A Pain & Pain Management Course Enhanced by Liberal Arts Content By

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Despite the prioritization of pain assessment and management, pain continues to be inadequately assessed and treated (Duke et al., 2013; Institute of Medicine of the National Academies, 2011b; Seesle, 2011). Academic and health care settings struggle to effectively instruct students and health care professionals about pain, pain assessment, pain management, and desired pain management outcomes (Briggs et al., 2011; Chow and Chan, 2015; Mezei et al., 2011; Watt-Watson & Murinson, 2013). The purpose of this paper is to describe a specialized course which utilized science, literature, religion, philosophy and art to educate undergraduate college students from nursing and a variety of other majors about the multidimensional experience of pain.

Background

To improve knowledge of effective pain assessment and management practices, there has been a call to improve pain education curricula (Doorenbos et al., 2013; Institute of Medicine of the National Academies, 2011b). Of note, education regarding pain, pain assessment and pain management has been dominated by a biomedical perspective (Kall, 2013). Recommendations have been made to include education on the affective, or emotional, dimension of pain to improve pain management practices (Carr, 2011; Kall, 2013; Murinson et al., 2011). It is through learning about the affective dimension of pain that one can recognize the contribution of emotional and psychosocial factors to the patient's pain experience (Institute of Medicine of the National Academies, 2011b; Murinson et al., 2011). The addition of liberal arts components to

pain curricula contributes to greater understanding of the affective dimension of pain and is instrumental to develop a broad understanding of individualized patient perceptions, interpretations and responses to pain as well as providing opportunities for emotional responses to anecdotal writings and artistic expressions of the pain experience (Corri, 2003; Dellasega et al., 2007; Ferrell et al., 2010; A. Jensen & Curtis, 2008; Kall, 2013).

Additionally, the concept of who will encounter persons in pain, and therefore who should receive education on pain and pain management, should be expanded beyond just present and future health care practitioners. Pain and suffering are universal experiences, affecting all directly or indirectly (Cohen, 2010; Institute of Medicine of the National Academies, 2011b). For example, teachers and others who interact with children and adolescents may need to work with and around the limitations caused by chronic pain and its treatments, as chronic pain is a common and undertreated issue among children and adolescents (Institute of Medicine of the National Academies, 2011b; King et al., 2011). Pain has a deleterious effect on quality of life and work productivity (Witt et al., 2016). Therefore, it would be helpful for business students to learn about the physical and psychological processes of chronic pain and evidence-based treatments.

Most concerning however, are the negative effects of chronic pain experienced by the families of persons in pain (Campbell et al, 2018). At least 115 million U.S. adults experience chronic pain (Institute of Medicine of the National Academies, 2011b) and the ripple effect of their pain experience has a profound impact on others. Educating baccalaureate students from a variety of majors regarding pain, pain management and pain management outcomes will assist in placing persons in workplaces, families, and general society that are familiar with the complex,

multidimensional nature of pain and can therefore, be instrumental in meeting the various needs of those experiencing pain.

Nurse educators in academic settings are uniquely prepared to teach others about pain as a multidimensional experience. The conceptualization of pain, pain management and pain management outcomes as being influenced by the domains of person, health and illness and environment (Dodd et al., 2001; Bender et al., 2018) closely mirrors the nursing paradigm of person, health, environment and nursing. As such, nurses are well-suited to educate others about pain in a multidimensional manner. Furthermore, leadership within the nursing profession entails innovation, fostering collaboration and partnership, and improving health care delivery systems (Institute of Medicine of the National Academies, 2011a). Keeping in mind the above obligations and strengths of the nursing profession and the need for effective pain management education, a new course on the multidimensional experience of pain was developed and implemented integrating liberal arts components.

Project Structure

This course was taught for three consecutive years during a January interim at a small, Midwestern, private, liberal arts college. The purpose of the interim is to provide time and opportunity in the academic calendar for the students to study topics which would not ordinarily be pursued in the regular semester (Calvin University Academic Services, 2020). During the interim, classes meet for three hours per day for approximately three weeks. This course was designated as interdisciplinary to encourage students from a variety of majors to enroll. Each year, approximately 20 students took this course including students majoring in business, psychology, art, English, gender studies, nursing, pre-medicine, sociology and social work, kinesiology, and education.

