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An Exploration of the Clinical Accommodation Process for Nursing Students with Physical Disabilities Using Grounded Theory

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Abstract:
Aim: The purpose of this study was to uncover the process by which nursing faculty make reasonable academic accommodations in the clinical environment for nursing students with orthopedic impairments. Background: Accommodating students with disabilities is necessary in nursing education. Unfortunately, policies, procedures, and practices for accommodation in nursing education are lacking. Nursing faculty lack resources for accommodation implementation for students with disabilities. Method: Constructivist grounded theory methods according to Charmaz, K. (2014). *Constructing grounded theory* (2nd ed. ed.). Thousand Oaks, California: Sage guided data collection and analysis. Results: Two defined processes were uncovered. "Faculty Perceptions of Their Experience Navigating the Clinical Accommodation Process" discusses external factors that affected implementation. "Reaching the Bottom Line" describes the essential elements of the implementation process. Conclusion: Seven steps of the accommodation process were identified. Additional research is needed to determine the effectiveness of each step and explore possible ways to mitigate numerous barriers to the accommodation process which participants also described.

Keywords: clinical education, nursing education, accommodation, student with disabilities

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Background & literature review

In recent years, US Department of Education regulatory changes have facilitated the inclusion of students with disabilities into more aspects of higher education, through the use of reasonable academic accommodations (accommodations) (US Department of Education, 2011). Accommodations are interventions designed to neutralize the discriminatory effect of a student's disability; thus, providing students with disabilities an equal chance at success (Dupler, Allen, Maheady, Fleming, & Allen, 2012). Traditionally, nursing education programs have excluded students with disabilities (Aaberg, 2012; May, 2014; Meloy & Gambescia, 2014). However, due to the ongoing regulatory changes, access to nursing education for students with disabilities is expected to increase. However, challenges related to the feasibility of providing accommodations for students with disabilities remain (May, 2014).

Some students with disabilities have matriculated through nursing programs; however, a gap in the literature exists explaining how accommodations were used with these students. As a dearth of nursing literature exists on students with disabilities, higher education literature commonly guides accommodation practices in nursing. Unfortunately, higher education literature primarily focuses on accommodation implementation (AI) in didactic courses lacking applicability to clinical education (May, 2014; Timmerman & Mulvihill, 2015). Additionally, research has shown that students with physical disabilities have additional accommodation needs, most often in the clinical setting, when majoring in disciplines such as nursing (Betz, Smith, & Bui, 2012; Luckowski, 2016). Accommodations are permitted in both didactic and clinical courses however, clinical accommodations are less often provided. Students go without clinical accommodations due to discrepancies between university standards and practice standards. Few practice partners have developed accommodation frameworks. Therefore, students enter the clinical setting without necessary accommodations (Griffiths, Worth, Scullard, & Gilbert, 2010; Tee & Cowen, 2012). Discrepancies in accommodation allocation place students with physical disabilities at a disadvantage in nursing education.

Research has documented that student success is more dependent on the faculty's ability to implement the accommodation in a way that benefits the student than the actual accommodation itself (Dupler et al.,

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2012; May, 2014). Therefore, understanding the accommodation process is essential for nursing faculty in order to provide adequate student support. Unfortunately, the policies, procedures, and accommodation practices of nursing education lag behind those of other higher education disciplines (Baker, Boland, & Nowik, 2012; Betz et al., 2012; May, 2014; Neal-Boylan & Smith, 2016). Currently, few resources exist in nursing education to assist faculty with AI (Dupler et al., 2012; May, 2014). Since little is known about the process of providing accommodations within nursing education (Baker et al., 2012; May, 2014); this study was designed to uncover the process by which faculty made accommodations. As more students with disabilities enter higher education, the likelihood that nursing faculty will need to know how to implement accommodations increases (May, 2014).

