Looking Is Not Seeing: Using Art to Improve Observational Skills

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ABSTRACT

This project evaluated the effects of an art museum experience on the observational skills of nursing students. Half of a class of non-nurse college graduates entering an accelerated master’s degree program (n = 34) were assigned to a museum experience, whereas the other half (n = 32) received traditional teaching methods. Using original works of art, students participated in focused observational experiences to visually itemize everything noted in the art piece, discriminate visual qualities, recognize patterns, and cluster observations. After organizing observed information, they drew conclusions to construct the object’s meaning. Participants visiting the museum subsequently wrote more about what they saw, resulting in significantly more objective clinical findings when viewing patient photographs. In addition, participants demonstrated significantly more fluidity in their differential diagnosis by offering more alternative diagnoses than did the control group. The study supports the notion that focused viewing of works of art enhances observational skills.

A critical skill for nurses in general and advanced practice registered nurses (APRNs) specifically is clinical visual observation. In fact, the power of observation was noted in the early writing of Florence Nightingale (1860):

Looking is not seeing, and seeing is not observing. There must be an understanding of what is seen. Observation is a process of organized thinking. (p. 150)

The most important practical lesson that can be given to nurses is to teach them what to observe—how to observe. (p. 150)

The need for keen and accurate observation as a core content for all nursing education programs, including physical assessment skills, has been outlined by the American Association of Colleges of Nursing (AACN) (1998) for RNs and by the National Organization of Nurse Practitioner Faculties and AACN (1996, 2002) for APRNs. Yet, the skill of seeing requires more than didactic content and limited clinical exposure. Indeed many professionals, including artists, museum experts, athletic coaches, and geographers, acknowledge the skill of observation as fundamental to their respective activities (Bryce, 1902; Franks & Miller, 1991; Hein, 1998; Nemiro, 1997). But there is more to observing than memorization of rules, practices, and experiential and theoretical knowledge; mastery is not bequeathed but earned through diligence in the skill of looking and seeing (Csikszentmihalyi & Robinson, 1990).

Literature Review

Nurse educators are faced with the challenge of developing innovative approaches to teaching and learning and evaluating the effectiveness of the new approaches. Critical content for all nurses is physical assessment, during which students incorporate skills of inspection, palpation, percussion, and auscultation and master them in the clinical arena. The standard approach to teaching physical assessment consists of lectures followed by practice with normal peers or with patients in a clinical setting. The skills are not intuitive and require opportunities to learn. Alternative pedagogical approaches include the use of simulators, videotapes, standardized patients, and online material and assignments (Kelley, Kopac, & Rosselli, 2007; Rushforth, 2008). Creation of opportunities to integrate content from physical assessment or health assessment courses are points of discussion for faculty at nursing universities across Europe, Canada, and the United States (Rushforth, 2008). In addition, studies revealed variability in nurse preparation for physical assessment, adding to the challenge for advanced practice faculty who plan on augmenting basic knowledge (Giddens, 2007; Hagopian, Gerrity, & Lynaugh, 1990; Kelley et al., 2007;
Observational skills are fundamental to high-quality physical examination and comprise the majority of core techniques used by RNs (Giddens, 2007). Fostering skillful use of the senses—observing, palpating, hearing, and smelling—is key to the development of clinical competency. When these skills are taught solely in the clinical setting, the variation in available patient experience means that students may or may not be presented with important observable abnormalities that they will be required to recognize and respond to once in practice. In addition, Di Vito-Thomas (2005) noted the challenge for educators is identifying clinical facilities for opportunities where students can “think like a nurse” (p. 135). With the continued demands on our practice partners to increase capacity, nurse educators must begin to consider alternative strategies to traditional physical assessment curriculum.

Several scholars have pioneered the use of art as a medium for enhancing or refining observational skills. There is evidence to support the claim that the use of artwork facilitates seeing, including observing, identifying, discriminating, and clustering data that facilitate diagnostic ability (Appel et al., 1984; Bardes, Gillers, & Herman, 2001; Dolev, Friedlaender, & Braverman, 2001; Inskeep & Liako, 2001; Kirklin, Duncan, McBride, Hunt, & Griffin, 2007; Pardue, 2005; Shapiro, Rucker, & Beck, 2006; Wikstrom, 2000). For example, medical students’ diagnostic skills related to dermatological lesions were 56% better after visual training in an art museum (Braverman, 2001).

Clinical examination begins with observation. Enhancement of observational skills is important because they are the basis for initial assessment, history taking, physical examination, and diagnosis of patients’ needs. In addition, observation must extend from the patient to the environment within which practitioners see patients. Although current curricular content specifies the recognition of cardinal signs and symptoms of disease, the art of detailed observation is rarely emphasized (Bardes et al., 2001; Elder, Tobias, Lucero-Criswell, & Goldenhar, 2006). The Looking Is Not Seeing project aims to provide students with an opportunity to meticulously detail the art of seeing and to facilitate timely acquisition and mastery of observational skills by nursing students in a museum.

