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Nurse-Provided Foot Care for Populations with Severe Mental Illness: A Phenomenological and Swanson's Theory of Caring Approach

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Nurse-Provided Foot Care for Populations with Severe Mental Illness:

A Phenomenological and Swanson's Theory of Caring Approach

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Abstract

Foot care is an essential element of health care for populations with, or at high risk for chronic diseases and foot abnormalities. However, nursing research regarding foot care specifically for patients with severe mental illness (a category which includes bipolar disorder, schizophrenia, and schizoaffective disorder) is sparse. This mixed methodology phenomenological study seeks to provide a further understanding of how nurse-provided foot care and its implicit "caring" ethos impact this patient population, and what might this imply about creating models and educational protocols for the delivery of future evidence-based care.

Methodology: Participants at a low-barrier day center for populations who self-identified as female, unhoused, and diagnosed with severe mental illness were treated with nurse-provided foot care. Data was collected from a five-question semi-structured interview, focused on the participant's experience of foot care and then thematically coded.

Results: Six participants fulfilled eligibility requirements, provided informed consent, and completed the semi-structured interviews. Five main themes emerged from data analysis: 1) apprehension to enjoyment, 2) self-criticism, 3) importance of hygiene, 4) inclusion of anecdotal experience, and 5) attitude of the practitioner.

Conclusion: This research project called attention to the need for increased access and provision of hygiene supplies and the relevance of incorporating relationship-based therapeutic foot care. The process of addressing these issues will require focusing on these needs in the development of models for hygiene access provision as well as incorporating the importance of a Swanson's Theory of Caring derived education protocol.

Key words: foot care for psychiatric populations, foot care considerations, nurse-provided foot care, severe mental illness

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Foot care is an essential element of health care for populations with or at high risk for chronic diseases and foot abnormalities, however nursing research regarding foot care specifically for patients with severe mental illness is sparse. Since foot care is a complex treatment that can involve therapeutic touch, treatment, and interaction with a healthcare provider, change in how foot care is administered to this patient population may have strong potential to both reduce infections and disease progression (Lehmann & Brandt, 2016) and treat psychiatric symptoms (Kito & Suzuki, 2016). This could have a direct effect on mortality: despite increasing focus on a growing number of determinants of health, a significant life expectancy gap between people with severe mental illness (SMI) and the rest of the population continues and may be getting larger due to healthcare disparities (Jayatilleke et al., 2017). Furthermore, it has been noted that populations who are experiencing homelessness and living with SMI "feel further difficulties in accessing and finding trusting health care professionals" (D'Souza et al., 2022), further compounding inequities in the provision of healthcare.

SMI sometimes referred to as severe persistent mental illness (SPMI) is a category which engulfs "people aged 18 years and older who suffer from a prolonged or recurrent mental illness, are impaired in activities of daily living, and require long-term treatment … people who have schizophrenia, major depression, [bipolar disorders]" (Woods et al., 2008) and is overall considered to represent a population with "severely disabling mental disorders which require crisis resolution or ongoing and long-term support and treatment" (Yamada et al., 2000). In recent years this definition has been inclusive of substance use disorders, considered "any DSM-5 mental illness diagnosed for at least 2 years resulting in serious functional impairment" (Elie et al., 2018).

However, when foot care is discussed in the psychiatric context, it is often reduced to a topic related to chronic illness treatment as opposed to a valued intervention. Foot care is typically defined at its most basic level as inspection, washing, drying, moisturizing, and nail care. An expanded view in the healthcare setting includes as-needed interventions for the treatment of foot problems, prevision of

regular foot exams, and the proper selection and maintenance of shoes and socks (Hinkes, 2012). There is a noticeable gap in the literature regarding the caring function of nurses and the perspective of patients, with much of the literature focused elsewhere such as on disease processes or quantifiable interventions. As stated in the landmark description of the nursing theory of caring, "Caring has been discussed and described … yet little inquiry exists from a phenomenological inductive stance whereby caregivers, care receivers, and care observers are queried for their perceptions of caring" (Swanson, 1991, p. 161). Since further research can lead to enhancing the field, the existing disconnect between the consideration of foot care for psychiatric populations and the examination of the patient experience is meaningfully absent from much of the present literature (Peoples, 2021).

Background and Significance

Providing holistic foot care, both acutely and preventatively, does not exist in a clinical vacuum that can be solved by adding a medication or running some blood tests and then measuring the results. Foot abnormalities can be a result of various injuries, disease processes, and countless other determinants of health. Chronic medical conditions and psychiatric conditions are closely intertwined, and more than a rudimentary understanding of this relationship is necessary for patient care (Prom, 2019). Advanced practice providers have a responsibility to assess foot care needs based on studies of SMI, life expectancy, and disease processed, which will be analyzed in this paper.