Methods

Constructivist grounded theory was used to determine how nursing faculty implemented accommodations (Charmaz, 2014). Through the systematic collection and analysis of data, constructivist grounded theory was used to answer the research question: What is the process by which faculty make reasonable academic accommodations for pre-licensure nursing students with physical disabilities, specifically orthopedic impairments, in the clinical setting of a nursing education program? To encourage homogeneity of the sample, data collection only involved participant experiences with students with orthopedic impairments.

This study defined a clinical setting as an experiential learning environment where nursing students practice skills, enhance clinical judgement, and interact with patients and healthcare providers under the direction of a licensed nursing instructor (Hayden et al., 2014). Additionally, an orthopedic impairment was defined as an impairment of the musculoskeletal or nervous system "caused by a congenital anomaly [birth defects], a disease (e. g. poliomyelitis, bone tuberculosis), or another cause (e. g. cerebral palsy, amputations, and fractures or burns that cause contractures)" that adversely affects an individual's educational performance or mobility (US Department of Education, 2004).

Recruitment and data collection

Consistent with grounded theory methods, data collection, through semi-structured intensive interviews occurred simultaneously with data analysis. After institutional review board approval, a convenience sample of nursing faculty was recruited through email blasts sent to the deans of accredited schools of nursing concentrated in the Midwestern United States. Deans were asked to distribute a recruitment flyer to all pre-licensure nursing faculty. Recruitment was sent to 594 schools of nursing across 20 states. Participants self-selected into the study by contacting the researcher via email. Participants were screened using the inclusion criteria, provided a copy of the informed consent, and asked to provide a list of potential interview times. In total, 29 potential participants responded. To meet the inclusion criteria, participants must have been the primary clinical instructor for a student with an orthopedic impairment. No exclusion criteria was used. Six participants met the inclusion criteria, agreed to participate, responded to requests for an interview, and were included in the initial convenience sample. Informed consent was obtained from all participants.

Data collection from participants in the initial convenience sample occurred through a single, one-on-one, semi-structured, virtual interview using video conferencing. Interviews lasted 30–50 minutes. An interview guide consisting of broad, open-ended, pre-determined questions surrounding accommodation implementation guided each interview. Participants were asked questions such as: "can you describe the first time you needed to implement a reasonable academic accommodation in clinical?" and "can you explain how you prepared yourself to work with a student with a physical disability in clinical?" Additional questions were asked at the researcher's discretion. Interviews were digitally recorded and transcribed verbatim by a Collaborative Institutional Training Initiative (CITI) certified transcriptionist using pseudonyms. The researcher's observational notes of each interview were included in data analysis. Data from five additional participants were collected during the theoretical sampling phase of the study. These participants were nursing faculty who had assisted in and had knowledge of the accommodation process for a student with an orthopedic impairment but did not meet the inclusion criteria of serving as the student's primary clinical instructor. All five participants had responded to the researcher's initial recruitment and agreed to be contacted later for participation as a theoretical sampling participant. Data from theoretical sampling participants were collected through both written statements and interviews. Data collection ended when theoretical saturation, as defined by Charmaz (2014), had been achieved.

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Sample demographics

Demographic data were collected from all convenience sample participants. All participants were Caucasian females working full-time as a nurse educator in the rank of assistant or associate professor. Four of the six participants were between the ages of 51–60 while two participants were younger. Participants had an average of 13 years of experience as a nurse educator. Each participant had a minimum of an MSN degree and all participants completed education courses during an advanced degree program. Two-thirds of participants had formal training on working with students with disabilities. Lastly, two participants identified themselves as disabled, and both denied an inability to practice nursing related to their disability.

Data analysis

Data analysis followed Charmaz's (2014) approach to coding and theory development. Consistent with grounded theory methods, deep exploration of data occurred, and thick descriptions were developed (Charmaz, 2014). Occurring simultaneously with data collection, interview transcripts of initial participants were hand coded by the researcher, line-by-line, using constant comparative methods. All initial codes were written as gerunds. Focused coding began after the fourth interview utilizing constant comparative methods. Line and transcript numbers tracked the initial data during focused coding. The researcher spent extended periods of time immersed in and interacting with the data to remain grounded in it. Memos were used throughout to record and track the analytic decisions made during data analysis. When coding was complete all categories were returned to the original data for confirmation. Theoretical coding as described by Charmaz (2014) is when a researcher links the focused codes into defined processes. During theoretical coding, theoretical sampling data was analyzed and the emergent codes were added into existing categories. No new categories were developed.

