Journal of Interprofessional Education & Practice 14 (2019) 18–21

Contents lists available at ScienceDirect

Journal of Interprofessional Education & Practice

journal homepage: www.elsevier.com/locate/jiep

A case study activity to assess nursing students' perceptions of their interprofessional healthcare team's collaborative decision-making process

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ABSTRACT

Stronger interprofessional team collaboration is associated with higher satisfaction with decision-making processes, but nurses are most likely to feel low satisfaction with team decision-making. Because interprofessional teams should make inclusive care plan decisions using consensus, a semester-long, interprofessional case study activity included student health profession team creation of a hospital discharge plan for a web-based patient. Interprofessional student teams from nursing and five other health professions participated in the activity that used an 'adapted' nursing case study as an interprofessional case. Upon completion, it was hoped nursing student participants would report high perceptions of collaboration and satisfaction with their team decision-making process.

Post-activity, overall scores on the Collaboration and Satisfaction about Care Decisions instrument indicated that nursing student participants perceived collaboration levels as relatively high or acceptable and were generally satisfied with their team decision-making process. However, no mean scores were in the higher or most positive levels. More interventions focusing on team process and decision-making may assist in the delivery of effective patient-centered, team-based care. Case studies from the National League for Nursing and Community College of Philadelphia, Advancing Care Excellence for Seniors website can easily be adapted as interprofessional.

1. Format

A semester-long, interprofessional case study activity included student health profession team creation of a hospital discharge plan for a web-based older adult patient. The activity was delivered online and on-ground with small-group interprofessional student teams facilitated by health professions faculty members.

2. Target audience

After Institutional Review Board approval, 28 upper-level undergraduate nursing students participated in the activity and study. Interprofessional student teams of four or five participants from nursing and other health professions (first/second year medical and dental students, upper-level undergraduate public health students, graduate-level communication disorders students, and upper-level undergraduate athletic training students), over 100 total and from two universities in the same town, participated in the activity.

3. Objective

Interprofessional teams should make inclusive, patient-centered care plan decisions using consensus.[1] Stronger team collaboration is associated with higher decision-making process satisfaction, but nurses are most likely to feel low satisfaction with interprofessional team decision-making processes.[2] Objective: Post-activity, nursing student participants will report high perceptions of collaboration and satisfaction with their team decision-making process.

4. Activity description

The semester-long, interprofessional case study activity was focused on interprofessional competencies and healthcare for the older adult population. All students were pre-assigned to a healthcare team and tasked with decision-making for and creation of a comprehensive hospital discharge plan for a 'web-based' older adult patient that would meet patient/family healthcare needs. For two months before program start, faculty member facilitators from each of the represented health professions met once/week for an hour to adapt a case study/scenario from the National League for Nursing/Community College of

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https://doi.org/10.1016/j.xjep.2018.11.005
Received 15 June 2018; Received in revised form 12 July 2018; Accepted 8 November 2018
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Philadelphia, Advancing Care Excellence for Seniors into an interprofessional case. Using a template saved time, therefore, each faculty member just created accompanying provider notes from their profession and added information about background and role of their profession to case notes. All then worked collaboratively to adapt the template's patient medical information, medical/social history, and life story to be relevant for each profession as well as relevant to the local culture and local healthcare services available. A website was easily created in-house to hold the case information, interprofessional collaborative competencies for reference, and the case judging rubric.

All students enrolled in the case study activity attended a 2-h evening orientation at the local medical school's interprofessional building and were led through the process by medical and health professions faculty members. The orientation covered the purpose of the activity, an overview of the interprofessional competencies, a description and brief history of interprofessional education and practice, and a tour of the website. Each interprofessional student team was also assigned one of the medical or health professions faculty members as a facilitator to guide the teams in the process of creating their discharge plans and preparing a 15-min long oral presentation with slide show to be judged during the final week of the program by an interprofessional panel of volunteer practitioners and academics. Teams met on their own time during the semester to discuss and prepare their case notes, met with their facilitators, and practiced their case presentation and slide show. During the last week of the program and during an evening session, all teams presented their cases and were judged on level of adherence to the four interprofessional collaborative competencies, reflection on teamwork, and presentation delivery on a scale of: 3-Excellent, 2-Good, 1-Fair, 0-Poor. All interprofessional team members received their team scores, certificates of participation, and debriefed their teamwork experience in a large-group setting during an evening celebration the next week. Study respondents completed the Collaboration and Satisfaction about Care Decisions instrument following that session.

5. Assessment

The Collaboration and Satisfaction about Care Decisions (CSACD) was used to assess post-program collaboration in making patient care decisions as well as satisfaction with the decision and decision-making process. The self-report questionnaire contained nine Likert-scale items (1-Strongly Disagree to 7-Strongly Agree) with two subscales: collaboration and satisfaction. Internal consistency Chronbach's alpha for the six collaboration items = 0.93, correlation between the two satisfaction items r = 0.64, and factor analysis loading for six items ranged from 0.82 to .93.[3] Descriptive were calculated. Mean scores for each of the subscales were also calculated. Higher mean scores corresponded to more positive attitudes toward collaboration and satisfaction.

