

IMPLEMENTATION OF UNIT COUNCIL
IN THE ANESTHESIA DEPARTMENT

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Abstract

Background: Local Certified Registered Nurse Anesthetists (CRNAs) reported a decrease in team morale and job satisfaction over a 12-month period. Job Satisfaction can affect retention, quality of care, and healthcare costs. Unit council forums have been noted to help address management, practice, quality, and research issues in nursing. There is, however, no literature regarding the use of unit councils in anesthesia departments. **Purpose:** To implement a unit council (UC) in the anesthesia department of a 600-bed level 3 trauma center and assess the impact on Certified Registered Nurse Anesthetist (CRNA) perception of work climate and job satisfaction over a 6-month period. **Methods:** Pre-intervention and post-intervention, the Certified Registered Nurse Anesthetist Occupational Climate Questionnaire (CRNA-OCQ) survey was used to assess changes in job satisfaction and work perceptions after six months of the UC intervention. Direct focus was placed on the lowest ranking pre-intervention subscale, CRNA-Administration Relations, to address top concerns voiced by UC members. **Results:** After unit council implementation, all subscales of the CRNA-OCQ showed improvement except for one, CRNA-Physician Relations, which remained stable. One subscale, CRNA-Administration Relations, showed statistically significant positive change. Job satisfaction amongst CRNAs increased but was not statistically significant. **Recommendations and Conclusion:** While unit council implementation in anesthesia departments can improve how CRNAs perceive their work environment, the amount of time required to produce significant results needs to be studied. When direct focus is placed on efforts to address certain areas of CRNA work, such as CRNA-administration relations in this project, positive outcomes can be seen. Using this information can help direct future initiatives to improve CRNA work environments, overall job satisfaction, and ultimately, patient care.

Key Words: Shared Governance, Unit Council Implementation, Anesthesia, Nurse Anesthesia, Nursing, Certified Registered Nurse Anesthetist, CRNA, Advanced Practice Registered Nurse, APRN, Job Satisfaction.

Implementation of Shared Governance in the Anesthesia Department

Background and Significance

Certified Registered Nurse Anesthetists (CRNAs) are advanced practice registered nurses (APRNs) that provide anesthetic care for patients undergoing surgical procedures. As members of the surgical care team CRNAs work to safely provide anesthetic care for all types of procedures in every setting in which anesthesia is delivered. The site of this project was a 600-bed level 3 trauma center in the southeastern part of the United States. The project facility employs 32 full time CRNAs who provide anesthesia to over 25,000 patients a year in collaboration with physician anesthesiologists. According to verbal reports, there was a noted decrease in job satisfaction and team morale over the last 12 months. Implementation of shared governance may provide a possible solution to voiced concerns.

Shared governance (SG) is an evidence-based model for management of healthcare teams in both large and small institutions throughout the United States. The shared governance model (SGM) embodies professional collaboration, accountability, and collective decision making based on current evidence and organizational standards (Olender et al., 2020). Often described in the literature as synonymous with staff empowerment, SG promotes shared decision making between leadership and bedside clinicians. Structures supported by the SGM most notably include the development and implementation of unit councils that address issues in the areas of management, practice, quality, and research (Radha & VijayaNarayanan, 2014). Successful implementation of SG has been shown to increase employee engagement, decrease employee turnover, improve patient outcomes, and positively affect patient satisfaction (Allen-Gilliam et al., 2016; Radha & VijayaNarayanan, 2014).

The anesthesia department at the project facility had no system for the discussion and resolution of practice issues as voiced by CRNAs. Lack of such a system appeared to negatively affect APRN culture, leaving feelings of discontent and dissatisfaction amongst staff. Furthermore, issues in the department regarding patient care and the use of evidence-based practice (EBP) called to question the quality-of-care surgical patients received. With over 25,000 surgical patients a year, ensuring consistent high-quality care was of direct importance to both the facility and its staff.

Could use of the SGM bring positive change to this facility's APRN culture? Is it possible that CRNAs who participate in unit council development & decisions could express an increase in job satisfaction? This project sought to utilize hospital resources already in place under SG to implement an anesthesia unit council and examine the direct effects of its use on CRNA practice.

Purpose

The purpose of this project was to implement a unit council in the anesthesia department of a 600-bed level 3 trauma center and assess the impact on Certified Registered Nurse Anesthetist (CRNA) perception of work climate and job satisfaction over a 6-month period.

Review of Current Evidence

A comprehensive search of current literature was conducted using CINAHL, EBSCO, MEDLINE, and PubMed databases. Key terms used in searches included shared governance, unit council, implementation, anesthesia, nurse anesthesia, nursing, Certified Registered Nurse Anesthetist, CRNA, advanced practice registered nurse, APRN, and job satisfaction. Search limits included peer reviewed articles published in the English language from 2015 to 2021. Inclusion criteria consisted of articles that addressed unit council or shared governance implementation to include methods, benefits, pitfalls, actual or potential effect on practice as

well as articles that discussed CRNA job satisfaction. After review of database results, a total of 15 articles were selected for synthesis. Articles were chosen based on their inclusion of information regarding shared governance benefits, structure, implementation at the unit-based level, and its reported impact on employee satisfaction as well as methods of assessing CRNA job satisfaction.