Clinical Context

Foot care is a prime example of an intervention that encapsulates the ethos of treating the patient holistically. The development of foot problems is known to "represent risk factors for the development of many significant complications of multiple systemic diseases such as depression, diabetes mellitus, high blood pressure, inflammatory arthritis, obesity, osteoporosis, stress and vascular alterations" (Rodríguez-Sanz et al., 2018, p. 65). For such an indicative part of the body, abnormalities of the feet are only briefly reviewed in two main nursing physical assessment textbooks (Bickley et al.,

2021; Harding et al., 2020). To understand why there is a scarcity of information, the larger context of foot care must first be unraveled further.

Considerations on National & Local Prevalence of Problem

In the United States as well as in the King County, WA region, foot care is typically performed by podiatrists, on a referral or for-hire basis (especially in skilled nursing facilities), or by registered nurses. An accredidation for registered nurses in the United States, the Certificate in Foot Care Nursing (CFCN), was started in 2005 by the Wound Ostomy Continence Nurse Certification Board (WOCNCB). However, this certification is not necessary for nurses to perform foot care. In 2015, the requirements for this certification changed to 40 clinical hours, increased from 6 hours, and 24 education hours, increased from 5 hours, notably increasing the amount of education and exposure offered to holders of the certification (Beuscher et al., 2019).

There is no mention of providing foot care specialized for psychiatric populations beyond a stated requirement for the certification of "knowledge of … methods for mental health assessment" mentioned in the CFCN examination handbook (WOCNCB, 2021). This is notable because there is a gap in communication between psychiatric nursing institutions and foot care certifying bodies. There is no communication nor protocols between organizing bodies at a national level regarding the provision and nuances of foot care to individuals experiencing severe mental illness.

Specifics on Participants with Severe Mental Illness (SMI)

There is a significant lack of with foot care, combined with no research specifically focused on foot care experiences in people with SMI. Oftentimes due to symptomology, behavior concerns, communication, co-occurring disorders, and other factors that generally complicate research, individuals may be excluded from many studies. There is a deficiency of research specifically focused on the experiences of foot care of individuals with SMI. As Rosenbaum (2016) states:

> Purportedly transformative care models often fail to substantially improve the quality of care, perhaps in part because of behavior fostered by a subtle shift in responsibility: as we focus on "fixing the broken system," do we stop seeking solutions from within ourselves? (p. 1588)

The Doctor of Nursing Practice project is an ideal opportunity to include this population to focus on the inherent focus on clinical practice and incorporation of the holistic elements of nursing research.

Literature Review

The literature regarding foot care for psychiatric disorders falls into two main categories: research surrounding diabetes care and inpatient hospitalizations. The findings regarding diabetic care point directly to the importance of the psychiatric care team involvement in this population. For example, a study of type II diabetes screenings of patients with SMI found that psychiatric specialties placed 38.1% of screening orders, a rate second only to that of primary care providers at 54.3% (Mangurian et al., 2018). As people with diabetes are more likely to have a mental illness, and people with a mental illness are more likely to have diabetes (Prom, 2019), this involvement is crucial. For patients undergoing psychiatric hospitalization, foot care combined with therapeutic touch have been found to significantly improve negative symptoms of schizophrenia (Kito & Suzuki, 2016) and reduce pain and infections in patients with SMI (Lehmann & Brandt, 2016).

There is an expanding body of community health research on both obstacles to foot care for vulnerable populations, and some proposed solutions. For instance, although there is an immense need for foot care services for unhoused populations, foot care is not routinely offered in health care settings. For this population, both an impediment- and potentially a facilitator- can be availability of washing facilities and clean socks and shoes (D'Souza et al., 2022). Of course, these facilities are not always an option in a community. When there is a lack of financial and medical resources, care is less accessible. Since diabetic foot care is especially neglected, educating and empowering the professionals who provide health care is a crucial first step (Abbas, 2017).

Synthesis

Critical evaluation of the literature on this subject must consider that the research is extremely limited, and often exceptionally specific to institutional contexts. Much of the literature is international, which adds a freshnew slew of compounding variables into a topic that is already complex. For instance, one study from Spain assumes psychiatric hospitals use textile shoes instead of leather (Pérez-Pico et al., 2018), and studies involving foot care programs included instances from the United States (Lehman & Brandt, 2016), Canada (D'Souza et al., 2022), Japan (Kito & Suzuki, 2016), and Tanzania (Abbas, 2017). There is a severe lack of longitudinal studies and a noticeable gap of the role of nurse practitioners, with much of the literature considering physicians (Prom, 2019) and increasingly nurses to fill in the care voids (Lehmann & Brandt, 2016).

