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Using Audio-Visual Simulation to Elicit Nursing Students' Noticing and Interpreting Skills to Assess Pain in Culturally Diverse Patients

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KEYWORDS

clinical judgment;
clinical reasoning;
post-operative pain;
nursing students;
pain

Abstract

Background: Pain is a complex and multi-dimensional phenomenon. Nurses play a vital role in assessing and managing pain and must use sound clinical reasoning to accurately make clinical judgments to notice, interpret and respond to patients' pain.

Method: Exploratory research on the impact of a newly developed AV simulation on nursing students' *Noticing* and *Interpreting* skills in assessing pain of culturally diverse patients. Data were collected via self-administered pre and post-intervention surveys.

Findings: The majority of participants were able to identify that the patient was in greater pain than reported, however some participants were unable to notice and interpret the impact of culture during pain assessment. Participants were more aware of the subjectivity of pain (cultural knowledge), and that the strategies learnt would improve their future clinical practice (cultural desire).

Conclusion: Findings support the need to include AV simulations in the nursing curriculum to enhance student nurses' cultural awareness, knowledge, and skills regarding pain, all complex factors for making the best clinical judgments to respond to pain.

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Background

Assessment and management of pain is a critical role for health care professionals. Although pain perception has been recognized as a multi-dimensional phenomenon, a one-size-fits-all mantra of ‘pain is whatever the patient says it is’ has prevailed. A number of biological, sociocultural, and communication differences contribute to pain perception and self-report, requiring nurses’ clinical reasoning to assess pain appropriately (Schiavenato & Craig, 2010). Globally, a range of cultural norms impact on pain expression and reporting (Orhan et al., 2018), necessitating greater consideration of factors that influence individual patient assessment.

Culture is defined as a set of shared beliefs, values, knowledge and expectations that guide behaviour and social interaction (Racher & Annis, 2007). Beliefs about the acceptability and meaning and expressions of pain, and responses to pain, both in oneself and in others, may differ among cultures (Ho & Johnson, 2013). In cultures where a holistic view of health is pre-dominant, pain may be viewed as an imbalance in a complex system of interconnected physical, emotional, social and spiritual factors (Hoeta, Baxter, Bryant, & Mani, 2020). Patients from these backgrounds may be less likely to report pain and be resistant to accepting pain relief medication (Monsivais & Engbretson, 2012), believing pain can be addressed through returning the system to balance (Shipton, 2013).

Clinical judgments are the outcomes of clinical reasoning. (Tanner, 2006). According to Tanner, a clinical judgment is “an interpretation or conclusion about a patient’s needs, concerns, or health problems, and/or the decision to take action (or not), use or modify standard approaches, or improvise new ones as deemed appropriate by the patient’s response” (p. 204). This process involves aspects of *Noticing*, *Interpreting*, *Responding*, and *Reflecting*.

In the context of pain management, accurate pain assessment depends on the nurse *Noticing* that a patient is experiencing pain, then gathering information to *Interpret* the patient’s pain experience to inform care. These steps involve the nurse seeking and using specific knowledge about: the patient and/or pathophysiology; the patient’s past responses to pain; information from the patient or significant others about the level of pain and/or the patient; as well as the best available evidence, based in research.

It is well known that nursing students graduate and often begin their careers with a deficit in clinical judgment (Kavanagh & Sharpnack, 2021; Monagle, Lasater, Stoyles, & Dieckmann, 2018). Simulation based education (SBE) is one approach to raise students’ awareness of and enhance clinical practice in the context of holistic patient care. Authentic audio-visual (AV) simulations, that is, pre-recorded simulated scenarios that are purposely created, can be used in important ways across curricula: as a visual guide for students to reflect on their own and others’ practices (Rochester et al., 2012), as trigger material for discussions, role modelling best practices (Johnson et al., 2012; Kelly et al., 2020), or as preparation for simulations or clinical experiences (Lasater, et al., 2014; Salameh, et al., 2021). This paper reports on students’ clinical judgment outcomes after viewing a novel AV simulation scenario which focused on assessing pain in an older Chinese patient.