Shared Governance

Benefits

Shared governance (SG) has been noted to promote healthy work environments where people have input into their daily work (Brull, 2015). This input often leads to greater overall job satisfaction that can be linked to positive healthcare outcomes (Allen-Gilliam et al., 2016). Frequently associated with the term empowerment, SG enables facilities to utilize frontline workers as assets by taking their input and identifying problems and solutions in the workplace. The attitude of continuous improvement promotes positive work environments that workers feel connected to and vested in (Huntington & Goodyear, 2018). SG can increase employee input and potentially affect both job satisfaction and retention.

The economic cost of turnover affects healthcare organizations, healthcare consumers, and the payers of healthcare costs (Mahoney et al., 2020). Interventions that improve retention are therefore valuable. With the implementation and maintenance of SG, work engagement levels rise and stabilize over time (Olender et al., 2020). Work engagement could help lead to feelings of empowerment which help foster a sense of autonomy. Autonomy is of high value in the CRNA workplace (Mahoney et al., 2020). Promoting autonomy has the potential to increase CRNA job satisfaction and retention which ultimately presents savings to hospital systems and improvements in patient care. The benefits of increased job satisfaction, employee

empowerment, feelings of being vested, and increased retention all support justification for SG implementation.

Structure

Implementing SG at the unit level can be accomplished with the development of a unit-based council (UC). The UC model allows for one large coordinating council to oversee smaller work groups (Brull, 2015). Dividing goals and objectives into work groups helps promote ownership in the research and reporting of issues taking hold of suggestions from the bottom up (Huntington & Goodyear, 2018). Managers often serve as guides and mentors at the unit level and provide a connection to larger facility goals and objectives (Jordan, 2016; Moreno et al., 2018). Strategic and reflective leadership of the unit council that is based on organizational culture helps promote unit success in its initiatives (Copeland et al., 2020; Moreno et al., 2018). Development of a prioritized council agenda between managers and UC leadership will assist in more targeted efficient action planning. Heads of UC should work in close connection with management when defining action plans but should ultimately lead group meetings and task assignments without intervention from management to be fully effective (Jordan, 2016; Moreno et al., 2018). UC structures should therefore be integrated collaborative efforts between staff and their peers as well as management.

Implementation

Implementation of SG at the unit level requires collaborative efforts between hospital administration, direct management, and unit staff (Copeland et al., 2020; Panayotou et al., 2019). Key things to consider when initiating SG at the unit level are leadership, unit stakeholders, SG knowledge base, and strategic goals of both the facility as a whole and the individual unit (Moreno et al., 2018; Copeland et al., 2020). For implementation of a UC structure there must

first be identification of key stakeholders on the unit (Jordan, 2016; Moreno et al., 2018; Copeland et al., 2020). Identification of these stakeholders will help develop a steering committee for council development (Jordan, 2016; Medeiros, 2018; Copeland et al., 2020). Stakeholders should be members of the unit who are willing to volunteer their time and encompass both new and senior staff (Moreno et al., 2018; Medeiros, 2018). Once key stakeholders are identified, discussions amongst the group should aim to elicit ideas about UC structure, function, leadership, meeting logistics, and educational needs of the council and staff which it serves (Jordan, 2016). Members should develop guidelines that define each of these aspects for implementation (Jordan, 2016; Moreno et al., 2018). Once guidelines are established, discussions about pre-assessment of unit needs can be held. Pre-assessment allows the steering committee to prioritize goals and analyze pre- and post-intervention data to assess effectiveness of council interventions (Moreno et al., 2018). While the UC is staff directed, frequent meetings should be held with management to discuss findings and progress (Brull, 2015). These meetings serve as mentor opportunities between management and UC leaders allowing each to foster UC growth and sustainability (Jordan, 2016; Moreno et al., 2018).

CRNA Job Satisfaction

CRNA job satisfaction could benefit greatly from further study and assessment. Few endeavors have taken on the task of defining what this group of practitioners defines as occupational satisfaction. Boyd and Poghosyan (2017) developed the first tool for assessment of CRNA organizational climate known as the CRNA Organizational Climate Questionnaire or CRNA-OCQ. The questionnaire identified six subscales important to assess when looking at CRNA work climates as CRNA-anesthesiologist relations, CRNA-physician relations, CRNA-administration relations, independent practice support, and professional visibility (Boyd &

Poghosyan, 2017). The subscales developed by Boyd and Poghosyan are supported by findings from Mahoney et al. (2020) who noted that CRNA jobs should feature more autonomy and a greater skill mix for increased job satisfaction. Themes of autonomy, administrative recognition, organizational support, control over practice, and education found by Mileto and Penprase (2014) also support recurring patterns in the CRNA-OCQ. Newer in development, the CRNA-OCQ is noted by its creators to need additional study and validation. For the purposes of this project, the CRNA-OCQ was a great resource for the development of a pre- and post-assessment questionnaire that addressed CRNA job satisfaction in which the project then focused interventions on.

