

ENHANCING THE CLINICAL REFLECTIVE CAPACITIES  
OF NURSING STUDENTS

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Abstract

The purpose of clinical practicums is to help nursing students learn from real clinical experiences. In clinical settings, nursing instructors set-aside time at the end of each clinical day for reflective, debriefing discussions that are designed to draw the students' attention to relevant information and help them understand their beliefs and experiences. The students' competence and decision-making skills are enhanced when they are able to reflect on critical incidents or everyday practice events. It is sometimes difficult, however, for instructors to engage students meaningfully in discussions and promote reflection when students are fatigued. In this article, I argue that it is possible to refresh, support, and inspire undergraduate nursing students by engaging them in an activity designed to distract them and occupy their conscious attention, so that their more divergent and less accessible ideas are allowed to surface. Less accessible ideas are associated with the default network; regions in the brain that are most active when the brain is allowed to rest and wander. Congruent with the middle range theory of comfort, a distracting activity will provide comfort to students who are fatigued and/or distressed, and at the same time, will enhance their reflective capacities. A distracting activity that is

enjoyable, not too demanding, and can be sustained for more than just a few minutes works best for idea generation and reflection.

#### Highlights:

- Builds on the role of the unconscious mind, unconscious thoughts, and concept of distraction
- Provides comfort to students and enhances their reflective capacities
- A creative way to renew nursing students' energies for post-clinical discussions

#### Key Words:

Reflection, student nurse, post-clinical discussions, clinical

#### Background

Throughout time, people have found that moments of inspiration and answers to difficult problems occur to them when they are not deliberately focused on solving the problem at hand. Researchers from the diverse fields of psychology and neuroscience have studied this interesting phenomenon and have found that when people feel pressed to think in situ (for example, by a professor or an instructor) they will generate only the most readily accessible ideas and perform less creatively than those who are not actively engaged in focused, deliberative, and conscious efforts to generate original opinions or ideas (Baird et al., 2012; Dijksterhuis & Meurs, 2006; Mason et al., 2007). Dijksterhuis & van Olden (2006) observed that conscious thought is quite limited to defined sets of information. Unconscious thought, on the other hand, is expansive and creative, and able to weigh and evaluate information to form an "evaluative summary judgment" in ways

that conscious thought cannot (Dijksterhuis & van Olden, 2006, p. 628). Additionally, researchers have noted that if people are provided with a period of rest called an “incubation” interval *and* become occupied in a simple distracting task that is not too cognitively demanding, these people will find more creative solutions to problems than people who are not occupied at all, or occupied in a demanding task (Baird et al., 2012; Sio & Ormerod, 2009, p. 94). Baird et al. (2012) and Mason et al. (2007) call the phenomenon “mind wandering” or “stimulus independent thought” (Mason et al., 2007, p. 393).

In this article, I argue that it is possible to use a teaching intervention that builds on the role of the unconscious mind, unconscious thoughts, mind wandering, and the concept of distraction – providing comfort to nursing students who may be fatigued and/or distressed, and at the same time, enhancing their reflective capacities. During clinical practicums students learn from real clinical experiences and their competence and decision-making skills are enhanced when they reflect on critical incidents or everyday practice events. The ability to be a reflective practitioner is recognized by nursing regulatory bodies as a component of professional competence.

#### Student Responsiveness During Post-Clinical Discussions

In Canada, the United States, and in Australia, clinical instructors are hired by the universities to accompany groups of eight to ten students as they complete clinical shifts at various clinical sites. The number of clinical shifts per semester is dependent on the students' progression through the program, but generally, students who are in their second or third year of an undergraduate program will complete twenty-six shifts per semester in a clinical setting. The registered nurses who are employed by these agencies

act as knowledgeable resources and permit the instructors and the students to provide care to some of their assigned patients for seven-hour shifts, but generally do not intervene while the instructors and students are present. After clinical practice, students describe their experiences to each other and to the instructor, share information, analyze situations or significant events that occurred during the day, and reflect on their actions. Thus, reflection is an essential part of the process of learning to become a nurse. Multiple authors have recommended that nursing instructors commit to reflective practices and probe student assumptions to help them understand their beliefs and experiences, draw their attention to relevant information, and guide discovery (Ip et al., 2012; Karpa & Chernomas, 2013; Lazenby, 2013; Murphy, 2004). Hour-long, post-clinical discussions are part of the clinical curricula and enforced in most North American and Australian nursing schools.