Credibility indicators

Trustworthiness is essential in qualitative research to ensure the accuracy of analyzed data (Lincoln & Guba, 1985). Charmaz's (2014) four constructs, credibility, originality, resonance, and usefulness were used to ensure the accuracy of the findings and maintain methodological rigor during data collection and analysis. Credibility was ensured though peer debriefing, memo writing, and a structured audit trail of methodological and analytical research decisions. Originality was ensured through peer debriefing and regular memo writing and review of memos. The researcher reiterated and confirmed emerging categories with participants. This served to establish resonance for the study. Additionally, participants were asked to affirm or not affirm codes that emerged from previous data to establish resonance. Lastly, the study's usefulness was evaluated by the sharing of study results with clinical nurse educators who were not study participants. These individuals were able to affirm the applicability of the research findings to clinical nursing education.

Results

Data analysis uncovered two distinct processes for AI. The first process, "Faculty Perceptions of Their Experience Navigating the Clinical Accommodation Process" identified external factors that affected the faculty's AI. The second process, "Reaching the Bottom Line" described what faculty participants deemed as the essential elements of a successful implementation plan.

Additionally, data analysis revealed a guiding behavior faculty participants felt influenced the accommodation process. Coded "The Bottom Line", participants repeatedly shared the importance of students meeting course objectives. Participants were focused on ensuring that the accommodated student met the same expectations as a non-disabled, non-accommodated student. While a determination into meeting course objectives is a function of evaluation and not the accommodation process, it became clear during data analysis that "The Bottom Line" affected faculty decision making during the AI process.

Process 1: "faculty perceptions of their experience navigating the clinical accommodation process"

Participants revealed that AI for a student with an orthopedic impairment is more complex than just completing the steps of the accommodation process. Rather, AI is a complex matrix of elements. According to participants,

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the accommodation process was much more complex than initially anticipated related to external barriers, facilitators, and stakeholders. Many participants felt they struggled more with how to navigate, control, and mitigate external forces than with the actual AI itself. Some participants felt their implementation was poor related to an inability to anticipate barriers and/or an underutilization of facilitators. Data analysis revealed that AI was impacted by both the steps in the accommodation process and the faculty's ability to navigate the external forces. The navigation process is included in Figure 1.

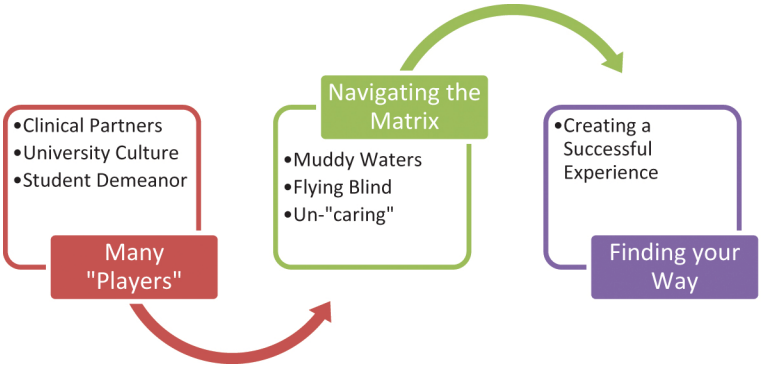

Figure 1: Faculty perceptions of their experience navigating the clinical accommodation process.

Many players

Outside stakeholders were found to both positively and negatively impact the accommodation process. One participant shared, "*we find that when it comes to clinical and accommodations for anything there are a variety of stakeholders who are the decision makers*". University culture, clinical partners, and student demeanor influenced AI by participants.

