Teaching Psychosocial Vital Signs Across the Undergraduate Nursing Curriculum

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Abstract: Psychosocial vital signs (PVSs) are a recently developed nursing tool measuring psychosocial variables of health. High-fidelity simulation, an interactive method of teaching PVSs, is designed for progressive implementation across the undergraduate nursing program curriculum. While learning basic assessment skills, students are introduced to PVS components as essential variables in assessing patients holistically. In a review of conceptual understanding of PVSs, this article states a threefold purpose for their use. Underlying theoretical premises of PVSs are presented, and components of the three-phase curriculum for teaching PVSs are discussed. Faculty roles in implementing the curriculum are summarized.


Competent nursing embraces a holistic view of patients and their health care needs. Hence, the time is overdue in nursing education to provide students with a tool for measuring essential psychosocial variables of health. Universal vital signs measure temperature, pulse, respiration, blood pressure, and oxygen saturation and are among the basic skills taught beginning nursing students. These predominately physiological cues of human response give a limited view of patients’ needs. Competent nursing practice requires a widened holistic view of patients and should include cues from cognitive, affective, spiritual, and behavioral dimensions of human response.

Psychosocial vital signs (PVSs), a measurement of psychosocial variables of health (Spade, 2008), provide a wider view of patient assessment. Because PVSs require the interactive context of a therapeutic relationship, an appropriate method for teaching PVSs is simulation. Simulation refers to a teaching strategy in which a student purposefully interacts as a nursing professional in a situation with another student, an actor or actors, and/or a computerized manikin serving as a patient surrogate. This realistic replication of human responses encourages and facilitates learning experiences that require the student to interact in a therapeutic manner. The ability to reflect in and on practice provides the student with a true representation of the role of the nurse and how efficacious he or she is in that role. In the initial learning phase of PVSs, a high-fidelity manikin is used, with faculty enacting the voice of a patient. In subsequent learning phases, students, under faculty guidance, fulfill the roles of patient and nurse.

This article examines the curriculum used for teaching PVSs to beginning nursing students in a baccalaureate...
program using high-fidelity simulators. Components of PVSs are reviewed and the inherent theoretical premises of PVSs presented. A discussion of the three-phase curriculum components is followed by a summary of identified faculty roles related to implementation of the curriculum.

PVSs Reviewed

Vital signs, primarily measurements gathered from physiological body systems, are the essential reference points, providing quick initial and periodic views, assessment snapshots, of patient health status. They provide critical information about rudimental changes in patients and indicate stability as well as risks for safety before, during, and after health events. PVSs, a model of assessment with roots in crisis intervention and relational theories and practice (Aguilera, 1998; Benner, 2004; Jonsdottir, Litchfield, & Pharris 2004; Perraud et al., 2006), widens the view of universal vital signs by gathering often neglected data from cognitive, affective, spiritual, and behavioral dimensions of human response (Spade, 2008). As defined components of PVSs, the variables of patient perception, sense of support, ability to cope, and level of anxiety are understood, in part, as factors restoring equilibrium during situational crisis (Aguilera, 1998). Assessment of these variables provides the additional essential reference points for a holistic view of patient health status.

PVS Purpose

We view the purpose of PVSs as threefold. First, PVSs offer nurses a widened lens to the holistic assessment of patients and their needs (Figure 1; Spade, 2008) and a means for communicating that assessment to one another. Second, PVSs initiate and facilitate the nurse—patient relationship, in which “disclosive space” (Benner, 2004, p. 349) and “partnership” (Jonsdottir, Litchfield, & Pharris, 2004, p. 243) cultivate trust and patient-centered dialogue. Last, PVSs provide the patient a forum for safe, authentic sharing and potential resolution of the immediate concerns, hopes, and fears surrounding his or her health situation.

PVS Components

The psychosocial variables of perception, support, coping, and anxiety level are the defined components of PVSs. As points of reference on a continuum of patient experience and nurse observation, these variables inform a holistic view of patient needs essential to safety and quality of life.