Discussion of Major Findings in the Literature

Despite the relatively sparse literature, two major findings significantly stand out and act as a model for what could potentially be implemented into a public health setting. When an inpatient psychiatric unit decided to incorporate specialized nurses to provide foot care along with therapeutic foot massage, the program was a resounding success with patient buy-in, reduced infections and pain, and nurse satisfaction as they felt able to provide holistic mental health interventions to their patients in an effective way (Lehmann & Brandt, 2016). Similarly, in a hospital in Japan, researchers performed foot baths and massages on patients with schizophrenia three times a week for four weeks and found significant improvement in negative symptoms, increased quality of life, and relaxation as measured by decrease in heart rate (Kito & Suzuki, 2016). These findings may set the stage for the creations of foot care guidelines specifically for patients with SMI in outpatient settings.

Gaps in the Literature: Foot Care Protocols

Given that foot care has been found to have the strong potential to treat some negative psychiatric symptoms (Kito & Suzuki, 2016), reduce infections, and build relationships in the psychiatric

setting (Lehmann & Brandt, 2016) for adults with SMI, a recommendation can solidly be proposed to create and implement specific foot care protocols for this population. The existing literature supports this finding. There is a need for more research for both psychiatric foot care protocols and causes of decreased life expectancy in the population (John et al., 2018). It is crucial to note in this recommendation that foot care is clearly not a panacea for these disparities, just as no tweak to the inequities of the health care system can enact instant change. The purpose of integrating this care with a psychiatric perspective is to recognize that interventions that focus on many causes of mortality must be prioritized (Jayatilleke et al., 2017).

Project Purpose and Statement

The purpose of this project is to explore the question: For unhoused women with severe mental illness, how does nurse-provided foot care and its implicit "caring" ethos impact this patient population, and what might this imply about creating models and educational protocols for the delivery of future evidence-based care? A mixed methodology of hermeneutic phenomenological and middle-range nursing theory, Swanson's Theory of Caring, is utilized to explore the lived experiences of receiving nurse-provided foot care, with data collected from semi-structured interviews that were subsequently thematically coded (Saldaña, 2021), analyzed, and incorporated into educational quality improvement materials.

Theoretical Framework: Swanson's Theory of Caring

As this project is a nonexperimental endeavor, striving to improve patient care through holistic nursing interventions, it fits into the utilization of the middle range Swanson's Theory of Caring. This theory is unique in that it focuses on care delivery as part of the cycle that leads to patient welfare and includes addressing emotional needs through creating a moment of caring that connects to patients. Specifically, "caring theory postulates that nurses demonstrating they care about patients is as

important to patient well-being as caring for them through clinical activities such as preventing infection and administering medications" (Tonges & Ray, 2011, p. 374).

When this holistic definition of nursing is applied, the expansion of foot care evidence-based practice to include patients with SMI is a strong example of working within a nursing theoretical framework to effect change. This relates to conceptualization of the scope of this project since foot care involves many elements such as therapeutic touch, patient conversation and interaction, assessment, and tending to the feet. Kito and Suzuki (2016) describe this process of foot care as "nursing care skills [that] are effective in relieving the daily life difficulties caused by psychiatric symptoms" (p. 380), perfectly stating how this holistic process is, in itself, a form of caring. Significantly for this population with SMI, this fits within our understanding of the cognitive impairments and loss of abstract thinking skills associated with schizophrenia; as a result, concrete expressions of caring may be more readily comprehended as "caring actions" by the nurse than more nebulous caring interventions, e.g. active listening.

Hermeneutical Phenomenology in Mixed Methodology Research

As this project utilizes mixed methodology, it is imperative to first note the qualitative underpinnings of this research. The specific method of this project will be hermeneutic phenomenology, with the nursing theory of caring utilized as a secondary theory. This makes the project a hybrid as the theory of caring will be the lens through which the phenomenological research is framed. Specifically, hermeneutic phenomenology is a theoretical framework that recognizes that the self (and all the accompanying and shifting preconceptions) cannot be separated- and *should not* be separated- from the study of the essence of experience (Peoples, 2021). This framework could best be described as summative as the process of phenomenology is highly reflective and compares outcomes from analysis to original "goals" or perceptions (McKenzie et al., 2017).

This leads to the question of how a methodology based on hermeneutic phenomenology, which is research understood by *not* bringing a predetermined set of procedures, can be measured by quantitative research. This has led to critiques of nursing use of phenomenology in the past, but it has been argued that this framework can be used in nursing research as textual analysis considered to be a process of specialized seeing, more than strict overlayed, rule-bound procedures (Rehorick & Bentz, 2017). As such, this framework is most suitably described as summative as the process of phenomenology is highly reflective and compares outcomes from analysis to original "goals" or perceptions (McKenzie et al., 2017).

Methods and Procedures

This project is considerably nonexperimental as there cannot be a control group since foot care needs may vary, there is no randomization since patients self-select, and data will be collected systemically using a standardized cross-sectional survey so there will not be statistical controls (Terry, 2018).