University culture

Participants had mixed experiences with university support during AI. Participant six praised the work of the university's disability officer stating, "*she [disability coordinator] has definitely put in more time, effort, and follow through- I think as compared to other students without a physical disability. I think having clinical sites makes it, and to that extent, it makes it maybe a little bit more in-depth.*"
This participant went on to explain how the disability officer had visited clinical sites in order to aid in the accommodation process. Conversely, participant two felt, disability assistance was lacking stating, "*you would never get anything specific back from them [disability office]*".

Challenges of university culture also included a lack of support from administration. Half of the convenience sample participants felt university or nursing administration did not support AI. Participant one was frustrated noting, "*this became such an issue all the way to the president, who really just wanted to make this go away*". Another participant shared, "*I made the dean aware of it and she was kind of hands off*". This participant further explained, "*it kinda felt like, there was a lack of support there like, through the whole process.*" While positive administrative support was not specifically addressed by participants, it was apparent that the absence of support affected faculty. Participant one stated, "*I think also if we would've had support from administration, we would have been able to manage this much better.*"

Clinical partners

Clinical partners were the most significant external factor in the accommodation process. Participant experiences with clinical partners were mixed. Participant three explained, "*it's not the school that is having difficulty, it's the clinical partner that's resistant.*" She went on to explain,

> *if they can't do what they are supposed to do at clinical, then they can't go to clinical. And we don't have that policy because we have the policy. We have that policy because the facilities push that policy. They just don't allow it.*

Participant two reflected, "*we met with the director of the unit we were on and asked if X would be acceptable and they felt no.*" Participant one shared that the clinical partner, "*just said, absolutely not. It goes against our practice.*" Even

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after the student was accepted by the facility, participant five experienced resistance from unit staff. "*One of the head nurses was appalled more or less. We should just fail her. That was her thought.*" Participant four had a different experience noting, "*our clinical agencies are very supportive.*" Participant six had mixed responses from clinical agencies. She shared that the first clinical agency had an employee with the same disability and therefore was very comfortable with the accommodation process; however, "*most places we went to remain unsure of what needs done.*" When asked more about why she thought there was such resistance, participant six shared this opinion, "*I think that it was more of a concern of how they were going to work with the student in the area. It was just insecurities and uncertainties of how am I going to do this? Because I have never done this before.*" More participants experienced resistance or refusal from clinical partners than did not. Participants agreed that working with clinical partners was the most challenging aspects of providing accommodations.

Student demeanor

Participants noted that the attitude and demeanor of the student played a role in AI. One participant, who worked with a student with a birth defect, shared that the student did not view herself as disabled. According to the participant, this caused increased challenges for the student who was resistant to using accommodations. The student struggled during the first portion of the semester before accepting accommodations. Participant three shared this about the effect of the individual student,

> *she's lucky that she was smart enough and picked up on things quickly. Again, that was specific to that student. I don't know that every student would have been able to do what she did. She didn't make excuses for herself.*

Participant one worked with, "*a very assertive student who refused to take no for an answer.*" Participant four reiterated, "*it's their attitude, and their soft initiative, perseverance.*" Participant five's student had less of a positive attitude. The student had, "*an attitude that I owed her extra.*" This attitude ultimately led to additional struggles for the student, including a stint on probation. All participants agreed that the attitude and perspective of the student influenced their approach to AI.

Navigating the matrix

The multitude of stakeholders in the accommodation process led to struggles as participants attempted to balance the best interests, requirements, and desires of all stakeholders. Participants identified three elements that made AI feel like a matrix as opposed to a linear path.

Flying blind

Lack of resources contributed to faculty challenges in navigating the AI process. Participants all agreed that more guidance was needed. Multiple participants noted the absence of standardized and/or shared resources for faculty while others felt an absence of policy was problematic. Participant six shared this about her attempts to find guidance,

> *I even went to my state board of nursing. They were like, 'well is she meeting your objectives?' Okay, yes. Is she … There is just nothing to go by as to what and any guidance.*

While all participants voiced frustration with the lack of resources available, participants had differing views on how this lack of resources affected their AI. Many participants ultimately felt they were successful with AI; however, one participant was more discouraged. "*I felt I should be able to handle this just fine and I really felt like I didn't handle anything well.*" Regardless, participants all agreed that more resources and policies are needed within a nursing education framework.

