The Link Between Collaboration Interactions and Team Creativity Among Nursing Student Teams in Taiwan: A Moderated Mediation Model

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Abstract: Background: Considerable theoretical and empirical work has identified a relationship between collaboration interactions and creativity in an organizational context. The mechanisms underlying this link, however, are not well understood in healthcare education. Objectives: The aims of this study were to explore the impact of collaboration interactions on team creativity and its underlying mechanism and to verify a moderated mediation model. Design, setting, and participants: This study utilized a cross-sectional, quantitative, descriptive design. The survey data were collected from 177 nursing students who enrolled in 18-week capstone courses of small interdisciplinary groups collaborating to design healthcare products in Taiwan during 2018 and 2019. Methods: Questionnaires assessed the nursing students' perceptions about their teams' swift trust (of cognition- and affect-based), conflicts (of task, process, and relationship), interaction behaviors (constructive controversy, helping behaviors, and spontaneous communication), and creativity. This study used descriptive statistics to compare demographics, swift trust scores, conflict scores, interaction behavior scores, and creativity scores for interdisciplinary teams. Data were analyzed using Pearson's correlation coefficient and simple and hierarchical multiple regression models. Results: Pearson's correlation analysis showed the cognition-based team swift trust was positively correlated with team creativity. The mediation model indicated constructive controversy fully mediated the effect of cognition-based team swift trust on student teams' creativity. The moderated mediation model indicated that task conflict negatively moderates the mediating effect of the constructive controversy on the link between cognition-based team swift trust and team creativity. Conclusion: Our findings suggest nursing student teams' interaction behaviors and task conflict are crucial mediating and moderated mediation variables on the relationship between collaboration interactions and team creativity, respectively. The empirical data confirms the validity of our proposed moderated mediation models of team creativity. Therefore, this study's validated moderated mediation model could provide guidance for nursing educators to improve collaboration interaction outcomes and creativity on nursing student teams.

Keywords: team swift trust, team conflict, team interaction behavior, moderated mediating effects, interdisciplinary education, nursing students

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