Feelings of partnership, equity, empowerment, accountability, ownership, and support are foundational concepts in shared governance (Medeiros, 2018). These factors help assist in increased job satisfaction and can play a role in improved employee morale.

Summary of Evidence

Development of a UC for the Anesthesia Department using SG guidelines has the potential to positively impact CRNA job satisfaction and increase department morale. Literature has shown that SG empowers employees to troubleshoot and discuss together potential resolutions to unit issues and concerns. Developing a UC structure that allows smaller work groups to focus on certain topics enables individual employees to take on ownership and creates a sense of partnering with both peers and the larger organization (Brull, 2015; Huntington & Goodyear, 2018). Leaders in UC need the mentoring of management to keep goals specific, reachable, and in line with larger facility objectives (Jordan, 2016; Moreno et al., 2018). Developing bonds amongst staff in their quest to make a better work environment can positively affect patient care and facility outcomes (Radha & VijayaNarayanan, 2014; Allen-Gilliam et al.,

2016). Empowering individuals to have discussions about issues and present resolutions is a known way of engaging staff and promoting satisfaction (Huntington & Goodyear, 2018). CRNAs have a desire to be autonomous, educated, recognized, and respected (Mileto & Penprase, 2014; Boyd & Poghosyan, 2017; Mahoney et al., 2020). Giving them the ability to directly change organizational approaches based on best practice evidence accomplishes each of these things. Implementation of UC done on a team level with identified staff that is committed and passionate about affecting change is a rational intervention for a struggling department lacking structure, cohesiveness, and overall morale.

Theoretical Framework

According to Tiffany and Lutjens (1998), change theory exists in two forms – theories that help people watch change and theories that help people produce change. These theories use interwoven concepts to systematically explain how change occurs, how different environmental forces will react in change situations, and how planners can affect change by intervening to assist the process (Tiffany and Lutjens, 1998). The actual production of change involves the use of planned change theory. One type of planned change theory described by Kurt Lewin (1947) identifies three steps in the change process: Unfreeze, Change, and Refreeze.

Lewin described the unfreeze phase as when planners identify both driving and restraining forces (Kritsonis, 2005). Driving forces are considered the positive energy present to move a situation away from the status quo and towards the desired or needed resolution, while restraining forces are the things that prevent those driving forces from moving towards their intended destination (Kritsonis, 2005). To unfreeze the current state, one must first realize what is motivating change and what is stopping change (Kritsonis, 2005). Once these factors are identified, interventions can be focused accordingly. Pre-intervention, the anesthesia department

at the project facility had no system for the discussion and resolution of practice issues and concerns by Certified Registered Nurse Anesthetists (CRNAs). Many reported feelings of frustration, low morale, insignificance, and desire for change. In this situation the driving desire to change was present and was used to help propel staff out of the status quo, but restraining forces like low morale, feeling disenfranchised, and lack of forum for team discussion stood in the way. Focusing interventions in these areas was identified as a way to help move the team forward.

The second step in the change theory described by Lewin is change or movement. In this phase, individuals have identified the need for change and begin to adopt a new way of thinking, feeling, or behaving (Spear, 2016). Implementation of a unit council for the anesthesia department was predicted to be a way frontline employees could have direct input into the everyday activities of their job. This new sense of ownership promotes team cohesiveness and amplifies the desire to change through participation and vesting.

Finally, the step of refreeze involves solidifying the change (Kritsonis, 2005), in this case the unit council, so that it becomes standard practice. Providing policy and procedure updates to incorporate the use of the new standard is one way to ensure stability and continuing use of the change (Kritsonis, 2005). This is important in preventing return to old ways of thinking, feeling, and acting. Over the course of unit council development and implementation goals for long term use and revision were considered to sustain the new approach.

Methods

Project Purpose and Design

The purpose of the project was to implement a unit council in the anesthesia department of a local healthcare facility and assess the impact on Certified Registered Nurse Anesthetist

(CRNA) perception of job climate and satisfaction over a 6-month period. The study was a descriptive longitudinal study that administered a pre- and post-intervention survey to assess for changes in CRNA job satisfaction and work perceptions.

Translational Framework

The FADE Model for quality improvement was used before, during, and after the intervention phase of the study. The model consists of 4 steps – Focus, Analyze, Develop, and Execute (Wiseman and Kaprielian, 2005). During the focus phase a problem or process is identified and defined as in need of intervention. Once a problem has been identified data is collected and analyzed to determine baseline conditions as well as potential causes and resolutions to the issue. Based on the data collected an action plan is developed to intervene on the situation. Finally, once plans and measurement goals have been established the final phase of execution is implemented on a pilot basis. The process is repeated and continues in a cyclic nature until resolution of problems is complete.

In this instance, the lack of forum for team discussion and resolution of issues was identified as the focus. Data regarding team morale, job satisfaction, and provider perception of clinical issues was gathered using a job satisfaction survey. Unit council development and implementation then occurred using data gathered from the survey to prioritize objectives. After establishment of the unit council forum, identification of additional problems and issues were performed, and new data collected. The cyclic nature of the FADE Model continued throughout the intervention process to help address unit concerns.