Un-"caring"

Participants discussed challenges balancing their nurse and teacher role identities. Some participants felt their nursing instincts took over, unintentionally, causing them to make decisions in regards to their student with a physical disability they would not normally have made. Participant five reflected, "*I also think I felt really sorry for her*" going on to explain, "*I think the biggest challenge for me was the emotional draining of having a student that*

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can't perform or looks like they're in pain." When asked, many participants felt the key to separating their nursing instinct to care for the injured, from their role as an educator, was to analyze each decision in terms of a non-disabled student. Participant six shared,

> *I think it's a constant thing. That we have to remind ourselves that she's the student and not the patient- to be considerate and thoughtful of the whole process without going overboard and treating her differently per se.*

Another participant further explained, "*we need to make sure that we are encouraging her independence. That we're not doing above and beyond. We're not going to do that for our other students.*" Participants saw their innate need to care come out most in instances where the student exhibited visible pain, a side effect of most of the orthopedic impairments encountered. When asked how she dealt with the impulse to care, participant three noted, "*you still have to have compassion for it. So I think it's like a balance basically.*"

Muddy waters

Participants shared many challenges and struggles of navigating the matrix. For most participants, the barriers and facilitators collided causing unanticipated challenges. Participant one described, "*it becomes muddy waters and it becomes very difficult to sort through how to be fair and equitable for all parties involved.*" Another participant experienced muddy waters when the accommodation equipment she needed could not be accessed. In this case, the collision of barriers and facilitators prevented the faculty from utilizing her AI plan. Participant two shared a similar experience when her AI plan was refused by a stakeholder. Participants felt frustrated when their potential solutions met resistance.

Participants felt that the muddy waters deepened when the collision of barriers and facilitators impacted student evaluation. For example, the participant who struggled to get equipment for her accommodation also struggled evaluating the student. Knowing the student could be successful if not for external limitations complicated evaluation. While one participant felt that past positive experience with AI helped her see through the muddy waters, most participants did not have past experience to fall back on. Furthermore, when muddy waters led to issues in evaluation, most participants were unsure of how to best handle the situation.

Findings your way

Participants managed their struggles during the accommodation process by focusing on the end goal. While no participant felt they had a clear vision of how AI should look, all but one agreed that facilitating the possibility of success for the student was most important. Therefore, student success guided most participants when navigating the accommodation process. Additionally, most participants felt they created a successful learning experience through their AI plan. The biggest challenge, one participant felt, was "*probably just wondering if we're doing it right? I mean, because we honestly don't- we don't have a … clue.*" Lastly, all but one participant stated a willingness to work with students with orthopedic impairments again as most participants agreed that the accommodation process can work.

Process 2: "reaching the bottom line"

Data analysis identified seven steps in the AI process. The steps were not found to be step-wise in nature; however, participants felt that the co-existence of all seven steps comprised the process by which accommodations were made. The seven steps are illustrated in Figure 2.

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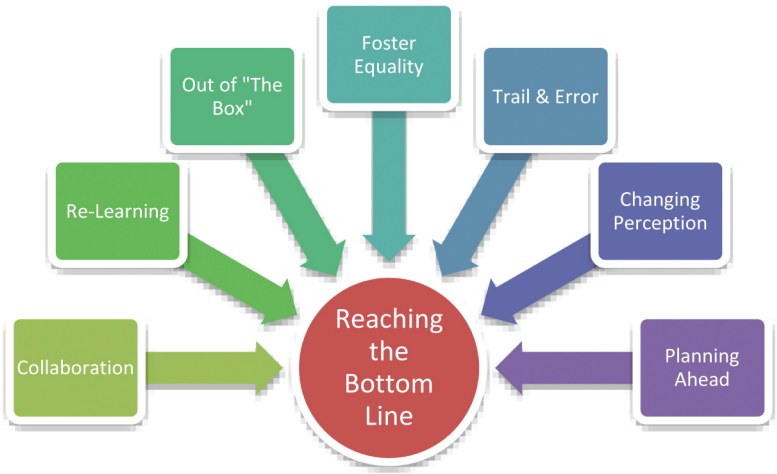

Figure 2: Reaching the bottom line.