Aim

To evaluate the impact of a newly developed AV simulation on nursing students’ *Noticing* and *Interpreting* skills within their clinical pain assessment with culturally diverse patients.

Methods

Research Design

The study used a mixed methods approach. A new AV simulation was developed, in which a registered nurse interacted with an older male patient of Chinese background and his daughter to assess the patient’s pain. Quantitative data collection involved a pre-post-survey to assess changes in students’ levels of compassion after viewing the AV simulation (these results will be presented in a future paper). Qualitative data were collected using open-ended questions developed to explore student’s clinical judgments and analysed using content analysis (Hsieh & Shannon, 2005).

Sample and Setting

This study was conducted at a large Australian urban university in 2020. Due to the limitations of the COVID-19 pandemic, the intervention and data collection processes were conducted via synchronous tutorial sessions on a learning management system.

The sample consisted of nursing students enrolled in the Bachelor of Science (Nursing) who had completed at least one year of study, or students who were enrolled in a graduate entry pre-registration Masters program. Students were

Key Points

- Observing expert nurses modelling ideal practices promotes student learning.
- AV simulations are feasible learning resources to elicit students’ noticing and interpreting skills.
- AV simulations enhance student nurses’ cultural awareness, knowledge, and skills.

drawn from three units (two undergraduate units and one graduate entry Masters unit). All students who attended the online sessions in the specified units were offered the intervention and invited to participate in the research.

The AV Simulation

The nine-minutes AV simulation featured professional actors in the role of a nurse, patient, and daughter. The nurse is shown conducting a pain assessment with the older Chinese male patient who speaks little English and depends upon his daughter for interpretation of what the nurse is saying and/or asking (subtitles shown in the AV simulation). Ethical, legal, and moral aspects of clinical practice featured in the simulation (for example, the daughter did not always accurately translate the nurse's communications) to enable participants to reflect about pain assessment, cultural differences, and communication for their own practice. Additionally, the 'nurse' regularly spoke 'to camera,' eliciting a personal connection with the viewer, explaining her critical analysis of the clinical situation, and modelling best nursing practices. The AV simulation was developed by nurse academics experienced in pedagogy and simulation with input from clinicians and health consumers, and in partnership with an actor who is also a director and a registered nurse.

Data Collection

The research sessions were conducted during a scheduled online class in each of the three units. One of the researchers, not involved with teaching the participants, facilitated the research sessions. Data collection consisted of a self-administered pre/post-survey containing demographic, quantitative and qualitative questions, administered via the Qualtrics platform. An online link to the AV simulation was inserted into the survey. During each session, the researcher shared the participant information sheet and answered questions about the research project, after which the participants received the survey link. Using computers or mobile devices, participants completed the pre-AV simulation survey, watched the AV simulation, and immediately completed the post-AV simulation survey. For those who chose not to participate, the online link for the AV simulation was made available for concurrent viewing. On completion of the post-AV simulation survey, another researcher delivered a short bespoke teaching session on pain assessment and management to complete the session and address any outstanding questions.

Ethics

The university's human research and ethics committee (HRE2020-0522) approved the study. At the beginning of the research sessions, the teaching academic introduced the researcher to participants, then left the online forum.

Participants were not required to turn on their cameras to protect their anonymity, although the researcher's camera was enabled to elicit a personal connection. Research sessions were not recorded to ensure confidentiality of participants.

Instruments

The survey consisted of three sections. First, the pre-survey collected demographic characteristics, including age, gender, cultural background, clinical experience, and previous experience or education in pain management. This information was completed before participants watched the AV simulation. Second, participants completed a 24-item Compassion Scale (Pommier, 2010; Pommier, Neff, & Tóth-Király, 2020), designed to assess participants' levels of compassion before and after viewing the AV simulation. These results will be reported in a future paper.