Activity Description

Students in a medical-surgical course who were assigned to the Looking Is Not Seeing activity during their first semester of nursing school went to a university art museum in groups of 5 to 6. Each student was assigned a preselected painting and given a comfortable stool on which to sit and a pencil and paper for recording observations. They were informed that they were going to participate in an experience designed to enhance observational skills. No prior knowledge of art or history was required.

Paintings were chosen for their rich visual detail. In addition, allegorical pieces were selected to facilitate students’ ability to make inferences from the cues within the painting. The nursing instructor and art expert selected paintings with features that were open to alternative interpretations. For example, some aspects of a painting can be interpreted as chaotic, whereas other cues can be considered serene.

Because of the rich inventories within the selected paintings, students could observe many details, cluster observations, and recognize patterns. However, an equally important lesson was revealed when students jumped too quickly to a diagnosis without considering alternative viewpoints or ignored details simply because they did not fit into their initial analysis. The lesson emphasized was that all details were important and needed to be considered. Consider Andrew Wyeth’s (1948) piece, Christina’s World, that at first glance may be viewed as serene with a rolling hill, rural house, and pastoral scene. However, with closer inspection, nuances of light and shadow are noted along with muscular deformity of Christina’s right arm and fingers.

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Students were given 10 minutes to study their painting. The initial goal was not interpretation or analysis, but verbalization of observations—what did they actually see within the painting. At the end of the 10 minutes, the group gathered together and each student described for all participants, including a nursing instructor and docent, what he or she saw in the painting, without interpretations. The docent asked open-ended questions, without leading students down any path.

Students followed the rules of description and only after a meticulous visual inventory (a detailed description of all of the objects in the painting) was completed were they coached to consider how thoughts and feelings were communicated through visual forms (i.e., posture, body language) and to reflect on factors such as light and its effect on manner and mood. Interpretation was grounded in visual evidence.

Students clustered observations that directly supported their interpretation or possible explanation of
themes presented in the painting, while coached by the nurse and art expert about alternative opinions. In addition, the docent and educator stayed alert for omissions of observations by the student simply because they did not cluster into their interpretation. The group moved from painting to painting as each participant described their object. An additional goal of this exercise was to forewarn students of the potential to self-select observations, categorize too quickly and easily, and ignore conflicting cues. In addition, when students discussed how they had very different interpretations of the underlying themes within the same art piece from their peers, they recognized the influence of their backgrounds and experiences on their analyses. The art museum experience was a single event lasting approximately 90 minutes per group of 6 students.

**Sample**

The 66 students were primarily white (78%), women (94%), graduates with a baccalaureate degree in the arts (77%), and students are enrolled in an accelerated nursing program that leads to a master’s degree and an area of specialization such as family nurse practitioner, pediatric nurse practitioner, clinical nurse specialist, or certified nurse midwifery.

**Method**

The project was submitted to the institutional review board and was approved as exempt because of the curricular characteristics of the plan: data were anonymous, students could decline to participate, and there was no association with course grade. Sixty-six students were divided into 12 clinical groups, of which six groups (n = 34) were selected for the Looking Is Not Seeing project, whereas the remaining students (n = 32) continued to receive traditional classroom and clinical learning strategies. No pre-test was given to students.

As described above, using museum artwork, 34 students participated in focused visual experiences to learn to discriminate, compare, and contrast artistic intentions, as well as learn how to decode objects’ meanings and extract information by direct observation. All students (N = 66), then viewed six patient photographs and recorded observations in writing. Each picture was individually sealed in an envelope and labeled as photographs one through six. Students were allowed 5 minutes to observe the patient photograph and 5 minutes to record all observations in writing. At the end of 5 minutes of recording details, students were given 3 minutes to record their interpretations of the clinical issue represented in the picture. All students progressed in unison from photograph one through six.

The number and quality of observations were clustered and compared between the two groups. Number of observations, as measured by the written word count, by each student was tallied for each picture to provide a count of observations. Observations were categorized into plausible objective clinical findings and totaled, thus providing a measure of number of reasonable objective clinical findings. Examples of objective comments included pursed lip breathing, asymmetry of limbs, tripod position. Fluidity was measured by number of alternative diagnosis offered by the students. For example, for one photograph, a student’s observations noted four possible diagnoses (anorexia, cancer, hyperthyroidism, and wasting syndrome). The student wrote:

This woman is extremely thin. She could be anorexic from [a] psychiatric issue or is burning her energy stores so it could be anorexia or cancer or hyperthyroidism or some wasting syndrome.