Planning ahead

Participants identified the importance of planning ahead, prior to clinical, as part of the accommodation process. A participant noted, "*It's going to take additional time to figure out how to accomplish the course objectives in a way that you've not done before.*" Participants who met with stakeholders to plan and practice accommodations prior to clinical rated their AI higher. These participants felt more prepared than participants who lacked knowledge of the student's disability prior to clinical starting. A participant noted, "*I really didn't have any warning that the student was coming my way so I kind of had to get up to speed on accommodations as the semester started.*" The participant went on to explain that the student struggled during the beginning of the semester when accommodations were not clear. Participants agreed that pre-planning and working with the student prior to clinical beginning, helped them better facilitate the students' needs.

Collaborating

Participants viewed collaboration with other faculty as an essential element of the accommodation process. Participant six shared,

> *if you've never encountered how am I going to handle that? What am I going to do? I think that has helped a lot, and having more than one perspective in the room to talk those things out.*

Participant four agreed feeling it was essential "*to get the entire faculty involved in thinking of ways that you can accomplish this and do it in the best way for the student.*" Likewise, participant five noted how the absence of collaboration negatively impacted her AI. She shared "*I should have done that [collaborate] because on my own I had a harder time than I've ever had sticking to the rules.*" This participant went on to explain, "*I found out that I really need more people to bounce things off of*" as the line between accommodation and leniency wasn't clear. Participants felt that frequent meetings with other faculty during the semester, helped put the accommodation process into perspective and led to smooth troubleshooting of any issues. Participant three noted, "*the more heads the better*" when asked about whether collaboration aided her in AI.

Getting out of the box

Almost all the participants felt that creativity was key during AI. While participant three stated, "*you can't make an exception. You have to hold everyone to the same standard*", most participants shared the perspective that faculty could and should approach typically situations differently in an AI plan. Participant four stated, "*there's a lot of things we can think out of the box to find areas for people.*" Participant two highlighted the importance of thinking outside the box, especially with weaker students. "*Trying to figure out how she [the student] could come back. She was a weak student in theory courses and you don't want to set a student up to fail.*" Getting outside the box allowed participants to implement accommodations and facilitate learning experiences in ways they may not have previously through possible.

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Prior to working with a student with an orthopedic impairment, most participants had not considered the possibility of such individuals as nurses. Participant six shared,

> *I just always expected that your typical nurse could go running down the hall and grab the crash cart, even as a psych nurse. But, I think that's just the picture of anybody in general. You say, 'I am a nurse,' that's what they're going to picture. The stethoscope, and giving needles, and doing life saving measures type of role as a nurse when in fact there are so many other roles above and beyond just doing that*.

This participant went one to note that while she was hesitant of the student's ability initially, watching the student excel has, "*made me consider more of different types of disabilities that could also be successful in nursing*."

Fostering equality

Participants were focused on creating a perceived equality between students with orthopedic impairments and students without. Accommodations are intended to provide students an equal opportunity to demonstrate success but not necessarily an equal experience; however, participants felt that ensuring equal experiences was important. Participant two's student faced inequality when switching clinical agencies during the semester due to her disability. The student ended up completing two additional weeks of clinical due to agency policies and, "*it really put the student out having to change agencies.*" Participants felt creating equal experiences was important when a student's accommodations prevented them from working with any patient on the floor. One participant questioned,

> *are we doing harm to her by not giving her the opportunity to take care of X? Are we and not knowing? We can't say you can't pass clinical because you can't do this- because that is not a specific objective, right. But, are we not going to be able to give her every learning opportunity she needs?*.