In reality, it is often difficult for clinical instructors to consistently promote introspection and engage students meaningfully in discussions because student response varies considerably. Nurse researchers have highlighted four overarching reasons why students fluctuate in their abilities to respond: First, most nursing students feel anxious before clinical practice begins and are often very fatigued by the end of the day. Many students report that they do not sleep well before clinical practice experiences, if at all. The need to prepare for practice the night before (Chernomas & Shapiro, 2013), concern about alarm failure, arriving late for clinical (Kim, 2003), and apprehension about upcoming clinical experiences all contribute to lack of sleep. The second reason for variation in response is student apprehension and anxiety. Student apprehension and anxiety is well documented and includes fear of making a mistake and being reprimanded

in front of others (Evans & Kelly, 2004), or concern about revealing a lack of experience or ability (Jimenez, Navia-Osorio, & Diaz, 2010; Kim, 2003). Some students report physical symptoms such as nausea and heart palpitations and conclude that clinical practice experiences (including the post-clinical discussions) are the most stressful components of their entire undergraduate-nursing program (Chernomas & Shapiro, 2013). Third, lack of student responsiveness may be a psychological consequence of the pressures and stresses associated with the typical student academic workload. Most students express that they feel overwhelmed in nursing school, and many experience a gap between their expected academic performance (based on their high school academic achievements) and their current academic performance. Experiencing the pressure and the gap can lead to mental exhaustion, perceptions of inadequacy, and detachment or depression. All of these factors negatively affect responsiveness (Cox Dzurec, Allchin, & Engler, 2007; Edwards, Burnard, Bennett, & Hebden, 2010; Evans & Kelly, 2004). Finally, although nursing faculty might perceive that their abilities to form interpersonal relationships with students is most important for effective clinical instructing and debriefing, researchers have found that students are really more focused on the concepts of performance and evaluation, and the evaluative behaviours and evaluative role of the clinical instructors (Gignac-Caille & Oermann, 2001; Kim, 2003; Parsh, 2010). This means that reflective practices during post-clinical discussions always involve a certain amount of risk for students. Students may also feel shy or uncomfortable about expressing their feelings and/or discussing their experiences, especially if the instructor dominates the debriefing session (Berntsen & Bjork, 2010).

Inspiring, Supporting, and Refreshing Students: The Theory of Comfort

The theory of comfort (Kolkaba & Kolkaba, 1991) is about the implicit and explicit needs for comfort that motivate and direct human behaviours. According to the theorists, three categories of comfort are relevant for nursing: a state sense, a relief sense, and a renewal or transcendental sense (Kolkaba & Kolkaba, 1991). Each sense is distinctly different, operationalized differently, and meets different objectives. The state sense is a passive condition, and requires careful cessation of stressful activities to satisfy a person's ease, enduring contentment, and peace. Nurses who provide comfort in this sense create situations that enable people to feel at *ease* or calm and content. The relief sense does not imply ease, but instead implies cessation (relief) of discomfort as the desirable goal. Nurses who provide comfort in this sense will intervene until someone's pain, troubled state, physical irritation and so on, is relieved. The renewal sense implies neither ease nor relief. The desirable goal is to rise above (transcend), strengthen, and invigorate to enhance outcomes for many different populations (Kolkaba & Kolkaba, 1991). Nurses who provide comfort in this sense will intervene in ways that encourage others, help them to persist, or find their inner strengths. The comfort state of renewal or transcendence occurs when people feel able to rise above a challenge. Aligned with comfort theory *in the renewal sense*, if an instructor provides students with a comforting activity during their post-clinical discussions, this strategy will have a refreshing and invigorating action, will positively influence students' mindsets, and will renew their energies to participate in discussions. Kolkaba and Kolkaba (1991) stress that the renewal sense of comfort does not predispose complete absence of discomfort.