Perception

As “the conscious . . . interpretation of sensory stimuli that serve as a basis for . . . understanding . . . and . . . motivating action” (Mosby’s Medical, 2002), perception affects the meaning of situations and the way a person adjusts to circumstances. Perception is the way a person thinks about something; a situation can be positive or negative, the best or worst. Aguilera (1998) suggested that misperception negatively influences problem solving, resulting in increased feelings of distress. When a patient’s perception is explored and shared, he or she can be assisted in understanding, coping, and adapting to a situation (Spade, 2008). In PVS assessment, the patient rates his/her perception of the situation from 1 (the best) to 10 (the worst; Spade, 2008).

Support

As discussed by Spade (2008), support is assessed in PVSs as “the presence of people who care—every significant other versus no one” (p. 182). Significant others can empower the patient by offering validation of importance and ability to cope. A sense of support is rated by the patient from 1 (I have everyone I need) to 10 (I have no one; Spade, 2008).

Coping

Coping is the ability to adapt, change, or live with a situation. Although coping involves dynamic cognitive, affective, spiritual, and behavioral processing, it implies action—a doing something, a behavior that makes a difference in circumstances ranked between easiest and most difficult. A PVS assessment of coping can provide validation of skills as well as opportunity to learn new skills for optimal adaptation in health status changes. The patient’s rating of coping is from 1 (this is the easiest circumstance to handle) to 10 (this is the most difficult circumstance to handle; Spade, 2008).

Key Points

- Psychosocial variables are essential points of reference in holistic patient assessment.
- Psychosocial vital signs widens patient assessment to holistic view.
- Simulation curriculum provides interactive nursing process for PVSs skills development.

Figure 1 Purpose of psychosocial vital signs.
Anxiety

Anxiety, predominately a felt experience, is commonly viewed on a continuum at mild, moderate, severe, and panic levels (Stuart & Laraia, 2008). Anxiety affects all dimensions of human response. Examples of concern for the nurse are cognitive manifestations of anxiety, such as illogical thinking and confusion, which can greatly impair the patient’s capacity for learning. As a crucial warning sign of suicide risk, anxiety is a defining element of the recently developed Hermes-Deakin Suicide Risk Assessment Tool (Hermes, Deakin, Lee, & Robinson, 2009; Memorial Health System, n.d.). With PVSs, a precursor to using a suicide risk tool, anxiety is rated on a scale from 1 (feeling calm; Spade, 2008) to 10 (feeling terrified; Spade, 2008). The nurse uses known descriptors for objective observation and notes patient thinking, affect, behavior, and physiological responses related to anxiety. The nurse also notes any incongruence between his or her observations and patient reporting.

Inherent Theoretical Premises

PVSs are grounded in several commonly held fundamental premises of competent nursing care. Underlying premises of PVSs include the following: (a) A holistic view of human responses to health and illness is five dimensional, (b) the nurse—patient relationship and patient-centered care are an essential context for gathering data and responding holistically to patient needs, (c) situational crisis is a consequence of health status change, and (d) a repertoire of effective communication skills is the key element to assessing and responding to psychosocial variables of health.

Five Dimensions of Human Response—A Holistic View

As suggested by Spade (2008), five dimensions of human response provide a holistic view of patients. Dimensions of human response include (a) cognition; (b) affect, or emotion; (c) spirit; (d) behavior; and (e) physiology.

Cognition

The cognitive dimension of human response includes process and content (Stuart & Laraia, 2008). Cognitive process can be logical or illogical, and content of cognition can include thoughts, hallucinations, and suicidal ideation. The nurse listens carefully to the patient’s speech for cognitive cues.

Affect

Although influenced by cultural norms (Siantz, 1991), affective and emotional human responses are often seen in facial expression (Mosby’s Medical, 2002). Patients may describe mood as sad, anxious, or happy; when asked, they may rate mood on a scale from 0 to 10 (Stuart & Laraia, 2008).

Spirit

The deeply held personal beliefs and core values giving meaning and purpose to life (Puchalski, 2006) define the spiritual dimension of human response. Loss of hope and purpose, accompanied by feelings of abandonment, are examples of spiritual distress.