The participant went on to explain, "*It's very difficult because we want to give her the experiences.*" Participants were concerned that limiting patient assignments or experiences may lessen the student's overall learning; therefore, participants focused on creating equality while providing accommodations.

Using trial and error

Most faculty participants viewed AI as trial and error. Participant one noted, "*situations happen, and there's always something that comes out of the blue, you can't plan for everything.*" Participants reported varying comfort levels with a trial and error process. While participant five shared that, "*there were times that I was extremely frustrated and thrown off course during her clinical*" another participant shared a much more relaxed approach stating, "*we told her [the student]. This is a trial and error. We don't know. We're going to be doing this all brand new and together.*" Faculty comfort level using trial and error may be related to their comfort level with uncertainty and change.

Re-learning

Several participants discussed the importance of learning to facilitate learning differently in order to provide successful accommodations. Termed re-learning, participants felt it was important to be open to changing how things had been previously done. "*We don't know exactly … there's no way to know exactly how this will work*" commented participant five. Multiple participants discussed the learning curve they experienced in providing accommodations and how their AI plan changed during the course of the semester. As one participant noted, "*you [the faculty] have to adapt.*"

Changing perceptions

Participants felt that a faculty's perception of the student's ability played a role in AI. This changing perception, or the ability of faculty to recognize the potential success of students with orthopedic impairments was key, in the mind of most participants, to the accommodation process. Reflecting on the perceptions of both herself and her co-workers when a student returned to the nursing program after a serious injury one participant shared,

> *initially, in the time period before she came back, there was a lot of hesitancy. A lot of its not going to work kind of attitude. Or, were going to get in trouble kind of things. Because it was so unknown*.

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The participant shared that some faculty tried to refuse to take the student to clinical until,

we all met together. We worked as a team to build the plans. We made sure that we were all there to support one another and to come up with the appropriate accommodations or plans to help because it is scary for faculty, too.

After seeing accommodations work, the majority of the participants co-workers became less resistant to working with this student. The only participant to have an unsuccessful student shared a more negative view of students with orthopedic impairments. The participant felt individuals with disabilities had no place in nursing. After personally deeming some of the prescribed accommodations as 'excessive' this participant chose not to allow all the prescribed accommodations. Conversely, most participants felt seeing evidence of successful accommodations helped participants navigate AI. Participant four felt, "*it's probably our overall background that makes us more comfortable with accommodations; and our willingness to change.*" She goes on to explain, "*we've got to figure this out. It's our role and it's our responsibility, to figure it out. To help these people [students with disabilities] achieve their dream.*" In sharing how her personal perception of students with disabilities has changed participant six noted, "*you don't think twice anymore when you get that accommodation letter that they need extra time or an extra room. That's nothing anymore. Those things are just easy today.*" Participants felt that a changing perception by faculty was key to helping students with orthopedic impairments be successful. When the faculty implementing the accommodation believed the student could be successful, the accommodation experience was both positive and effective from the perspective of participants.

Discussion

This grounded theory study explored the process by which nursing faculty make clinical accommodations for students with orthopedic impairments. The study was warranted as no previous research on the process by which clinical accommodations are made for nursing students with orthopedic impairments was found in the literature. Therefore, no literature fully supports the accommodation process as identified in this study. However, findings from the literature do support some of the steps identified by study participants. Similar to the results of this study, Luckowski (2016) found that faculty collaboration and planning ahead were key to accommodating students with disabilities. Additionally, flexibility has been identified in previous research as a necessary component of the accommodation process (Neal-Boylan & Smith, 2016; US Department of Labor Office of Disability Employment Policy, 2014). Neal-Boylan and Smith (2016) described flexibility as a faculty's willingness to adapt and change the accommodation process during the course of the semester to fit student needs. Study participants discussed several steps in the accommodation process that require adaptability. 'Using trial and error, 're-learning', and 'getting out of the box' all require faculty to change and adapt. Steps that described adaptability as a necessary component support the previous research noting the importance of flexibility. Therefore, this study supports previous research demonstrating the importance of flexibility in the accommodation process.