Setting

The project was implemented in the anesthesia department of a 600-bed hospital system located in the southeastern part of the United States. Responsible for staffing 25 operating rooms

at the time of assessment and implementation, the system employed 32 full time CRNAs and contracted with a local group of 12 anesthesiologist for physician coverage. Anesthesia at the facility was and continues to be performed under the care team model with a 4-1 CRNA to physician ratio. Over 25,000 surgical procedures were performed during the 2021 study and included general, orthopedic, Ob-gyn, neuro, hearts, GI, EP, and same day cases.

Sample

Convenience sample of 32 CRNAs between the ages of 28 and 59 with experience ranging from less than 5 years to greater than 20 years was used to collect data. Inclusion criteria consisted of any full time CRNA at the project facility who completed a job satisfaction survey and returned it for evaluation prior to the deadline with anonymity codes intact. Exclusion criteria consisted of non-full-time CRNAs, other departmental employees who serve in non CRNA roles, and surveys that were not returned by the evaluation deadline or with anonymity codes present.

Intervention

Application of the unit council (UC) intervention took place after obtaining baseline data on CRNA job perspectives and overall job satisfaction. The intervention timeframe lasted for a period of 6 months and consisted of a total of 12-unit council meetings with one meeting every two weeks. Seven days prior to each meeting flyers were posted throughout the department announcing the date, time, location, and agenda items to be discussed. Meeting one covered unit council purpose, rules of participation, meeting dates and times, and election of council officers per shared governance guidelines already in place at the facility. Survey results were reviewed by council members in meeting two, and intervention priorities were established based on UC discussion and managerial input. Meetings three and four focused on departmental

communication and education efforts with major emphasis placed on how to improve the flow of information from management to staff and from staff to management. Intervention updates and adjustments for interdepartmental communication were the focus of meeting five with invites sent to pre- and post-operative area representatives requesting their attendance at meetings six and seven. Meeting six focused on CRNA to physician communication and meeting seven focused on preoperative and postoperative area staff concerns. An administrative representative was present for meeting eight where CRNA concerns regarding APRN practice and contracts were discussed. Follow up measures and dates were established by the council for these issues. Meeting nine provided updates to communication patterns noted over the previous four months and plans for streamlining and adjusting efforts were made. Contract samples and concerns were discussed in meeting ten and future administrative meeting dates were debated and decided on. Meeting eleven discussed the plan for follow up survey post council deployment and its potential effect on UC direction and initiatives. Meeting twelve invited discussion of policy procedure review for areas specific to anesthesia and a plan for post project continuation of UC meetings was implemented. Meeting frequency was discussed, and officers agreed to remain in place per current hospital shared governance rules and guidelines.

Data Collection

Procedures. After obtaining approval from the University of North Carolina Greensboro Institutional Review Board (See Appendix D), a meeting was set up with the Chief of Nurse Anesthesia at the project site. Review of the Certified Registered Nurse Anesthetist Occupational Climate Questionnaire (CRNA-OCQ) was done to assure managerial approval of the chosen survey instrument. Once approval was received, paper surveys (See Appendix B) of the CRNA-OCQ were placed in the departmental mailbox of every full-time CRNA along with a

recruitment letter (See Appendix A) containing instructions on how to complete and return the survey. Survey collection happened via participant return to a locked drop box that only the project facilitator had key access to.

Two weeks after survey distribution, initial surveys were retrieved from the locked drop box and data was transcribed into a Microsoft Excel (2021) spreadsheet by the project facilitator. The spreadsheet data was maintained on the facilitator's laptop under password protection until project completion. No location or participant specific information was collected or maintained during the duration of the project apart from an anonymous code placed at the bottom of the survey by the taker themselves. This code was intended to assist in potential trending of differences in pre- and post-data without the ability to identify the respondent by name. After data was entered into the Excel spreadsheet, paper surveys were disposed of in a locked shred bin at the project facility.

Following the initial survey, a verbal information blitz was provided during the monthly staff meeting about unit council purpose, goals, benefits, and objectives. Flyers were posted weekly throughout the unit to invite and inform staff about meeting dates and times as seen fit by UC members. After six months of regular bi-weekly UC meetings, or 12 meetings total, the CRNA-OCQ was again distributed via departmental mailbox under the same pre-survey conditions noted above. Return, collection, and entry of data was performed in the same fashion for post-intervention survey results as pre-intervention survey results. Data comparisons were made between pre- and post-intervention surveys to assess if unit council implementation had an effect on job perspectives and or overall satisfaction.