### The Activity

The activity itself is intentionally distracting and not nursing focused because researchers have found that creative and unique thoughts or ideas occur more often to people who are engaged in distracting activities than to people who are actively engaged in focused, deliberative, and conscious efforts to generate original opinions or ideas (Baird et al., 2012; Dijksterhuis & Meurs, 2006; Mason et al., 2007). To prepare for this activity, clinical instructors will need to source and print a variety of complex colouring pages for adults. There are multiple online sources for these pages and they are free. Free sources are supplied at the end of this article, after the reference list (see sources). Instructors must also purchase a variety of high quality gel pens, pencil crayons, and fine markers. Although gel pens and markers are expensive, most students find them more pleasurable to use than pencil crayons because the colours flow easily, feel luxurious, and result in quality end products (see Figures 1, 2, 3, and 4). Metallic gel pens are very popular with students. It is important for instructors to *invest* in the activity by investing in high quality tools. The instructor's investment contributes significantly to the success of this activity, and rests on four fundamental assumptions: 1) the activity is important enough to invest in quality art tools; 2) the instructor values the students enough to invest in something for them; 3) the activity is planned to meet adult students' needs and expectations; 4) the activity is planned to make a positive contribution to the students' overall experience.

Instructors bring all supplies to the post-clinical discussions, and simply present the supplies to the students at the beginning of every discussion. Other than allowing students time to choose pages and begin shading, instructors should provide no specific instructions other than to say, "This is something that other students have enjoyed. I

thought you might enjoy this as well". The entire presentation should have a spontaneous and naturalistic quality. Student participation is voluntary. To encourage divergent thinking, it is important to allow time (about five minutes) for students to settle and begin shading. Researchers have called this time to settle an "incubation" interval (Sio & Omerod, 2009, p.94; Ellwood, Pallier, Synder, & Gallate, 2009, p.6). The longer the incubation interval, the greater the effect (Sio & Omerod, 2009). Filling the incubation interval with high cognitive demand tasks will only reduce the effect (Sio & Omerod, 2009). Therefore, when initiating the shading activity, the instructor should use the incubation interval to do something quietly such as reviewing his or her clinical schedule and anecdotal notes and making preliminary plans for upcoming patient assignments.

Depending on the desired outcome of the post-clinical discussion, after the incubation interval the instructor proceeds with a planned discussion, cases for analysis, or open-ended questions that encourage new ways of thinking and opportunities for students to think critically. Post clinical discussions often focus on describing clinical situations/patient cases that are difficult to solve, reflecting on actions of others, making choices or decisions, and thinking about the natural consequences of decisions. The goal of the shading activity is to distract or "occupy conscious attention" and prevent constrained focused concentration on the instructor's prompts (Dijksterhuis & Meurs, 2006, p. 139). The process must be undemanding, self-paced, and repetitive, so students should not draw freely (Andrade, 2010). If asked to draw freely, some students may feel self-conscious about their drawings, in effect, promoting discomfort. The shading is meant to be a distracting activity to allow creative and less accessible ideas to surface so the post-clinical discussions and reflections should all occur while the students carry on



with the shading activity, meaning that the students do not stop shading until the post-clinical discussion is over.

#### The Science Behind the Activity: The Default Network

Attention to the role of the unconscious mind, the concept of distraction, and the concept of an incubation period stem from Greene & Haidt (2002) who combined brain lesion data, pathology data, and neuroimaging data to define brain regions that are activated when people evaluate moral dilemmas. They called these brain regions the “neuroanatomy of moral judgment” (p. 519). Greene and Haidt (2002) highlighted that the brain regions crucial for moral judgments converged with images of a “resting brain” (p. 522). They proposed therefore, that the key elements in moral reasoning are both rest and introspection – or the “personal ruminations in which we engage when otherwise unengaged” (p. 522).