The third section consisted of seven free text questions derived from the *Noticing* and *Interpreting* dimensions of the Lasater Clinical Judgment Rubric (LCJR) (Lasater, 2007). Because participants were observing the AV simulation, the researchers focused on the *Noticing* and *Interpreting* aspects of the Tanner model and rubric. Effective *Noticing* within the LCJR includes: focused observation, recognising deviations from expected patterns, and information seeking. Effective *Interpreting* involves: prioritising data and making sense of the data. Lasater et al. (2019) explored these concepts in similarly designed research to determine whether participants' cultural backgrounds influence what they notice and how they interpret what they notice in an AV simulation. The data strongly suggested that participant backgrounds do impact clinical judgment but not in definable patterns. The authors concluded that clinical supervisors must become acquainted with participants' backgrounds in order to offer them individualized assistance to develop their clinical judgment skill. An additional free text question asked the participants to detail how the AV simulation could influence their future practice.

Data Analysis

Participant responses were exported from Qualtrics into IBM SPSS Statistics for Windows, version 27.0. Summary statistics were generated to describe demographics. The seven LCJR questions were exported into Microsoft Excel, and data were analysed using the conventional content analysis approach outlined by Hsieh and Shannon (2005). Two members of the research team independently coded responses for each question. These codes were then reviewed and collapsed into a smaller number of broad themes by three research team members. The participant responses were then recoded by two researchers using the

new themes. In the final step, four researchers achieved consensus on the themes and sub-themes. Some participant responses contained multiple themes and so were coded under more than one theme.

Results

There were 372 students enrolled in the three units; 112 potential participants attended the online sessions where the research was conducted with 82 participants completing the surveys (73.2% response rate). Most were undergraduate participants ($n = 69$, 84.1%).

Demographics

The mean age of participants was 27 years (range 19-60 years), the majority being female ($n = 73$, 89%) (Table 1). More than half were born overseas ($n = 55$, 67.1%), predominantly from Asian countries ($n = 39$, 72.2% of non-Australian born). The majority of participants spoke English at home ($n = 30$, 36.6%), or English and another language ($n = 23$, 28%), with 34.1% speaking another language at home ($n = 28$). Despite the high proportion of participants being originally from other countries (highest counts: India = 8; China = 5; Malaysia = 5; Nepal = 5), the pre-registration programs are offered in English, and English ability is required for entrance. Of the 59 participants who reported on their previous nursing experience, the majority ($n = 30$, 52.5%) had no previous nursing experience or only had experience from within course clinical placements. In relation to previous experiences with pain, almost all participants ($n = 80$, 97.6%) had previous experiences, sometimes in multiple capacities (Table 1).

Clinical Judgment

Noticing

The first three open-ended questions related to participants' *Noticing* skills. The first of these sought to elicit participants' focused observation: "What was the most important aspect about Mr Yung that you noticed?" The three emergent themes were: experiencing pain, assessing pain, and cultural beliefs (Table 2). Forty participants (51.3%) noted simply that Mr Yung was experiencing pain or included aspects of pain assessment in their responses (44.9%). Sixty percent of participants further mentioned cultural beliefs as the most important aspect in relation to Mr Yung's pain. This was a multi-faceted concept, encompassing culture, language, gender, family relationships, and medication preferences. For example, one participant wrote:

Mr Yung's cultural background led him to mask his pain. He also preferred to rely on his traditional medications. This cultural aspect also meant that there were difficulties in communication. This meant that he was un-

able to communicate clearly the true depth of pain experience. (P40)

The second question explored participants' recognition of deviations from expected patterns: "Based on your answer to the last question, how was this different to what you expected?" Responses tended to convey participants' expectations of how patients report and respond to pain. For example, many participants expected the patient to be open and transparent about pain (38.5%) in comments such as, *I expected the patient to be willing to express the full extent of their pain* (P74). Others expected patients to request and accept pain relief medications (18.0%), and several (11.5%) had not expected the extent of the language barrier. For example, *I expected Mr Yung's daughter to be more helpful when translating. She obviously wasn't and in fact made the situation worse* (P61). However, a small number of participants noted that it wasn't different to what they expected (15.4%), with a few responding that they weren't sure (5.1%).