Instruments. The Certified Registered Nurse Anesthetist Organizational Climate Questionnaire, or CRNA-OCQ, is the first tool for assessing organizational issues affecting job

satisfaction and retention for CRNAs (Boyd & Poghosyan, 2017). The questionnaire developed by Boyd & Poghosyan (2017) consists of 35 items with a content validity index (CVI) of 1.00. These 35 items are grouped into six subscales each with a high value of internal consistency as noted by the following Cronbach alphas: CRNA-Anesthesiologist Relations (0.753), CRNA-Physician Relations (0.833), CRNA-Administration Relations (0.895), Independent Practice (0.830), Support for CRNA Practice (0.683), and Professional Visibility (0.772) (Boyd & Poghosyan, 2017). The instrument utilizes a 4-point Likert scale where participants rank each question with 1 strongly disagree, 2 disagree, 3 agree, or 4 strongly agree to complete the survey. For the purposes of this project, the CRNA-OCQ was utilized with an additional seventh subscale entitled CRNA – Job Attributes developed in collaboration with project facility management (See Appendix B). In addition to subscale seven, three questions from the original survey’s subscale CRNA-Physician Relations were deemed repetitive and or unnecessary by management. The omitted questions referenced physicians outside of anesthesia practice and included “Physician colleagues support my patient care decisions”, “Physicians ask CRNAs for patient care suggestions”, and “In my organization, physician colleagues and CRNAs practice as a team”. Permission to utilize the original instrument was obtained from Dr. Don Boyd of the Columbia University School of Nursing (See Appendix C).

Data Analysis

Data analysis of pre- and post-intervention data obtained from the CRNA-OCQ surveys includes descriptive and inferential analytics. Comparison of data was done to evaluate if the unit council intervention had any effect on CRNA perception of workplace climate and or overall job satisfaction. Means for each individual subscale were calculated using Microsoft Excel (2021) and the pre- and post- intervention data was compared using paired samples t-test in the

Microsoft Excel Data Analysis Toolkit.

Results

Of the 32 pre intervention CRNA-OCQ surveys distributed, 26 were returned by the survey deadline. Three pre-intervention survey participants did not provide an anonymity code and were excluded from data analysis. In the remaining 23 surveys, each of the 38 questions were answered except for one survey that did not provide a rating for subscale 1, question 3 “There are enough ancillary staff to help with patient care.” This question was coded with a 2.5 value to indicate the subject neither agreed or disagreed with the statement and was included in analysis. Each survey could have a minimum of 38 points and maximum of 152 points. In the pre-intervention sample ($n = 23$), total survey scores ranged from 82 to 126 with a mean of 104 (SD 12). The mean score of 104 corresponds to 2.73 on the four-point Likert scale where 3 indicates the participant perceives a positive work climate and 2 indicates they do not.

Post-intervention a total of 32 CRNA-OCQ surveys were distributed and 26 were returned by the deadline. Three post-intervention surveys that could not be paired with pre-intervention survey results via the anonymity code were excluded. Return surveys were noted to have no blanks or omissions by participants. In the post-intervention sample ($n = 23$), survey scores ranged from 101 to 127 with a mean of 113 (SD 6.9). The mean score of 113 corresponds to a 2.97 on the four-point scale indicating that the participant perceived a positive work environment. Paired samples t-test showed a significant improvement in perceived work environment ($t(22) = -3.16, p = 0.005$) between pre-intervention survey totals ($M = 104, SD = 12$) and post-intervention survey totals ($M = 113, SD = 6.9$).

Of the seven CRNA-OCQ subscales, the highest-ranking subscale in terms of mean satisfaction pre-intervention was subscale 1, Support for CRNA Practice. Subscale 3, CRNA-

Anesthesiologist Relations, ranked second followed by subscale 6, Independent Practice. The two lowest performing subscales were subscales two, Professional Visibility, and five, CRNA Administration Relations, which was the lowest ranking subscale pre intervention. See Table 1.

Post-intervention, the highest-ranking subscales were subscales 3, CRNA-Anesthesiologist Relations, and subscale 1, Support for CRNA Practice. The subscale with the next highest ranking was subscale 6, Independent Practice, followed by subscale 7, CRNA Job Attributes. CRNA Administration Relations, or subscale 5, ranked next and showed the highest jump in ranking from 7th pre-intervention to 5th post-intervention. Subscale 2, Professional Visibility followed, and the lowest performing subscale post-intervention was subscale 4, CRNA Physician-Relations, which noted a drop in ranking from 5th place pre-intervention to 7th place post-intervention. See table 1.

Increased mean scores were noted in all subscales post-intervention except for subscale 4, CRNA-Physician Relations, which was essentially unchanged with a 0.04 mean decrease. While all subscales noted change, paired samples t-test performed on each subscale found that subscale 5, CRNA Administrative Relations, was the only subscale that demonstrated significant improvement in the pre-intervention and post-intervention survey data. See Table 1.

Table 1

Pre and Post Intervention Subscale Scores with Paired Samples T-Test by Subscale

Subscale	Mean (SD)		P-Value
	Pre Ranking	Post Ranking	
1 - Support for CRNA Practice	3.36 (0.62) 1 st	3.43 (0.50) 2 nd *	0.495
2- Professional Visibility	2.36 (0.84) 6 th	2.56 (0.67) 6 th	0.094
3- CRNA-Anesthesiologist Relations	3.30 (0.78) 2 nd	3.43 (0.56) 1 st	0.381

4- CRNA-Physician Relations	2.56 (0.77) 5 th	2.52 (0.63) 7 th	0.788
5- CRNA-Administration Relations	2.22 (0.74) 7 th	2.92 (0.60) 5 th	<0.001
6- Independent Practice	3.00 (0.78) 3 rd	3.14 (0.66) 3 rd	0.333
7- CRNA Job Attributes	2.93 (0.73) 4 th	3.09 (0.71) 4 th	0.075

Note. *Second place ranking determined by degree of scale change as compared to pre.