Behavior

Behavioral cues inform the nurse of a patient’s ability to act or interact in order to cope or adapt to situations. Behavior is also observable objective data when nurses are assessing levels of patient anxiety.

Physiology

Physiological human responses are concrete cues of body systems such as neurological, circulatory, endocrine, and integumentary; they can be seen, heard, smelled, and felt. For example, altered physiological responses may “include nonreactive pupils, sinus arrhythmia, fruity halitosis, and warm, dry skin” (Spade, 2008, p. 182).

Universal vital signs are tools for gathering cues of physiological human responses and translating them into such variables as oxygen saturation, temperature, fetal heart tones, and blood pressure. Using the PVS tool, the nurse gathers and translates cognitive, affective or emotional, spiritual, and behavioral cues into relevant and measurable psychosocial variables of perception, sense of support, coping, and anxiety. Just as physiological variables affect patient safety and quality of life, so do the identified psychosocial variables affect patient safety and quality of life.

Nurse—Patient Relationship

The interactions between nurses and patients hold significant value. Nurses are known to be some of the most trusted professionals in the United States (Hughes, 2004). Within the boundaries of this trusted relationship, the patient often exposes vulnerabilities not privy to acquaintances and, in some cases, significant others. The nurse guards and respects the patient’s vulnerability as integral to the value of patient safety (Institute for Safe Mediation Practices, 2008). In a patient-centered context, the nurse applies critical judgment when collecting, analyzing, and prioritizing subjective and objective patient data. Together, the nurse and patient implement a plan to meet the patient’s identified needs as efficaciously as possible. The nurse’s intentional presence to the patient—an ethical (American Nurses Association, 2001) and legal responsibility—cultivates the trust needed for assisting the patient toward adaptation to optimum health.

Situational Crisis

As health status changes, individuals experience crisis. The crisis that exists may be minor or major, depending on various
Affective, spiritual, and behavioral human responses. While observing and taking note of the patient’s cognitive, the student’s task is to assess the patient’s PVSs in establishing rapport and eliciting responses from the patient. The sequence of inquiry with verbal prompts assists the student to identify changing patterns of behavior and physiological responses in the patient. The three-phase PVS simulation curriculum was developed so that student progress in competency spans the nursing program curriculum. 

Effective Communication Skill

In the context of the nurse–patient relationship, communication is used during PVS assessment “much like a stethoscope to actively listen and respond to an inner head-to-toe assessment” of the patient (Spade, 2008, p. 184). Norcross (2002) has concluded that essential elements of a therapeutic relationship—establishment and maintenance of the alliance between care provider and patient, empathy, goals consensus, and collaboration—lead to positive patient outcomes. Effective communication skills are a key factor in cultivating those essential elements while assessing and responding to the patient’s psychosocial variables of health.

Phases of Curriculum Implementation

The three-phase PVS simulation curriculum was developed so that student progress in competency spans the nursing program curriculum. Curriculum components of each phase include (a) strategies for implementation, (b) learning outcomes and core questions (Su, Osisek, & Starnes, 2005) stimulating students’ critical and reflective thinking, (c) a period of discussion and debriefing of the learning experience, and (d) individual reflection on clinical utilization of PVSs. Students are introduced to PVSs during their first semester assessment skills lab. As students progress through the phases, their competencies in assessment and intervention develop and expand. Table 1 outlines the components of the three-phase curriculum.

Phase I: Beginning Level

At the beginning level of learning, the nursing student has yet to meet and interact with patients in the clinical setting. A preparatory 30-minute background lecture, including a 7-minute demonstration video, is presented before students are introduced to the nursing simulation lab and given a patient scenario. On entering a designated patient room, the student establishes rapport with the manikin, whose voice conveys thoughts and feelings enacted by clinical faculty whose empathic understanding of the real-world patient experience projects a snippet of patient reality for the student. In the PVS Assessment Tool (Figure 2), a sequence of inquiry with verbal prompts assists the student in establishing rapport and eliciting responses from the patient. The student’s task is to assess the patient’s PVSs while observing and taking note of the patient’s cognitive, affective, spiritual, and behavioral human responses.