The third question related to participants' information seeking skills: "What one bit of extra information would you like to have had?" There were three main sub-themes in response to this question: comprehensive assessment, language barrier and cultural beliefs. The majority of participants (57.7%) wanted more information to enable a comprehensive assessment, especially in relation to Mr Yung's pain and how he normally relieves this. Some participants (24.4%) also noted the language barrier and the importance of a professional interpreter:

There were also translational miscommunications occurring, with the daughter saying things like, 'if you don't take this medication, you will die.' This is an issue that needs to be resolved so the patient can truly understand what the nurse is saying, potentially through a staff member who can speak the language fluently. (P40)

More information about the patient's cultural beliefs was raised by some participants (10.3%) and a small number of participants (7.7%) were unsure or needed no other information.

Interpreting

Connected to *Noticing* is effective *Interpreting* of what is noticed, which involves prioritising and making sense of the data, represented in four questions (Lasater, 2007). Table 3 provides a summary of participants' most common responses in relation to what aspects of Mr Yung's care they saw as the priority and the next steps in care.

When asked to prioritise care in response to "In your opinion, what was the highest priority in the care for Mr Yung?," the majority (84.6%) identified pain relief as the highest priority. The need to uphold and respect cultural beliefs, usually mentioned in conjunction with providing pain relief (14.1%) featured to a lesser extent, as did ensuring safety and/or bigger picture (21.8%) such as: *If obs[ervations] are within normal ranges. Inspecting the injury (including x-ray)* (P29).

Table 1 Participant Demographics and Previous Experience with Pain (N = 82)

Demographic	Mean	Mode	
Age	26.78	21	
Gender	n	%	
	Female	73	89.0
	Male	8	9.8
	Other	1	1.2
Country of Birth			
	Australia	26	31.7
	Other (sub-regions below [†])	55	67.1
	<i>Eastern Asia</i>	7	
	<i>Central Asia</i>	3	
	<i>Western Asia</i>	1	
	<i>Southern Asia</i>	13	
	<i>Southeastern Asia</i>	17	
	<i>Eastern Africa</i>	5	
	<i>Middle Africa</i>	1	
	<i>Western Africa</i>	1	
	<i>Southern Africa</i>	1	
	<i>Northern Europe</i>	2	
	<i>Western Europe</i>	1	
	<i>South America</i>	2	
	Not stated	1	1.2
Length of time in Australia (if not born in Australia)			
	Never	2	2.4
	<1 year	3	3.7
	1-5 years	31	37.8
	>5-10 years	11	13.4
	>10-15 years	3	3.7
	>15-20 years	4	4.9
	>20 years	1	1.2
	Not stated	27	67.1
Language spoken at home			
	English	30	36.6
	Non-English	28	34.6
	English and another language	23	28.0
	Not stated	1	1.2
Previous nursing experience			
	None	11	13.4
	Student placements	20	24.4
	Disability/community support worker/nurse	4	4.8
	Other level nurse	7	8.5
	Aged care	3	3.7
	Nurse in another country/hospital	14	17.0
	Not stated	23	28.0
Previous pain experience *	n	%	
I have assessed and managed peoples' pain in my previous work	38	46.3	
• I have assessed and managed peoples' pain in my undergraduate practicums	57	69.5	
• I have been in a patient in hospital	41	50.0	
• I am a career for someone who requires regular pain relief	16	19.5	

* Responses were coded in multiple categories (where applicable) so the totals are greater than the number of participants and percentages do not sum to 100.

[†] United Nations global sub-regions.