Subscale 7 (question 33) asked participants to rate the statement “I am satisfied with my job” on the 1 to 4 Likert Scale. Pre-intervention survey responses indicated a mean response of 3.13 (SD 0.46) and post-intervention survey responses indicated a mean response of 3.35 (SD 0.49). Comparison of pre and post satisfaction data shows an increase in satisfaction scoring of 0.22. A paired samples t-test found no significant difference in job satisfaction between the groups ($t(22) = -1.42, p = 0.17$).

Discussion

The purpose of this project was to implement a unit council structure in the anesthesia department of a 600-bed level 3 trauma center and assess the impact on CRNA perception of work climate and job satisfaction over a 6-month period. Overall scores on the CRNA-OCQ survey showed significant improvement in workplace perceptions post-intervention. Every subscale of the CRNA-OCQ demonstrated positive change, with the exception of the CRNA-Physician Relations subscale that was essentially unchanged. The subscale CRNA-Administration Relations was the only subscale that demonstrated statistically significant increase, and while overall level of job satisfaction improved, the level of improvement for this project’s timeframe was found to be non-significant.

Pre-intervention surveys had a total mean score of 2.73 on the four-point Likert scale where 3 indicated the participant perceived a positive work climate and 2 indicated they did not.

Post-intervention surveys had a total mean score of 2.97 on the same four-point scale. This significant change demonstrates that interventions addressing CRNA concerns can be beneficial to how they perceive their work environment. It also shows that improvement in employee perceptions can be accounted for when using the CRNA-OCQ tool. Perception of the work environment is said to affect an individual's behavior and attitude towards work (Boyd & Poghosyan, 2017). Behaviors and attitudes are important as they affect satisfaction, job performance, and potentially patient outcomes (Swiger, 2017).

Subscale scores on the CRNA-OCQ all increased post intervention with the exception of one subscale, CRNA-Physician relations, that remained unchanged. The CRNA-Administrative Relations subscale was the only subscale to demonstrate significant positive change. This subscale was chosen as a priority by UC members and under guidance of the FADE Model change projects were implemented that directly affected communication patterns between staff CRNAs and Administration. The focus on this particular area allowed staff to analyze factors that contributed to identified communication issues and develop a plan to execute potential change. The use of staff to directly pinpoint areas of practice they felt most important to change is described in the literature as beneficial to outcomes; it is also a core principle of SG and unit council implementation (Brull, 2015; Huntington & Goodyear, 2018; Moreno et al., 2018). In this instance, the CRNA-Administrative Relations subscale improved from 2.22 to 2.92 on the four-point Likert scale and indicated that staff perceived a more positive outlook in this area than they did pre-intervention. This demonstrates that focused efforts on reported issues can directly impact how CRNAs view them in as little as six months. It also demonstrates the usefulness of the FADE Model as a translational tool for UC implementation. Subscales that did not experience such positive change may benefit from direct intervention in the future. Allowing

CRNAs on the UC to direct interventions promotes ownership, vested interest, and a sense of practice autonomy that is important to CRNAs (Mahoney et al., 2020). The cyclic nature of the FADE Model encourages repetition of steps to identify new areas for improvement. Perhaps new priorities and interventions directed by staff can be developed as the UC continues in order to promote additional change in other areas.

Interestingly enough, while overall scores on the CRNA-OCQ significantly increased, the level of satisfaction found pre-intervention and post-intervention changed minimally. A 0.22 increase in job satisfaction post intervention was found to be non-significant by paired t-test. Pre-intervention survey scores indicated that although CRNAs had certain perceptions about their work environment that could improve, they were overall satisfied with their job. A study by Mahoney et al. (2020) found that autonomy and CRNA job satisfaction were positively related. Subscale 3, Independent Practice, ranked 3.0 pre-intervention and 3.14 post-intervention. A high perception of autonomy pre-intervention is one possible reason for higher-than-expected job satisfaction scores at baseline. Subscales on the CRNA-OCQ can identify areas CRNAs perceive as not satisfactory, but the link between CRNA work climate perception and overall job satisfaction needs further study. The CRNA-OCQ is the first tool developed to assess CRNA organizational climate. Developers of the tool hypothesized that assessment of organizational climate could help direct improvement initiatives and affect overall job satisfaction for CRNAs (Boyd & Poghosyan, 2017). In this case, CRNA job satisfaction rated higher pre-intervention than expected and changed minimally post-intervention even though efforts improved certain aspects of the job. Continuing the intervention for an additional six months may provide a greater increase in the job satisfaction category and remains to be assessed.