Learning Activities

Course learning activities included lectures presented by the author, readings, documentary films, invited speakers, individual and group activities and exposure to liberal arts content.

Lectures. Lectures covered a variety of topics which were connected to concepts and domains within the Symptom Management Conceptual Theory (Dodd et al., 2001; Bender et al., 2018). For example, the concept of the pain experience and domain of person were investigated through presentations on basic neuron function, peripheral and central nervous system pain processing, as well as associations among pain and mental illness. The concept of pain management strategies was explored through discussions of pain assessment and pharmacological and non-pharmacological pain management strategies. The concept of outcomes was addressed through inquiry in relation to pain reassessment practices, economic and personal costs of pain management and quality of life issues.

Readings & Documentary Films. Readings and documentary films were related to the daily topic. Readings were selected based on their content and understandability, as many of the students were not science-related majors. During the course, students also read a non-fiction book which presented a personal experience of living with chronic pain (Thernstrom, 2010). Documentaries were shown during class time which addressed the science of pain and pain management as well as barriers to effective pain management. After the documentaries were shown, the instructor led group discussions and assisted the students in making connections between the content of the documentaries to other course content and the SMT. Interestingly, many students were especially intrigued by the topic of congenital insensitivity to pain and

shared how they had never thought before about the protective benefits of pain, leading to a conceptual shift of sorts (Brand & Yancey, 1997; Gilbert, 2007).

Guest Speakers. Guest speakers were selected to share their experiences related to patient, provider and health care system-related barriers to effective pain assessment and management. Guest speakers included a palliative care physician, an addiction and pain management physician, local law enforcement officers who worked in the detection and prevention of opioid diversion and abuse, medical cannabis support group leaders, a Protestant minister, and a registered nurse case manager of patients with chronic pain.

Group and Individual Activities. This course included three oral presentation group activities where students worked in pairs. First, students developed presentations which examined differences in the pain experience (pain perception, evaluation, response) regarding age groups, race and ethnicity, gender, developmental level, and cognitive function. Second, students presented different pain measurement tools which were pre-selected by the instructor. Students were asked to relate which pain dimension the tool measured, and which population(s) and clinical settings would most benefit from this tool. Third, students examined differences in pain management strategies regarding age groups, race and ethnicity, gender, developmental level, cognitive function, and socioeconomic level.

The individual student activity allowed for students to apply what they had learned throughout the course to their own scholarly area. Students developed a paper and presented the main points of their papers to the class and instructor. This activity took place at the conclusion of the course. Students exhibited a great deal of interest in this activity, as they were able to connect pain to personal interests and experiences and/or their major. Examples of student topics include the following:

- An art major examined the effect of art therapy on pain and pain management.
- An elementary education major addressed the issue of chronic pain in children and how physical education can help decrease pain and improve pain management outcomes.
- A pre-medicine student who enjoyed long-distance running explored the endogenous opioid system and its effect on pain.
- Several students chose to write about their own experiences with chronic pain (their own,
 or a family member's) and how the course helped them to view that pain experience
 differently.

Liberal Arts Content. This course was enhanced by the inclusion of liberal arts content. The discussion of the pain experience was broadened through a review of how mind-body philosophy and reductionism have influenced the science of and beliefs regarding pain over time (Duncan, 2000; Gallagher, 2004). A Protestant pastor was asked to speak regarding the concept of suffering in relation to faith and physical pain. For the purposes of this course, suffering was described as an individualized, subjective assignment of negative meaning to the pain experience (Rodgers & Cowles, 1997).

Each class session was opened with either the showing of art or reading of literature representing the pain experience. The art or literature was then explored utilizing discussion and application of different aspects of the pain experience, such as intensity (sensory), interference (affective), site, temporal, and qualitative (M. P. Jensen, 2003; Pasero & McCaffery, 2011). The art and literature readings used in this course served as powerful visual and auditory connections to other course material and the pain experience. Several examples of art and literature used in this class include:

- Temporal and interference aspects of pain are described in the poem "Pain—has an Element of Blank" (Dickinson, 1976). Pain dominates such that the one experiencing pain perceives that pain has been and will always be connected to time: past, present, future. Pain overshadows the life and the identity of the one experiencing it. Pain begets more pain in the future.
- In "CP II" (Collen, 2002), a plaster sculpture of the bottom of a human foot is imbedded with steel blades. Qualitative aspects of pain include descriptive words that describe qualities of the pain such as sharp, burning, stabbing, cold, radiating (Pasero & McCaffery, 2011). The observer can see that the artist views the foot as separate from the rest of the body. The visual presentation of qualitative aspects of pain as sharp and stabbing is very powerful.
- Interference with body perception and mood due to pain and sensory aspects of pain are depicted in "The Despair of Pain" (Yaron, 2002). In this mostly black and white drawing, a crudely drawn person exists in a small room, the walls closing in. The face is contorted in agony. One leg is much larger than the other, with a red, angry nerve running down the leg. Two pliers clamp onto this nerve. The artist notes that "...the pain is torturing him day and night, makes him feel as though he is in a mental dungeon. He is facing a black wall, as he sees no way out of his situation" (Yaron, 2002).

Conclusion and Recommendations

In conclusion, because pain is a multidimensional experience, it is imperative that painrelated curricula include both science and liberal arts components in order to fully educate those who will interact with individuals experiencing pain. This novel course not only educated prehealth professional students, but students from other majors as well regarding the multidimensionality of pain utilizing both science and liberal arts components.

References

- Brand, P., & Yancey, P. (1997). *The gift of pain: Why we hurt and what we can do about it.*Grand Rapids, MI: Zondervan.
- Briggs, E., Carr, E. C. J., & Whittaker, M. (2011). Survey of undergraduate pain curricula for healthcare professionals in the United Kingdom. *European Journal of Pain*, *15*, 789-795. doi:10.1016/j.ejpain.2011.01.006
- Calvin University Academic Services. (2020). Interim Information. Retrieved from http://www.calvin.edu/academic/services/registration/interim/
- Carr, D. B. (2011). Twenty-first century pain education: The rediscovery of compassion. *Pain Medicine*, 12, 183-185. doi:10.1111/j.1526-4637.2011.01054.x.
- Chow, K.M. & Chan, J. C. (2015). Pain knowledge and attitudes of nursing students: A literature review. *Nurse Education Today*, *35*, 366-372. doi: 10.1016/j.nedt.2014.10.019
- Cohen, E. (2010). *The modulated scream: Pain in late medieval culture*. Chicago: University of Chicago Press.
- Collen, M. (2002). CP II (pp. plaster with steel blades). Sacramento, CA. Retrieved from http://painexhibit.org/en/galleries/suffering/ag03_collen/
- Corri, C. (2003). Medical humanities in nurse education. *Nursing Standard*, 17(33), 38-40. doi:10.7748/ns2003.04.17.33.38.c3384

- Dellasega, C., Milone-Nuzzo, P., Curci, K. M., Ballard, J. O., & Kirch, D. G. (2007). The humanities interface of nursing and medicine. *Journal of Professional Nursing*, 23(3), 147-179. doi:10.1016/j.profnurs.2007.01.006
- Dickinson, E. (1976). *The complete poems of Emily Dickinson*. New York, NY: Back Bay Books.
- Dodd, M. J., Janson, S., Facione, N., Faucett, J., Froelicher, E. S., Humphreys, J., Lee, K., Miaskowski, C., Puntillo, S. & Taylor, D. (2001). Advancing the science of symptom management. *Journal of Advanced Nursing*, 33(5), 668-676. doi:10.1046/j.1365-2648.2001.01697.x
- Doorenbos, A. Z., Gordon, D. B., Tauben, D., Palisoc, J., Drangsholt, M., Lindhorst, T.,
 Danielson, J., Spector, J., Ballweg, R., Vorvisk, L. & Loeser, J. D. (2013). A blueprint of pain curriculum across prelicensure health sciences programs: One NIH Pain Consortium
 Center of Excellence in Pain Education (CoEPE) experience. *The Journal of Pain*,
 14(12), 1533-1538. doi:10.1016/j.jpain.2013.07.006
- Duke, G., Haas, B. K., Yarbrough, S., & Northam, S. (2013). Pain management knowledge and attitudes of baccalaureate nursing students and faculty. *Pain Management Nursing*, *14*(1), 11-19. doi:10.1016/j.pmn.2010.03.006
- Duncan, G. (2000). Mind-body dualism and the biopsychosocial model of pain: What did Descartes really say? *Journal of Medicine and Philosophy*, 25(4), 485-513. doi:10.1076/0360-5310(200008)25:4;1-A;FT485
- Ferrell, B., Virani, R., Harrington, H., Malloy, P., & Kelly, K. (2010). Arts and humanities in palliative nursing education. *Journal of Pain and Symptom Management*, *39*(5), 941-945. doi:10.1016/j.jpainsymman.2009.11.314