Table 2 Clinical Judgment Noticing Questions, Themes and Sub-Themes

Noticing	Number of participants ^{*,†}	% of participants (n = 78)
What was the most important aspect about Mr Yung that you noticed?		
Experiencing pain	40	51.3
Assessing pain	35	44.9
Cultural beliefs (responses in this category included gender, not admitting to the intensity of pain, not wanting Western medicine, not comfortable in hospital, and influence of family)	46	60.0
Based on your answer to the last question, how was this different to what you expected?		
Open and transparent about pain	30	38.5
• Expected pain behaviours–self-report and request pain relief		
Expected patient to accept pain relief medications	14	18.0
• Request pain relief		
Unanticipated issues regarding language barrier	9	11.5
• Get interpreter		
• Expected patient to understand simple instructions		
• Influence of family member (interactions)		
Not different to what I expected	12	15.4
Not sure	4	5.1
What one bit of extra information would you like to have had?		
Comprehensive assessment	45	57.7
• Pain assessment		
• Past pain experiences and relief strategies		
• More descriptors about current pain (quality, radiation, etc.)		
• General health history and baseline observations		
• Planning for discharge		
Language barrier	19	24.4
• Extent of understanding of information (nurse/patient interaction)		
• Extent of understanding of injuries/related pain		
Cultural beliefs	8	10.3
• More information about Chinese beliefs regarding pain		
• Daughter's influence on patient's behaviour and communication		
Not sure/nothing	6	7.7

* Responses were coded in multiple categories (where applicable) so the totals are greater than the number of participants and percentages do not sum to 100

† Four participants did not respond to any of the open-ended questions, therefore only 78 participant responses are included in the totals

An extension of the prioritisation question was “In relation to the last question, why was this your highest priority?” with two categories identified. Patient centred care (74.4%) was the major focus specifically to promote healing and recovery, ensure quality of care, and relieve suffering. This was evidenced by the following response: *If we do not respect his cultural belief he will keep refusing his treatment which will make him suffer more* (P27). A further category, avoiding complications, was noted by 34.6% of participants such as *if Mr Yung couldn't do his deep breathing, he may develop pneumonia, so his pain needs to be under control* (P10).

Two questions explored making sense of the data. There were five main themes to the question: “What is required next for Mr Yung?” Nearly half the participants (46.2%) indicated that strong and effective pain relief was the next requirement. The theme of communication was prominent with 41.0% of participants indicating a translator or a Man-

darin speaking nurse was required. Other themes were: further assessment (30.8%), as in *A review from the pain specialist and deciding a medication plan* (P13), cultural considerations (14.1%) and supportive and/or concurrent care and/or treatment (12.8%) including *Ensuring that he practices deep breathing exercises* (P44). Only one participant did not know what was required next for Mr Yung.

The second *Interpreting* question, making sense of the data, was: “In relation to the last question, why is this the next care requirement for Mr Yung?” Again, five main themes emerged from the data. Most commonly, participants saw the need to address pain (43.6%), *It is important to carefully assess his pain first, in order to provide him the right interventions* (P20). Other suggestions were to promote effective communication (30.8%) and to facilitate treatment and recovery (29.5%), for example: *To reduce his length of stay in hospital* (P39). Nearly a fifth of participants (18%) articulated the importance of

Table 3 Clinical Judgment Interpreting Questions, Themes and Sub-Themes

<i>Interpreting Questions</i>	Number of participants ^{*,†}	% of participants (n = 78)
In your opinion, what was the highest priority in the care of Mr Yung?		
Upholding and respecting cultural beliefs	11	14.1
• Personal choices		
• Negotiate/encourage pain relief		
Pain relief	66	84.6
• Interpreter		
• Accurate communication regarding needs and pain relief		
• Specialist pain clinician		
Ensure safety/bigger picture	17	21.8
• Risk of deterioration from less obvious clinical issue		
• Support recovery		
In relation to the last question, why was this your highest priority?		
Patient-centred care	58	74.4
• Uphold cultural beliefs = accepting pain relief		
• Promoting comfort		
• Alleviating suffering		
• Communication to aid quality care		
Avoiding complications	27	34.6
• Promote healing		
What is required next for Mr Yung?		
Strong and effective pain relief	36	46.2
Communication	32	41.0
• Getting an interpreter		
• Informed consent for treatment		
Cultural considerations	11	14.1
• Changing rooms		
Further assessment	24	30.8
• Specialist review (pain management/other injuries)		
Supportive concurrent care/treatment	10	12.8
• Mobilisation		
• Deep breathing exercises		
• Patient (and daughter) education		
In relation to the last question, why is this the next care requirement for Mr Yung?		
Address the pain	34	43.6
Avoid complications	6	7.7
See the bigger picture	5	6.4
Cultural and emotional comfort	14	18.0
Promoting effective communication	24	30.8
To meet ethical and legal standards of practice	3	3.9
Facilitate treatment and recovery	23	29.5
Don't know	1	1.3

* Responses were coded in multiple categories (where applicable) so the totals are greater than the number of participants and percentages do not sum to 100.