Phase II: Intermediate Level

The Phase II level of learning is introduced to students after they have had at least one clinical rotation. At this point, the number and types of patient experiences enable the student to understand how patients may respond to a nurse initiating a meaningful goal-directed conversation. A short slide show with video demonstration of an intervention following PVS assessment is presented before students receive scenarios. Under faculty guidance, student dyads simulate a nurse–patient PVS assessment followed by intervention. Each student has the opportunity to portray both nurse and patient. Scenarios reveal patients of greater complexity than those in Phase I. Behavioral and physiological cues of anxiety, as well as other responses, can be observed. In Phase II, students chart PVS findings in a simulated electronic medical record.

Cumulative learning outcomes of Phase II lead students through the nursing process of prioritizing, intervening, and evaluating as they explore their patients’ PVSs. Students identify and critique communication skills, as well as provide feedback to their simulation partners. During debriefing, students are asked to analyze the effectiveness of their skills by looking at the evidence in patient responses. Student reflective thinking is further stimulated through the use of Twitter, an online social network, between Phase II and Phase III of the curriculum. Students are asked to evaluate their use of PVSs in their clinical practice since Phase II learning, to reflect on their competency, and to consider changing their practice to expedite assessment and intervention in a patient’s PVSs. Students are required to identify barriers to using PVSs, as well as what helps them with successful use of PVSs in their practice. Students anonymously submit a post-Phase-II survey when entering the Phase III, advanced level of the curriculum.

A PVS communication algorithm (Figure 3) is distributed to students. Steps in the algorithm parallel steps of the nursing process—assessment, analysis, intervention, and evaluation—and are identified in blue. Potential concerns of the patient are listed, in the tan box, as psychosocial themes that may be identified during PVS assessment. Communication skills listed in the algorithm provide theme-related interventions for responding to patient concerns and are identified in the green boxes. Using these skills, students can develop and practice competency. In successive learning phases, students experiment with follow-up responses to patients that encourage goal-directed, meaningful dialogue. Additional Phase I strategies and core questions for discussion and debriefing are listed in Table 1.

After students have had clinical opportunities for patient interactions, a post-Phase-I survey is used as a ticket to Phase-II learning. Anonymously, students are asked to indicate to what degree they are integrating PVS assessment into their clinical practice.
Table 1  Psychosocial Vital Sign (PVS) Simulation Strategies, Learning Outcomes, Core Questions, and Survey