The use of Change Theory as first described by Lewin (1947) for UC implementation proved beneficial. Unfreezing current states by identifying driving and restraining forces helped staff pinpoint areas of concern and harness energy to move forward. The implementation of UC as a change agent made involving staff simplistic, and staff desire to see and make change was one of the biggest factors in transforming problems into solutions. Solidifying change through the verification of progress will help sustain change and keep momentum of the UC going forward.

Limitations

For those looking to institute UC into their own anesthesia models two primary things should be noted. First, the application of findings here are specific to a medium sized department in a very independent care team practice. With a staff of 32 full-time CRNAs the pool from which to recruit members and assign tasks was sufficient. Practices that are more restrictive or smaller in nature may have a difficult time instituting change initiatives or finding the staff to head them. Second, timeframe for initial assessment, intervention, and re-assessment should be considered. This project's intervention timeframe lasted for a period of 6 months and consisted of a total of 12-unit council meetings with one meeting every two weeks. With two meetings a month, this project identified change that needs more time to grow. Future project leaders should consider time constraints when planning for implementation and expected results. Balancing staffing needs of the operating room and allowing for coordination of schedules over a longer time frame may prove daunting and could be a limiting factor to more frequent or extended meetings.

Recommendations for Future Study

This project found that implementation of UC in the anesthesia department can improve

CRNA job perspectives and potentially alter CRNA job satisfaction. Use of the CRNA-OCQ should continue with further analysis of links between each subscale and CRNA job satisfaction. While the tool proved to be beneficial in the assessment of job factors that were satisfactory or could improve, identifying how much each area actually contributes to overall satisfaction would assist in identifying priority areas for intervention.

Identifying the ability to alter CRNA perceptions of the workplace through focused efforts provides an avenue for improved clinical practice and potential job satisfaction. The development of forums like UC for anesthesia could prove pivotal in practice areas where CRNAs feel they are unheard or do not have a voice. Furthermore, providing opportunities for CRNAs to review practice and outcomes has the potential to improve patient care.

Implementation of forums that promote professional communication and review of practice could enhance the profession in a desirable way. There are many hot button topics for CRNA practice. Using UC to address issues at the hospital level is the first step to adopting consensus that could break out into larger areas for advocacy in things hospital policy or local and state law.

Conclusion

Implementation of a Unit Council (UC) in the anesthesia department can significantly improve CRNA perception of work climate. Focused UC interventions have the ability to directly impact desired areas of practice and alter how CRNAs think about certain aspects of their work. Shared Governance (SG) structures like unit councils are known to promote employee engagement and can improve both communication and vesting into workplace activities. Allowing practitioners to have firsthand knowledge and input into anesthesia issues promotes a different viewpoint of the work system. This viewpoint can improve when CRNAs

are involved and kept up to date on process changes that affect them. While the perception of work climate may be directly tied to overall CRNA job satisfaction, how significantly so remains to be answered.

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Appendix A

Recruitment Letter

June 2021

Dear Potential Participant:

My name is Jennifer Whaley, and I am a graduate student at The University of North Carolina Greensboro. For my Doctoral Project I am evaluating CRNA job satisfaction at our facility over the next six months. I am inviting you to participate in this research because you are a full time CRNA.

The attached questionnaire will require approximately 5 to 10 minutes to complete. To ensure that all information will remain confidential, please do not include your name. There is a unique code that you will develop at the end that only you will know. This code will help link pre assessment data to post assessment data but in no way allow for identification of the survey taker. Copies of data collected for this project will be provided to my UNCG instructor and discussed at up-and-coming staff meetings. There is no compensation for responding nor is there any known risk.

If you choose to participate in this project, please answer all questions as honestly as possible and return the completed questionnaire by June 4th to the lock box marked "SURVEY" in the breakroom. A second survey will be conducted in December. Participation is strictly voluntary, and you may refuse to participate now or in the future.

Thank you for taking the time to assist me in my educational endeavors. The data collected will provide useful information regarding the level of satisfaction for CRNAs and help identify areas for improvement. Completion and return of the questionnaire will indicate your willingness to participate.

If you require additional information or have questions, please contact me at the number listed below. If you are not satisfied with the way this evaluation is being conducted, you may report (anonymously if you so choose) complaints to my-self or the Department of Nursing Project Advisor below.

Sincerely,

Jennifer Whaley, RN, MSN, CRNA
Doctoral Candidate – Project Facilitator
Jkwhaley@uncg.edu
910-229-8309

Angela Kabbe, PhD, FNP-PC
UNCG Department of Nursing – Project Advisor
Amkabbe@uncg.edu
336-334-5400

Appendix B

Modified CRNA-Occupational Climate Questionnaire

Indicate your degree of agreement with the following statements using the scale:

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

Support for CRNA Practice

CRNAs are an integral part of the organization

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

In my practice setting, I have enough resources to provide patient care

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

There are enough ancillary staff to help with patient care

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

In my organization, enough time is allotted to perform patient care

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

Professional Visibility

In my organization the CRNA role is understood

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

Staff members have an understanding about CRNA roles in the organization

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

CRNAs are represented on important committees in my organization

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

In my organization, there is a system in place to evaluate the care that I provide