6. Evaluation

For the individual items regarding respondent attitudes toward collaboration during the interprofessional case study activity, all but one score was at least a 5.0/7.0 – more positive than negative. The highest mean score (corresponding to more positive attitudes toward collaboration) was found for “Open communication among team members took place as the decision was made for this patient.” Table 1. When asked “How much collaboration among team members occurred in making the decision for this patient?“, most (17/28, 61%) also noted positive scores/above Neutral. Table 2.

For individual items regarding satisfaction with the decision-making process and the final decision about the patient discharge plan during the interprofessional case study activity, mean scores for both were a little over 5.0/7.0. Table 3.

For collaboration (seven items) and satisfaction (two items) scales, the collaboration variable (M = 36.96, SD = 8.07) and the satisfaction variable (M = 10.46, SD = 2.25) in Table 4 were the summated total of all the items in their respective categories.

7. Impact

Upon completion of a semester-long, interprofessional collaborative case study activity focusing on creation of a hospital discharge plan for a web-based patient, respondents were assessed on their perception of their team's levels of interprofessional collaboration and their satisfaction with team decision-making. Respondents generally reported mean team collaboration scores around 5.0–5.5/7.0, indicating relatively positive judgements about team process during the activity. However, no mean scores were in the higher or most positive levels. Respondents reported similarly positive mean satisfaction scores for the decision-making process and final discharge plan decision. However, no mean scores were in the higher or most positive levels. Post-activity, although causation cannot be inferred, overall scores indicated that respondents perceived collaboration levels as relatively high or acceptable and were generally satisfied with their team decision-making process.

Interprofessional collaboration about team process and decision-making is required to deliver effective patient-centered, team-based care.[4] Upon completion of the interprofessional activity, respondents in this study viewed their team collaboration and satisfaction with their team's final discharge plan as relatively positive. For example, the highest-rated item under the subscale for collaboration was “Communication”. This could be due to the case study activity itself; or perhaps, the respondents felt they could communicate well with their peers due to similar age, area of study, and/or locality. Respondents' mostly positive self-reported attitudes toward interprofessional collaboration were consistent with previous research on interprofessional education programs for health profession students for case study activities.[5,6]

The organization and administration of the interprofessional case study activity may have contributed to this result. Best practice recommendations for administration of inteprofessional education and practice[1] were followed for the activity and included didactic and online education about interprofessional collaboration as well as encouraging face-to-face team meetings. Although relatively high, respondent mean scores were not at the most positive or highest levels for factors of collaboration/collaboration assessment and satisfaction. Possibly because the interprofessional teams in this study included a variety of health professions, high confirmation bias regarding decision-making was not evident.[7]

Only a few individual responses for factors of collaboration/collaboration assessment and satisfaction, however, were noted as below neutral. Under the collaboration subscale, “Shared decision making” was lowest rated. Perhaps, the respondents felt they were not permitted enough responsibility in the decision-making process. Alternatively, the respondents may have felt they shouldered too much of the responsibility. Those teams may also have experienced some barriers to interprofessional collaboration and decision-making common in interprofessional team training activities such as: poor conflict management,[8] independent creation of care/discharge plans,[1] or lack of communication skills.[9] This may also be a positive result, though. High levels of collaborative healthcare decision-making and attitudes toward collaboration may not always lead to the best results or patient outcomes due to lack of differing perspectives and impressions on care.[10,11]

The summated scale scores for both collaboration and satisfaction were calculated, however, the original author of the instrument[3] did not dictate labels such as High, Moderate, or Low collaboration depending upon summated scores. The researchers, left to our discretion to interpret the results, conclude the following: The score of approximately 37 out of 48 would indicate that collaboration level was high or acceptable among respondents; and the score of 10.46 out of 14 would also indicate that respondents were satisfied with the process and outcome of the decision. Consistent with the literature, respondents in this study reported high satisfaction with the decision if they perceived

Table 1
Individual responses for factors of collaboration (n = 28)[a].

Survey Item[b]	1 Strongly Disagree n(%)	2 n(%)	3 n(%)	4 n(%)	5 n(%)	6 n(%)	7 Strongly Agree n(%)	M(SD)
"Planning Together"	0(0.0)	1(3.6)	2(7.1)	3(10.7)	6(21.4)	9(32.1)	7(25.0)	5.46(1.37)
"Communicat-ion"	0(0.0)	1(3.6)	0(0.0)	3(10.7)	10(35.7)	7(25.0)	7(25.0)	5.53(1.20)
"Share Decision Making"	0(0.0)	0(0.0)	4(14.8)	5(18.5)	9(33.3)	6(22.2)	3(11.1)	4.96(1.20)[c]
"Co-operation"	0(0.0)	0(0.0)	4(14.3)	4(14.3)	8(28.6)	7(25.0)	5(17.9)	5.18(1.31)
"Assertion"	1(3.6)	0(0.0)	0(0.0)	3(10.7)	8(28.6)	12(42.9)	4(14.3)	5.46(1.23)
"Co-ordination"	1(3.6)	0(0.0)	2(7.1)	4(14.3)	5(17.9)	9(32.1)	7(25.0)	5.39(1.50)

[a] Totals not adding to 28 indicate missing data.
[b] Item titles derived from Baggs (1994, p. 180).
[c] Mean score substitution was used to derive total survey score.