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Phase I: Beginning Level</th>
<th>Phase II: Intermediate Level</th>
<th>Phase III: Advanced Level</th>
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</thead>
<tbody>
<tr>
<td>• Slide show: Theoretical background with video demonstration—assessment</td>
<td>• Slide show with video demonstration—intervention; charting PVSs</td>
<td>• Slide show with video demonstration—inter-professional collaboration</td>
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<tr>
<td>• Simulation lab with manikin</td>
<td>• Simulation student role-playing—skills lab</td>
<td>• Simulation student role-playing</td>
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<tr>
<td>• Postsimulation debriefing</td>
<td>• Scenario context: increased complexity</td>
<td>• Scenario context: home visit</td>
<td></td>
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<tr>
<td>• Pre-Phase-II Survey</td>
<td>• EMR - charting PVS Findings</td>
<td>• SBAR with physician</td>
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<tr>
<td>Learning Outcomes</td>
<td>Learning Outcomes</td>
<td>Learning Outcomes</td>
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<tr>
<td>• Apply PVS tool to assess patient’s PVSs: perception of the situation, sense of support, coping, and anxiety.</td>
<td>• Explore patient’s PVS to prioritize and intervene in patient’s need.</td>
<td>• Assess and explore PVS priority need with patient.</td>
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<td>• Determine patient’s anxiety level: mild, moderate, severe, or panic.</td>
<td>• Evaluate patient’s response to intervention.</td>
<td>• Implement immediate communication intervention.</td>
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<tr>
<td>• Identify patient’s cognitive, affective, spiritual, and behavioral cues.</td>
<td>• Identify and critique communication skills used to explore and intervene in patient’s PVSs.</td>
<td>• Formulate priority nursing diagnosis based on patient response.</td>
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<td>Core Questions</td>
<td>Core Questions</td>
<td>Core Questions</td>
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<tr>
<td>• How could one component of PVSs, such as the patient’s perception, affect other components, such as the patient’s coping or anxiety level?</td>
<td>• What PVS was the patient’s priority need? How does it place the patient at risk?</td>
<td>• What priority PVS variables indicate the need for further evaluation?</td>
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<tr>
<td>• How could PVS components (perception, support, coping, anxiety) be risk factors for patient safety and/or quality of life?</td>
<td>• What communication interventions were most effective when exploring the patient’s PVSs? What is the evidence? In what ways are collaboration and patient outcome related?</td>
<td>• What safety risks are evident from the PVS?</td>
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<tr>
<td>• What PVS components (perception, support, coping, anxiety) were most effective when exploring the patient’s PVSs? What is the evidence? In what ways are collaboration and patient outcome related?</td>
<td>• Twitter: After using PVSs in your clinical practice, what are you doing differently to expedite assessment and intervention in your patients’ PVSs?</td>
<td>• Twitter: What process was used to devise an appropriate plan for disposition &amp; care?</td>
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<tr>
<td>Postsimulation survey before Phase II</td>
<td>Postsimulation survey before Phase III</td>
<td>Postsimulation survey before Phase III</td>
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<tr>
<td>• Describe a situation in which you used PVSs with a patient.</td>
<td>• Identify two barriers to using PVSs.</td>
<td>• Twitter: What challenged your thinking the most?</td>
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<tr>
<td>• What was the result of using PVSs?</td>
<td>• What are you doing that is helping you be successful in using PVSs?</td>
<td>• Twitter: What would you do differently in a similar situation?</td>
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</table>

Notes: EMR = electronic medical record; SBAR = situation-background-assessment-recommendation.

**Phase III: Advanced Level**

A simulated home health visit, in which students take turns playing roles of both nurse and patient, is the environmental setting for Phase III, the advanced level of learning PVSs. Students’ previous skills in PVS assessment and intervention are expanded to include the collaborative interprofessional communication task (American Association of Colleges of Nursing, 2008) of reporting the patient’s condition to an attending medical student. During PVS assessment, the nursing student discovers the patient to be gravely distressed and in need of further evaluation. A quick, yet methodical, nursing process leads the student to devising and implementing a plan for in-depth evaluation and disposition. The situation-background-assessment-recommendation skill set is used for reporting the situation. After communicating with the medical student portraying the physician, the nursing student closes the simulation with electronic medical record charting.

Core questions in Phase III require students to determine priority PVS variables and safety risks that indicate the
Psychosocial Vital Signs Assessment Tool – Phase I - II
Patient’s Scale = 1-10

**Perception** – Person’s thinking about a situation.

“What are your thoughts about your health situation and all it involves?”

*On a scale from 1-10, how would you rate this health situation? One is positive/best & 10 is negative/worst?*

Pt. Scale: ___

**Support** – Person’s sense of support from people who care.

“Who is there for you right now?” “Who can you depend on to give you some support during this?”

“How would you rate your sense of support? Is it a 1, everyone you need; is it a 10, meaning you have no one?”

Pt. Scale: ___

**Coping** – Person’s sense of being able to cope with the situation.

“How are you dealing with this?” Or, “How is this situation affecting you?”

“From easiest to most difficult (1-10), how would you rate this health situation?”

Pt. Scale: ___

**Anxiety** – Person’s feelings about the situation.

“How are you feeling about all this?” Or, “How is this situation affecting you?”

“From feeling calm to terrified, how would you rate yourself on a scale with calm being 1 and terrified being 10?”