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

I regularly get feedback about my performance from my organization

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

In my organization there is a system in place to reward my performance

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

CRNA-Anesthesiologist Relations

Anesthesiologists support my patient care decisions

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

In my organization, anesthesiologists and CRNAs practice as a team

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

In my practice setting, I have colleagues who I can ask for help

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

Anesthesiologists are open to CRNA suggestions regarding new ideas about patient care

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

CRNA-Physician Relations

I am valued by my physician colleagues

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

In my organization, CRNAs and physicians collaborate to provide patient care

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

Physicians in my practice setting value my patient care decisions

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

Physicians ask CRNAs for their advice when providing patient care

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

Physicians seek CRNAs' input when providing patient care

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

CRNA-Administration Relations

I feel valued by my organization

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

Administration is open to CRNA ideas to improve patient care

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

Administration takes CRNA concerns seriously

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

Administration shares information equally with CRNAs and physicians

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

Administration is well informed of the skills and competencies of CRNAs

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

Administration treats CRNAs and physicians equally

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

Administration makes efforts to improve working conditions for CRNAs

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

In my organization, there is ongoing communication between CRNAs and administration

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

Independent Practice

In my organization, I apply all my knowledge and skills to provide patient care

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

My organization does not restrict my ability to practice to the full extent of regulatory scope of practice

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

In my organization, I can provide patient care to the full extent of my state’s regulatory scope

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

My organization fosters an environment where I can practice autonomously

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

I independently make patient care decisions in my area of competency without physician input

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

CRNA Job Attributes

I am satisfied with my job

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

The schedule I work provides me with work life balance

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

I am satisfied with the variety of cases I get to perform

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

I am assigned to cases that I prefer

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

I am compensated fair market value for the work I do

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

I do not deal with workplace incivility

1 Strongly Disagree 2 Disagree 3 Agree 4 Strongly Agree

For pre/post survey data analysis to remain linked but confidential please generate an anonymous code:

- 1. Enter the day of father's birthday (e.g. 16) _____
- 2. Enter the first two letters of your mother's maiden name. _____
- 3. Enter the number of siblings you have (include step/half siblings) _____

Appendix C

Permission to Utilize the CRNA-OCQ Instrument

Good afternoon, Ms. Whaley:

Thank you for reaching out to me regarding the use of the CRNA Organizational Climate Questionnaire (CRNA-OCQ) in your DNP project. You may use the CRNA-OCQ for your project. This is very exciting! Your work will be impactful, and I look forward to learning more about it!

During my PhD work, I'd hoped to determine what factors of CRNA organizational climate contributed to job satisfaction (or dissatisfaction), but the scope of instrument adaptation and related work proved to be more than enough to satisfy degree requirements. I was also curious to know if CRNA-OCQ factors that were related to job satisfaction were similar to Misener's NP Job Satisfaction Scale factors for job satisfaction. I've attached that scale here for your reference, as I found it difficult to retrieve electronically. Of course, much work could come from this, and I am always happy to learn about work that is being done.

Thank you for inquiring about a statement of attribution. Mentioning my name (Don Boyd, PhD, MS, CRNA) and that the article was published in the Journal of Nursing Measurement (JNM) should be sufficient. If you plan to reproduce the CRNA-OCQ in its entirety in a publication, you may want to check with the JNM about permission to do so. I am almost certain they would allow it. I am in full support.

Please let me know if I might be of further assistance to you regarding the CRNA-OCQ. I'm happy to help however I can. Best to you in moving your work forward. I very much look forward to reading your work!

Sincerely,
Don

Don Boyd, PhD, MS, CRNA
Assistant Professor of Nursing at CUMC
Associate Director, Nurse Anesthesia Program
Columbia University School of Nursing
Office: (212) 305-5602

Appendix D

May 6, 2021
Jennifer Whaley
Angela Kabbe

Graduate Student, Nursing

Re: Exempt - Initial - IRB-FY21-36 IMPLEMENTATION OF SHARED GOVERNANCE IN THE ANESTHESIA DEPARTMENT

Dear Jennifer Whaley:

UNCG Institutional Review Board has rendered the decision below for IMPLEMENTATION OF SHARED GOVERNANCE IN THE ANESTHESIA DEPARTMENT.

Decision: Exempt

Approval: May 6, 2021
Expiration: --

Selected Category: Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording).

The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects.

This submission has been reviewed by the IRB and was determined to be exempt according to the regulatory category cited above under 45 CFR 46.101(b).

Investigator's Responsibilities

- Please be aware that valid human subjects training and signed statements of confidentiality for all members of research team need to be kept on file with the lead investigator. Please note that you will also need to remain in compliance with the university "Access To and Retention of Research Data" Policy which can be found at http://policy.uncg.edu/university-policies/research_data/.
- **Please utilize the the consent form/information sheet with the most recent version date when enrolling participants.**
- Please be aware that any changes to your protocol must be reviewed by the IRB prior to being implemented.
- **If your study is funded**, please note that it is the responsibility of the Principal Investigator to link your IRB application to your Cayuse SP record.

Sincerely,

UNCG Institutional Review Board