Observations were further delineated as person focused versus environmental. Examples included noting a urinal, a can of nutritional supplement, a wheelchair, and a bed.

Data were entered in Microsoft Excel® and analyzed using SAS® version 9.1 software. Univariate statistics were performed to assess distribution and variance. Wilcoxon Mann-Whitney U tests and t tests were conducted to examine differ-

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**Table 1**

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*a test, with means reported.
*Mann-Whitney U, with medians reported.
*Both p value and test are based on log transform.
ences between the scores of the students who received the art museum intervention and those in the control group. Appropriate data were transformed to meet assumptions of the t test. Unfortunately, data were coded only by picture rather than by participant; thus it is not possible to examine individual data across the six pictures. Therefore, six different analyses were performed on the data.

**Results**

Students who attended the Looking Is Not Seeing experience made significantly more written observations on five of the six photographs ($p < 0.05$). The median number of observations in the control group ranged from 36 to 55, whereas the median number of observations in the museum intervention group ranged from 51 to 68 (Table 1). The museum intervention group also recorded a significantly greater number of plausible objective clinical findings for the same five of six photographs ($p < 0.05$) compared with the control group (Table 1). In addition, Table 2 reveals that the museum intervention group demonstrated significantly more fluidity compared with the control group in their differential diagnosis, as they offered more alternative diagnoses than the control group in the same five of six photographs ($p < 0.05$).

On investigation, it was revealed that this photograph (photograph 4), did not rise to the level of statistical significance. Finally, there were no group differences when considering the number of environmental factors on five of six photographs (Table 3). Of note, in the outlier picture (photograph 4); those in the control group had a median number of 5.5 observations related to environment, compared with 4 by the museum group ($p < 0.05$).

**Discussion**

The results of this evaluation suggest that students who participated in the art museum activity subsequently observed more signs or symptoms, identified more objective clinical findings, and offered more alternative diagnoses when performing a differential diagnosis with a clinical picture than did nursing students who received traditional classroom and clinical teaching. The findings demonstrate that observational skills can be enhanced with focused viewing of original works of art, describing, and then interpreting findings.

Observational skills are critical to taking a thorough health history, performing a physical examination, and relying on these accumulated skills for the interpretation of clinical data. Helping students become keen observers, recognize patterns, cluster data, and reinterpret observations are fundamental skills needed for diagnostic reasoning. Learning opportunities designed specifically to enhance observational skills improve nursing students’ diagnostic skills. It should be noted that the majority of students in this accelerated master’s entry program are prepared with a bachelors of arts rather than a bachelors of science, supporting the notion that curriculum that supports students’ previous learning

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* Mann-Whitney U, with medians reported.

**TABLE 3**

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and skills can translate to nursing knowing (Monro & Krauss, 1985; Plummer & Phelan, 1976; Schraeder, 1987; Ventura, 1979; Wright, 1988). Also, when considering nursing students’ ability to observe the patient’s environment, whether in the home or the hospital, the museum experience did not improve the students’ ability to see more. The finding suggests that this institution’s standard curriculum provides all nursing students with the facility to observe the patients’ environment.

Many students entering nursing educational programs are older, second-career students (AACN, 2008; Auerbach, Buhrnhaus, & Staiger, 2007), and innovative programs such as Looking Is Not Seeing help to address their diverse educational needs. It is important that innovations in curriculum are considered outside of traditional teaching methods. As Diers noted in 1987, if the aim is to continue to admit the bright and talented students to nursing, the educational experience must be attractive for them.

This study suggests the process of clinical seeing can be constructed in novel environments—a finding supported by colleagues in medicine who are also trying to create a curriculum that aims to refine the skill of observation. Recently, Naghsineh et al. (2008) evaluated a course that integrated fine arts concepts with physical diagnosis and an elective life drawing session for medical students and demonstrated increased accurate observations of both art and physical findings. As noted by famed educator Maria Montessori (1964):

“We cannot create observers by saying “observe,” but by giving them the power and the means for this observation and these means are procured through education of the senses.” (p. 199)

With so much burden placed on the providers’ ability to observe, it seems reasonable that curriculum focuses on the vast importance of the observation, description, and interpretation of visual information as a key component to physical examination.

Limitations

This was a posttest-only design; therefore, changes over time could not be assessed. Group assignment was made by convenience. However, assignment sequentially through the list of 12 clinical groups likely did not seriously bias the study or lead to major confounding. Future studies will consider whether results are method dependent. The design can be strengthened by randomly assigning students to one of the two groups and ensuring identification of participants so subject variation over time and by picture can be examined. We are aware that not all nursing schools have access to rich museum resources; therefore, this study could be replicated using print images and Microsoft PowerPoint. In addition, this project should be evaluated with nursing students in different settings and levels of education, including associate, baccalaureate, and doctoral degree programs.

References


