMPLICATIONS**

Because the data were collected from nurses in only one acute care hospital, additional research with a larger sample is needed to more fully understand the nature of the relationships among intrapersonal conflict, intragroup conflict, intergroup conflict, team performance effectiveness, and work satisfaction. Future research should also consider the effects of variables such as patient acuity, staffing, admissions, transfers, and discharges per 24-hour period on intrapersonal, intragroup, and intergroup conflict, as well as absenteeism and actual turnover.

As noted previously, studies indicate that stress has a negative impact on work satisfaction.\(^{17,18}\) In this investigation, intrapersonal and intragroup conflict and unit technology, which can be considered sources of stress, had an impact on work satisfaction. Given these findings, managers need to assess levels and types of stress in individuals and in the environment and manage stress. In this study, intrapersonal conflict had the strongest negative effect on work satisfaction. Managers can test to assure that the individual's personality is congruent with a given work situation and provide counseling for individuals who experience intrapersonal conflict. Some stressors can be reduced by making changes in structure or organization, client care variables, availability of support services, and nursing care delivery modalities. Finally, managers can encourage others to enhance coping and support one another.\(^{19}\)

In this study, intragroup conflict had a negative effect on team performance effectiveness, which enhanced the negative effect of intragroup conflict on work satisfaction. Sovie\(^{34}\) noted that teams are the new imperative in health care. High-performing teams are essential to an organization's efficiency and effectiveness. Therefore, managers should concentrate on team-building. Nurses need to learn how to be effective team members, and students should be taught to function as team members beginning early in their basic education.

**CONCLUSION**

Changes in health care delivery are sure to continue, and therefore, the conditions that breed conflict will remain. These findings indicate that intrapersonal conflict is
associated with higher levels of intragroup conflict; intrapersonal and intragroup conflict are associated with lower levels of work satisfaction; intragroup conflict enhances the effect of intrapersonal conflict on work satisfaction; high perceptions of intragroup conflict and low perceptions of team performance effectiveness enhance negative effect of intragroup conflict on work satisfaction. Given these findings, managers need to assess levels of conflict within individuals and groups, and implement measures to reduce stress in the work environment and promote a team-oriented culture.

REFERENCES