- Gallagher, R. M. (2004). Biopsychosocial pain medicine and mind-brain-body science. *Physical Medicine and Rehabilitation Clinics of North America*, *15*, 855-882. doi:10.1016/j.pmr.2004.04.002
- Gilbert, M. (Writer) & M. Gilbert (Director). (2007). A life without pain. United States of America: Frozen Feet Films.
- Bender, M.S., Janson, S., Franck, L.S. & Lee, K.A. (2018). Theory of Symptom Management. In
 M. J. Smith & P. R. Liehr (Eds.), *Middle Range Theory for Nursing* (4th ed., pp. 147-177). New York: Springer Publishing Company.
- Institute of Medicine of the National Academies. (2011a). *The future of nursing: Leading change, advancing health*. Washington, D.C.: The National Academies Press.
- Institute of Medicine of the National Academies. (2011b). *Relieving Pain in America*. Washington D.C.: The National Academies Press.
- Jensen, A., & Curtis, M. (2008). A descriptive qualitative study of studnet learning in psychosocial nursing class infused with art, literature, music and film. *International Journal of Nursing Education Scholarship*, 5(1), 2-9. doi:10.2202/1548-923X.1344
- Jensen, M. P. (2003). The validity and reliability of pain measures in adults with cancer. *The Journal of Pain*, 4(1), 2-21. Retrieved from http://www.jpain.org/article/S1526-5900(02)65001-1/pdf
- Kall, L. F. (Ed.) (2013). *Dimensions of Pain: Humanities and Social Sciences Perspectives*. New York: Routledge.
- King, S., Chambers, C. T., Huguet, A., MacNevin, R. C., McGrath, P. J., Parker, L., & MacDonald, A. J. (2011). The epidemiology of chronic pain in children and adolescents

- revisited: A systematic review. *Pain*, *152*(12), 2729-2738. doi:10.1016/j.pain.2011.07.016
- Mezei, L., Murinson, B. B., & Johns Hopkins Pain Curriculum Development Team. (2011). Pain education in North American medical schools. *The Journal of Pain, 12*(12), 1199-1208. doi:10.1016/j.pain.2011.06.006
- Murinson, B. B., Mezei, L., & Nenortas, E. (2011). Integrating cognitive and affective dimensions of pain experience into health professions education. *Pain Research and Management*, 16(6), 421-426. doi: 10.1155/2011/424978
- Pasero, C., & McCaffery, M. (2011). *Pain Assessment and Pharmacologic Management*. St. Louis: Mosby.
- Plaisance, L., & Logan, C. (2006). Nursing students' knowledge and attitudes regarding pain.

 Pain Management Nursing, 7(4), 167-175. doi:10.1016/j.pmn.2006.09.003
- Rodgers, B. L., & Cowles, K. V. (1997). A conceptual foundation for human suffering in nursing and research. *Journal of Advanced Nursing*, 25, 1048-1053. doi:10.1046/j.1365-2648.1997.19970251048.x
- Seesle, B. J. (2011). Unrelieved pain: A crisis. *Pain Research and Management*, 16(6), 416-420. doi: 10.1155/2011/513423
- Thernstrom, M. (2010). The pain chronicles: Cures, myths, mysteries, prayers, diaries, brain scans, healing and the science of suffering. New York: Picador.
- Watt-Watson, J., & Murinson, B. B. (2013). Current challenges in pain education. *Pain Management*, 3(5), 351-357. doi:10.2217/pmt.13.39
- Witt, E.A., Kenworthy, J., Ishewood, G. & Dunlop, C. N. (2016). Examining the association between pain severity and quality of life, work productivity loss, and healthcare resource

use among European adults diagnosed with pain. *Journal of Medical Economics*, *19*, 858-865. doi: 10.1080/13696998.2016.1178127

Yaron, A. (2002). The despair in pain (pp. panda colors on paper). Givataim, Israel. Retrieved from http://painexhibit.org/en/galleries/suffering/ag03_yaron/