In the years that followed, scientists began mapping areas of the brain that are most active when people are engaged in activities that allow them to disengage from the immediate environment and think freely. These scientists used similar neuroimaging approaches such as positron emission tomography and functional magnetic resonance imaging to anatomically define the ‘disengaged/freely thinking’ brain regions, which they subsequently named “the default network” (Buckner, Andrews-Hanna, & Schacter, 2008; Mason et al., 2007). Activity within the default network occurs in the medial prefrontal cortex, the posterior cingulate cortex/retrosplinal cortex, and the inferior parietal lobule (Buckner et al., 2008, p. 7). The defining property of the default network is flexibility and the fundamental function is to “facilitate flexible self-relevant mental explorations” (Buckner et al., 2008, p. 2).

Buckner et al. (2008) noted that specific regions within the default network of the brain overlapped considerably with moral judgment regions identified earlier by Greene and Haidt (2002) and regions marked by activity when people remember the past, and then envision future events (Buckner & Carroll, 2007), leading Buckner et al. (2008) to suggest that the default network is also active when people consider the thoughts and perspectives of others, and “anticipate and evaluate upcoming events before they happen” (p. 2).

#### Making Use of the Default Network, the Theory of Comfort, and Unrelated Distracting Tasks

Moral reasoning, “flexible self-relevant mental explorations” (Buckner et al., 2008, p. 2), and thinking about what could happen are precisely the skills that most clinical instructors hope nursing students will achieve during reflective post-clinical discussions. Clinical instructors can make use of the default network, the purposeful period of rest for renewal called the incubation interval, and an unrelated distracting task that has a light cognitive load, as mechanisms to foster creativity and reflection during post-clinical discussions. Distracting and repetitive tasks that are enjoyable and can be sustained for more than just a few minutes work best for idea generation (Dijksterhuis & Meurs, 2006).

Anecdotal observations of experienced clinical instructors are congruent with nurse researchers who conclude that students worry about their lack of experience or ability and worry most about not knowing what to do (Jimenez et al., 2010; Kim, 2003). Students do know how to shade, however, so they can become engaged in something that they do know how to do. When stress levels are high, doing something that is ordinary

and undemanding is comforting to many. The theory of comfort provides a framework for this activity but it could be implemented in any setting where another's comfort is valued. The activity also strategically fulfills three other important functions: First, shading provides opportunities for students to speak without lifting their heads or making eye contact with the instructor and others. This is particularly helpful for students who feel overwhelmed, disoriented, or intimidated and lack confidence to ask questions or respond to the instructor's questions (James & Chapman, 2009). Students who seem disinterested, lacking in initiative, or detached may simply lack the confidence to speak (James & Chapman, 2009). Second, shading fulfills a social function because it facilitates cooperation and acts as a boundary object or interface between students. I have successfully incorporated this activity into a graduate class with graduate students who are engaged in group-reflection on theoretical or philosophical questions about their required readings. Finally, according to Andrade (2010), shading creates a "continual but small central executive load" which could play a role in preventing some students from daydreaming about going home during post-clinical discussions (p. 104). Andrade (2010) discovered that when people shaded printed shapes while listening to information, they were able to recall 29% more information on a surprise memory test compared to people who only listen, presumably because they were less able to daydream while listening.

Post-clinical discussions are an essential component of clinical learning. After implementing the shading activity, my own post-clinical discussions have undergone a transformation. Students who were previously fatigued and somewhat apathetic are more awake and dynamic. The simplicity of the shading activity, while comforting and

capacity building, is also fun. Students tell me that they look forward to the discussions. Despite these benefits, many instructors may feel as if they are entering into unfamiliar territory. I urge clinical instructors not to be overly concerned about the 'proper' or 'improper' use of this strategy or about what others unfamiliar with the neuroscience behind the activity might think. I argue that we need to know much more about how this activity can be used and for what purposes. Any teacher in a profession that benefits from unselfconscious sharing of thoughts and feelings may find this activity beneficial; especially if that teacher wishes to facilitate his or her students', moral reasoning skills, abilities to contemplate, reflect on actions, discuss, and analyze issues.

Future research focusing on actual use will offer insights into students' reactions and the implications of using this activity for specific instructional purposes. The results of such a study designed to test the relationship between the activity and students' reflective capacities could also be used to inform, direct, and improve nursing education in the clinical setting.

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