† Four participants did not respond to any of the open-ended questions, therefore only 78 participant responses are included in the totals.

promoting cultural and emotional comfort. For instance, one response was: *Cultural beliefs and practices are important to people and it can be distressing when these are associated with things such as death, particularly when you are unwell* (P37). Several participants knew the importance of avoiding complications (7.7%) and of gathering further information to see the ‘bigger picture’ (6.4%). Lastly, three participants talked about ethical and legal standards related to practice.

Translation to Practice

The final question was framed “How will watching this AV simulation influence your clinical practice?” Four themes emerged from the responses as summarised in Table 4.

Most participants (60.3%) reported a heightened awareness of patients’ cultural characteristics:

This video created the opportunity for me to understand that I will meet different people from different cultures

Table 4 Impact of AV Simulation on Clinical Practice

<i>Impact of AV simulation on clinical practice</i>	Number of participants ^{*,†}	% of participants (n = 78)
How will watching this AV simulation influence your clinical practice?		
Cultural characteristics	47	60.3
• Awareness of how cultural differences, beliefs and expectations affect care		
Importance of effective communication	28	35.9
• Caution with using relatives as interpreters		
• Being attuned to non-verbal cues		
Subjectivity of pain	13	16.7
Need for comprehensive pain assessment	15	19.2

* Responses were coded in multiple categories (where applicable) so the totals are greater than the number of participants and percentages do not sum to 100.

† Four participants did not respond to any of the open-ended questions, therefore only 78 participant responses are included in the totals.

and religion. They hold deep their belief systems, and if you can respect that, they will co-operate with you for better treatment outcome (P77).

Another theme was the importance of effective communication (35.9%), because *This simulation has provided me with some great tips on how to communicate with those who are non-English speaking* (P38). The need for comprehensive pain assessment was also mentioned (19.2%) as was the subjectivity of pain (16.7%), in that *It gave me a lot to think about in terms of how cultural differences influence perception and expression of pain* (P74).

Discussion

This study evaluated the impact of a newly developed AV simulation on nursing students' *Noticing* and *Interpreting* skills in relation to clinical pain assessment with culturally diverse patients. Overall, the majority of participants noticed the potential for the patient to be in greater pain than he was reporting due to upholding cultural beliefs, gender norms and expectations.

Tanner (2006) discussed nurses' clinical reasoning and judgments as complex, and that clinical judgments are most often required in patient situations that are ill-defined or unclear. Tanner further identified that such situations are "often fraught with value conflicts among individuals with competing interests" (p. 205). This simulation required participants to sort through many of these, such as culture and/or language, gender, age, and the desire to manage the patient's pain from patient, daughter, and nurse perspectives. Most participants indicated their awareness of the complexity of these issues by identifying multiple factors they noticed and ways in which they interpreted what they noticed. Additionally, in comments about the impact of the simulation on clinical practice, participants noted the importance of assessing patients as individuals. Tanner clearly made the point that quality clinical judgments are situated, that is, each context of care, each nurse, and each patient are unique for any given clinical judgment.

Patients from culturally and linguistically diverse backgrounds conceptualise and experience pain in ways that may differ from clinicians' expectations (Brady, Veljanova, & Chipchase, 2017). The need to individualise assessment and interpretation in pain assessment with culturally diverse patients is recognised but hard to achieve due to a lack of pain assessment tools that capture the cultural narrative (Booker & Herr, 2015; Brady et al., 2017). Clinicians' own self-awareness is critical to achieving accurate measures. In the current study, nearly 40% of participants noted how the patient's unwillingness to accurately report pain or accept pain relief contrasted with their own expectations of how patients in pain behave. Thus, the AV simulation served to raise awareness of cultural differences.