Table 2
Individual responses for collaboration assessment (n = 28).

Survey Item	1 No Collaboration n(%)	2 n(%)	3 n(%)	4 n(%)	5 n(%)	6 n(%)	7 Complete Collaboration n(%)	M(SD)
Collaboration	1(3.6)	1(3.6)	3(10.7)	6(21.4)	4(14.3)	8(28.6)	5(17.9)	4.96(1.62)

Table 3
Individual responses for satisfaction items (n = 28).

Survey Item	1 Not Satisfied n(%)	2 n(%)	3 n(%)	4 n(%)	5 n(%)	6 n(%)	7 Completely Satisfied n(%)	M(SD)
Decision Making Process	0(0.0)	1(3.6)	2(7.1)	4(14.3)	9(32.1)	8(28.6)	4(14.3)	5.18(1.28)
Final Decision	0(0.0)	1(3.6)	1(3.6)	2(7.1)	12(42.9)	9(32.1)	3(10.7)	5.28(1.12)

Table 4
Descriptive statistics for "collaboration" and "satisfaction" summated scales.

Scale	n	Possible Scores	Minimum Score	Maximum Score	Range	Mean	Standard Deviation
Collaboration	28	7–49	14.00	48.00	34.00	36.96	8.07
Satisfaction	28	2–14	4.00	14.00	10.00	10.46	2.25

Source: Baggs, J.G. (1994). Development of an instrument to measure collaboration and satisfaction about care decisions. *Journal of Advanced Nursing, 20*, 176–182.

high collaboration levels.[12]

The results of this study, however, may not be generalizable to the larger nursing student population as the sample size was small and not randomized. Self-reporting may have been a limitation, too, as respondent bias would be virtually unavoidable. Respondents were trusted to answer truthfully; however, there is always room for error. Due to a lack of control and randomization in this study, the satisfactory scores reported may be more reflective of the college the respondents attended or the specific nursing program itself. It is important to note that the case study activity was conducted with students from two universities in the same town, and it is probable that respondents knew each other, which could lead to increased collaboration and satisfaction with decision making. Because the interprofessional case study activity had to first take place in order for the team decision-making process and respondent evaluation of it to occur, a post-test only format was used; therefore, change in perceptions could not be studied.

The collaborative decision making process is important in preventing medical errors and improving patient outcomes.[13] Interprofessional clinical education interventions and programs should attempt to consistently provide opportunities to evaluate team strengths and weaknesses, especially in the areas of collaboration and team decision-making. Program administrators need to be alert to teams that report functioning with very low or very high levels of collaboration and satisfaction with the decision-making process and encourage adjustments. Team members can be satisfied with either collaboration levels or team decision-making but, unfortunately, not participate fully in the decision-making process.[14] Because these changes may not continue over time,[11] nursing and other health professions students participating in interprofessional education programs that focus on collaboration and team decision-making may need follow-up intervention programs and assessments as they move from education into practice.

Results of this study also suggest some directions for future research. Although nurses have been found to feel less satisfied with interprofessional team decisions,[2] examining the attitudes toward collaboration of other team members and comparing between all of the professions may also help to understand these team dynamics. It would also be useful in future studies to add an observational or focus group data collection method to the procedure to assist in explaining some of the scores more robustly. Adding an unobtrusive observer who would compare self-reported collaboration and decision-making attitudes with observed team collaborative behaviors and decision-making practices would help improve accuracy of results. Increasing sample size by including nursing students from multiple universities may also help improve generalizability of the results. Because some differences in collaboration levels were demonstrated between the assessment and discharge phases of team planning,[12] it would be useful to examine the planning phases separately. Also, using the data collection instrument from this study at the completion of other types or styles of interprofessional activities or events that focus on collaborative decision-making would also advance knowledge of this topic.

8. Required materials

Case studies focusing on the healthcare needs of older adults been created by the National League for Nursing and Community College of Philadelphia, Advancing Care Excellence for Seniors (ACE.S). They can be adapted as interprofessional cases and can be found here: http://

www.nln.org/professional-development-programs/teaching-resources/ace-s/index.htm.

Role of funding source

This work was supported by a small university-sponsored research grant but the supporting source had no involvement in the study/manuscript.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.xjep.2018.11.005.

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