

Complex adaptive system

[Health & Medicine](#), [Nursing](#)



In-class Paper #3 November 8, 2011 Topic: Define what a complex adaptive system is and identify the characteristics of complex adaptive systems

Discuss how complex adaptive systems influence healthcare and subsequently nursing practice. Use examples from your practice to convey your understanding of complexity as it relates to your nursing practice.

Outline: Introduction: Complex adaptive system is a collection of individual agents with freedom to act in ways that are not always totally predictable and whose actions are interconnected so that one agent's actions changes the context for other agents. (GPlsek, P. E. & Greenhalgh, T. 2001)

Characteristics of complex adaptive systems are: unpredictable interconnected, unclear boundaries, constant changing members, members also belong to other systems, each member uses internalized rules (these can, and likely are, different for each person and are not fixed). Complex system can influence health care because they can create positive or negative outcomes, they influence other systems and create tension and paradox that may be difficult to solve Body: Because the complex adaptive system is always changing, and interconnected with other systems so it will create many difficulty in solving the problems.

In clinical settings, student nurses have to think critically and take multiple approach in order to intervene or solve the problems. Give examples from clinical settings Conclusion: Restate the significances of complex adaptive system and how it can influence clinical settings as well as health care Health care is a complex system. There're varieties of different professions in healthcare from nurses to doctors, specialist, paramedics... and even the

concept of health itself is very complex as there're many determinants that can influence one's health.

Moreover, health care matches the definition of a complex adaptive system, which is a collection of individual agents with freedom to act in ways that are not always totally predictable and whose actions are interconnected so that one agent's actions changes the context for other agents. (GPIsek, P. E. & Greenhalgh, T. , 2001). The characteristics of the complex adaptive system are that it is unpredictable nterconnected, have unclear boundaries, constant changing members, members also belong to other systems, each member uses internalized rules (these can, and likely are, different for each person and are not fixed). Therefore, in order to work effectively in such complex system, nurses are required to have the competence to adapt to the system's characteristics and utilize their best skills and knowledge to solve complex cases in complicated situations. The complex adaptive system is unpredictable, interconnected and usually have unclear boundaries.

For example, at my clinical setting, which is a French immersion elementary school, is an example of a complex adaptive system. The school itself is a complex system because the students in the school is not only comprised of English speakers, but also the French speakers populations, and the teachers needs to know both language in order to communicate, to teach the students effectively. Students also come from different backgrounds, they have different ethnicities and different personalities.

However, the school's motto is “ Better Together” which promotes the interconnectivity as they needs to work together to achieve the schoolgoals. The interconnectivity characteristic is also demonstrated in an unwanted

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accident happened at the school. Grade 3 students there really like to play soccer, however, one day, there was a fist fight broke out between two students during a soccer game during recess, consequently, in order to ensure safety and that no conflicts would occur in the future because of soccer, soccer is banned at the school.

The banning of soccer at recess elucidated to us as nursing students and the school staff that we need to address and improve the problem solving skills for the grade 3 students in order to prevent similar undesired occurrence to happen in the future. At this point, the boundaries in the school is not clearly drawn as teach the Health class is not nursing students' responsibility, but the school expressed their need to us and wants us to do some interventions about it.

Therefore, we devised to talk to the grade 3 teachers and ask for permission to teach the health class on days that we are at the sites to implement our intervention and address the problem solving issues among students. In Health class, we decided to act out skits of conflicting situations and have the students to come up with their ideas using appropriate problem solving skills to resolve the conflicts. By doing that, we – nursing students are not only take on the role of the student nurses, we are also the health classteacher on Tuesday to the grade 3 students.

This example demonstrates that the context of the complex adaptive system (elementary school) really influences our nursing practice as we take on the role of Health class instructors to enhance grade 3 student conflict management skills. We exemplify The above analysis shows that the complex adaptive system and its unique characteristics has strongly

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influence nursing practice in different context. As a competent nurse, we have to have the critical thinking skills, being creative and adapting to any situation in order to come up with the best possible interventions.