Pt. Scale: ____

--- PVS: P ___ S ___ C ___ Ax ___ [ ] [ ] ---

**Nurse’s Observation: Anxiety Level**

**Anxiety Level**: ___Mild (alert, calm, speaks clearly) ___Severe (dry mouth, diaphoresis, can’t focus, urinary urgency)

___Moderate (muscle tension, “nervous”) ___Panic (hyperventilating, impaired thinking, “terrified”)

**Nurse’s Observation of Human Responses: Identifiable Positive and/or Negative Descriptors**

**Cognitive/Thinking**: Logical, goal-directed, clear, realistic understanding of situation, poor concentration, confused, “worried,” denial, illogical, loose associations, hallucinations, suicidal or homicidal thoughts

**Affective/Emotions**: Feels calm, feeling capable or confident (“I think I can get through this.”), uneasy, “nervous”, labile, “upset”, flat affect, guilt, shame, numb, sad, frustrated, angry, helpless, fearful, terror

**Spiritual**: Hopeful, “at peace”, agony or anguish, speaks of losing purpose/meaning (“no reason to live”), hopeless, abandoned,

**Behavioral**: Sociable, calm, cooperative, fidgeting, restless, startles easily, vigilant, pacing, rapid speech, loud, hostile, aggressive, withdrawn

**Physical**: Vital signs WNL, adequate sleep, elevated VS, dilated pupils, SOB, N/V, diarrhea, insomnia, hypersomnia, loss of appetite, urinary urgency/frequency

**Sources**


**Figure 2** Psychosocial vital signs assessment tool. Adapted from Spade (2008).
Figure 3  Psychosocial vital signs communication algorithm.
need for further patient evaluation. Twitter is used for further reflection and processing of the learning experience. Students are asked to name the process used for devising their plan of disposition and care. They are asked to think about their thinking process during the simulation and to project what they may do differently in a similar situation.

Faculty Roles in Teaching PVSs

The primary faculty role in students’ learning is twofold. First, clinical expertise and familiarity with nurse—patient interactions provide an essential backdrop for faculty members as they enact the role of patient during Phase I simulation. Using specific instructional cues, the faculty member guides the extemporaneous interactive process toward learning outcomes as students meet the task of assessment. The patient, from whom the student must elicit information, is withholding at times, yet in the end, the patient accommodates a successful completion of the student’s learning task.

Second, a faculty member facilitates the postsimulation debriefing, in which students are encouraged in self-reflection and expressions of discomfort and/or excitement about their learning. A sequence of open-ended questions is utilized for student reflective thinking and processing of simulation-induced thoughts and feelings. Examples of questions include the following:

1. What do you think?
2. What was it like eliciting a scale from the patient?
3. What is significant about the patient’s rating perception or experience?—much like rating pain—to measure a psychosocial variable (as defined in PVS)?
4. As temperature may affect pulse rate, how could PVS variables affect one another?
5. How could PVSs affect the value of safety for the patient?
6. What was it like to report to another professional?

The faculty member may also initiate and guide incidental role-playing using himself or herself as the nurse and the student as the patient. A “re-do” of the student patient simulation experience allows the student to get a different perspective on the assessment process as the faculty member demonstrates use of the verbal prompts in the PVS Assessment Tool. As the patient, students experience an empathic understanding of how the nurse’s approach during PVS assessment can feel for the patient.

Conclusion

PVSs are an important addition to assessing patients holistically. With a holistic view and use of effective communication, the nurse engages the patient in a collaborative patient-centered relationship. Implementation of the PVS simulation-designed curriculum across the undergraduate nursing program is a three-phase process of student learning. Students are progressively challenged as patient situations become more complex and learning outcomes demand developed competency. Faculty members, having expertise in patient interactions, play the significant role of patient during the initial simulation and provide guidance in subsequent simulations, in which students play both nurse and patient roles. As a facilitator, a faculty member guides the postsimulation process toward student self-reflection and expression of thoughts and feelings induced during simulation.

Our intentions are to continue developing the PVS tool and establishing its validity and reliability. While the concept has been refined since its inception (Spade, 2008), and curriculum refined for teaching it, the next phase in PVS development is that of researching its merits for measuring essential psychosocial variables and validating the effectiveness of teaching strategies. Other potential research questions simmer on back burners as PVSs continue to be introduced to professional nurses and nurse educators.

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References