When asked to determine the highest priority in the care for this patient, pain relief was the most frequent response. However, 41% of participants noted that strategies to improve communication with the patient were also a high priority. Having the confidence to use culturally appropriate communication methods and ask questions of patients to ascertain cultural needs is a form of cultural skill (Campinha-Bacote, 2007). Participants in the current study reported they were more aware of the subjectivity of pain (cultural knowledge), and that they would utilise some of the strategies from the AV simulation to improve their future clinical practice (cultural desire). The AV simulation appears to have enhanced participants' awareness of the influence of culture on acute pain management.

Cultural competence is an essential skill for nurses who, as a result of increased migration and globalisation, often find themselves in situations requiring interpretation services to ensure a shared understanding of care requirements to facilitate safe healthcare provision (Krupic, Hellström, Bisevic, Sadic, & Fatahi, 2016). Language barriers can negatively affect care, and a lack of understanding has the potential to introduce discrimination and prejudice into care delivery (Carnevale, Vissandjée, Nyland, & Vinet-Bonin, 2009). Being able to communicate about essential needs (for example, a pain assessment) is vital

(Panayiotou et al., 2019). In situations where communication interpretation is required, the use of a professional interpreter is preferred; however due to a variety of reasons, this is not always possible (Department of Health, 2017).

In this AV simulation, the patient's daughter was the interpreter; however, using a relative as an interpreter can result in ethical, legal and moral issues. The ICN Code of Ethics for Nurses (International Council of Nurses, 2021) provides guidance that the nurse's primary responsibility is the patient. Where interpretation about pain is required, the nurse must uphold patient privacy and confidentiality, whilst ensuring that the information translated is accurate. Using family members could therefore breach patient privacy and confidentiality (International Council of Nurses, 2021). Other issues include a lack of neutrality by the family member as well as potential difficulties in understanding healthcare language, both of which can result in family members missing out on significant medical information or translational miscommunication (Echoud et al., 2017). Strategies to overcome these issues include using a language-specific version of the pain assessment tool, assimilating the nurse's observations of the patient with the clinical and personal patient history to arrive at an accurate assessment, as well as referral to other health professionals to achieve pain control.

In the current study, a few participants indicated they did not know to certain questions. It is difficult to know if this was a true representation of their clinical judgment or if they just wanted to complete the learning activity so chose to answer obtusely. Misinterpreting pain assessment is akin to missing an aspect of nursing care and, in this situation, missed nursing care can be linked to increased pain and poor outcomes (Kalisch & Xie, 2014). More in-depth assessment of these participants may be necessary.

Limitations

There are several limitations to the findings of this study. Firstly, the study was conducted in one university setting and may not be applicable to other students, depending on the cultural demographics in other nursing courses. Additionally, to comply with ethical requirements, participation was voluntary so data were only collected from willing participants. Lastly, it was likely that some students were undertaking a clinical placement at the time of data collection and therefore unable to participate. Nevertheless, a strength of this study was the high response rate in that 73.2% of students attending the online class participated.

Conclusion

This study reported on the impact of a newly developed AV simulation on nursing students' *Noticing* and *Interpreting* skills within their clinical pain assessment with culturally diverse patients.

It is evident that the AV simulation enhanced participants' cultural awareness, knowledge and skills, thus contributing to the development of the student nurses' cultural competence and clinical judgment in the provision of care for culturally diverse patients. Thus, AV simulations represent an effective approach to enhancing student nurses' cultural awareness, knowledge and skills with *Noticing* and *Interpreting* pain.

Author Contributions

MK, SS, & HM - substantial contributions to conception and design, acquisition, analysis and interpretation of data; drafting the article and revising it critically for important intellectual content; and final approval of the version to be published

SG & JM - drafting the article and revising it critically for important intellectual content; and final approval of the version to be published

KL - substantial contributions to conception and design, analysis and interpretation of data; drafting the article and revising it critically for important intellectual content; and final approval of the version to be published

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Declarations of Interest

None.

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