Universal design has been previously recommended as an AI framework in nursing education. The concept of universal design suggests that tasks can be completed in multiple ways and each individual should identify how they can best complete a task (Lombardi & Murray, 2010; US Department of Labor, 2014). While no studies exist testing the use of universal design in nursing education for students with disabilities, the basic tenant of universal design is present in the study findings. Study participants identified two steps in the accommodation process similar to universal design. 'Re-learning' and 'Getting Out of the Box' require faculty to deviate from their traditional way of doing things. Therefore, these steps lend support for the hypothesis that universal design would be a practical educational method for nursing students with disabilities. As such, research into the use of universal design in nursing education is warranted.

The step 'Changing Perceptions' is supported by previous higher education literature. While not specific to nursing education, a study found a link between student success and faculty receptiveness to the accommodation process (Timmerman & Mulvihill, 2015). As discussed by study participants, the belief that a student could be successful played a role in AI success. While Timmerman and Mulvihill (2015) examined student success as opposed to AI, additional previous research does support that an effective implementation plan increases a student's likelihood for success (Dupler et al., 2012; May, 2014). Therefore, as faculty perceptions continue to change, an increased likelihood of student success exists.

In addition to the steps in the accommodation process, previous research also supports the navigation struggles experienced by participants. Neal-Boylan and Smith (2016) noted that the cooperation of clinical partners was necessary for successful accommodation. This supports the perceptions and beliefs of all study participants who felt that the cooperation or lack of cooperation from clinical partners impacted AI in the clinical setting. Additionally, the lack of resources available to nursing faculty to support AI has been well documented (Dupler et al., 2012; May, 2014). Therefore, the perception of 'flying blind' is supported by previous literature.

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Recommendations

Additional research into clinical accommodation practices in nursing education is needed. While this study has uncovered some important information about the AI process from a faculty perspective, no research to date has examined the same process from a student perspective. Additionally, the results of this study demonstrate the need for research on clinical partner regulations and restrictions regarding nursing students with physical disabilities. Clinical partner resistance was one of the most significant impacting factors noted by participants during AI, however participants perspectives on the source and extent of that resistance differed. Therefore, a study involving clinical partners and their policies for students with physical disabilities is warranted. Additional research to expand and confirm the findings of this study is needed.

Limitations

The study and its findings have several limitations. Despite a wide and aggressive recruitment strategy, access to the study's intended target population, adjunct clinical faculty, was difficult. This prevented the use of purposeful sampling in the study. Purposeful sampling was further limited by a lack of participant follow through. Second, as is consistent with qualitative research, the researcher's inherent lens of bias is a limitation of this study. The researcher's bias was controlled for using self-examination, reflexivity, memos, an audit trail, peer debriefing, and participant's confirmation of findings. Lastly, a final limitation of lack of transferability exists. Consistent with grounded theory, the processes developed belong to data and therefore, study findings cannot be generalized beyond nursing students with orthopedic impairments (Charmaz, 2014). However, individual nursing faculty may choose to independently evaluate the processes developed and apply them to other populations or in other contexts. In this case, an evaluation of the effectiveness of the processes in other contexts should be conducted.

Conclusion

The findings of this study help to identify key steps of the AI process of nursing faculty for students with orthopedic impairments. The steps of the accommodation process, when used together, aided faculty in the successful implementation of accommodations from the perspective of participants. Additionally, participants shared information about the facilitators and barriers encountered during the accommodation process and how numerous stakeholders affected their plans for AI. The findings of this study demonstrate a need for additional research in nursing education on the clinical accommodation process. Additional research is also needed into the role of outside stakeholders on the accommodation process. Most notably, the roles, responsibilities, and influence of clinical partners in the accommodation process needs to be explored. While additional research is necessary, the findings of this study are useful for nursing faculty. Findings of this study can serve as a framework for nursing faculty who need to implement clinical accommodations for a nursing student with an orthopedic impairment.

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