Components of Quality Improvement

This study is considered quality improvement as it builds on current literature and understanding of the process of nurse-provided foot care and the implementation of psychiatric-specific research to improve an existing process. Since quality improvement is an ongoing process of enhancing patient care, and foot care is broader than any one organizational policy, the implementation of "quality improvement" may not be as specific as if it were to pertain to only the processes within a specific site. This project is an example of the translation of principles of quality improvement with a focus on participant engagement that recognizes needs as well as experiences (Lobiondo-Wood & Haber, 2020).

Setting

Data was collected on site at an urban Seattle adult day center that provides low-barrier facilities including laundry, showers, cooking facilities, and storage space for unhoused individuals. This

day center works in tandem with North Seattle shelters and homelessness outreach organizations and could be considered a community hub. On a weekly basis, this center has a 3-hour window in which only female-identified community members are served, a time which in the past has been more of a "spa day" when volunteers provided manicures and other relaxing treatments. Although this is no longer occurring, staff expressed that it was well-enjoyed and many community members who visit the day center still remember these services. As such, there is a positive precedent for these services.

During the reserved afternoon, female-identified time, a temporary chair, divider, and complete foot care set-up was assembled on the right side of the center, ensuring an accessible, private space for the foot care and interviews (Appendix A). This principal investigator was able to interact in a friendly manner within the milieu when not providing foot care.

Participants and Recruitment

A recruitment flyer with eligibility requirements, a description of services, dates, times, and locations of any services (Appendix B) was posted at the project site and available throughout the milieu Staff members were involved with relaying information only, with no direct research input into the data collection. If individuals decided to participate, they were present at the research location at the designated times. Upon presentation, an eligibility screening was completed by orally listing the eligibility criteria (Appendix C) and asking the individual for verbal confirmation of eligibility. If confirmed, the researcher continued with the assessment of the participant's capacity to consent and understanding of the requirements of the study. Subsequently, the researcher proceeded with the overview and introduction to the foot care process, acknowledgment of the risk of physical harm, and visual evaluation of the feet and lower extremities to assess for wounds that could render the individual ineligible for participation.

Ethical Considerations

As this research involved human subjects who are unhoused and have severe mental illness, special consideration was incorporated regarding decisional impairment. This topic was addressed in the capacity for consent evaluation (Appendix C) preceding the interview. Ethical considerations necessitated a full Seattle University IRB review prior to the initiation of the project in recognition of the vulnerability inherent in research of marginalized populations. All participants, including those who chose to participate but did not meet the selection criteria, were eligible for compensation with a $20 gift card. In order to preserve anonymity, no protected or identifying information was included in the interview or the organization of data, and no signed consent form was collected. An information sheet about the project, IRB approval, and how the study can be accessed after completion was offered to participants and provided upon request (Appendix E).

Consent Process. The eligibility criteria for this study included the presence of SMI, as previously defined to include substance use disorders (Elie et al., 2018). Under this umbrella, participants may have cognitive or functional difficulties that limit their ability to consent, making capacity questionable. The National Institute of Health's recommendations for establishing capacity in these situations is that the principal investigator "could involve an informal screening at the start of the consent discussion with a prospective subject, relying on investigator experience and simple questions to determine which prospective subjects may have problems understanding consent-related issues" (NIH, 2009). The consent process was initiated with a brief discussion of the goal of the research to determine participant understanding (Appendix D). The NIH also advises informally assessing for capacity to consent, which in this case included asking the prospective participant "What does 'consent' mean to you?" and ensuring that the participant verbalized understanding of the concept before proceeding. The participant's response was analyzed from a psychiatric and public health RN background to determine their capacity to consent. Once established, the process of obtaining verbal consent proceeded.

Eligibility. Based on this discussion and the day center's discretion, a finalized recruitment flyer with eligibility requirements, a description of services, dates, times, and locations of service was available. It was posted at the center and available for staff members to distribute to potentially eligible individuals (Appendix B). If individuals chose to participate, they presented at the determined location at these designated times. Upon presentation, an eligibility screening was completed by orally listing the eligibility criteria and asking the individual for verbal confirmation of eligibility. If the eligibility was verbally confirmed by the individual, the process proceeded with the assessment of the participant's capacity to consent and understanding of the requirements of the study.

Intervention

Once understanding consent was demonstrated, participants proceeded with the overview and introduction to the foot care process, acknowledgment of the risk of physical harm, and visual evaluation of the feet and lower extremities to assess for wounds that could render the individual ineligible for participation (Appendix C). At the completion of the foot care process, the researcher initiated the recorded interview. Participants were advised that the study does involve the intervention of RN-provided foot care with the following steps:

1. Participant seated, with shoes and socks removed and feet resting on a cushion.
2. RN inspects the feet and visible lower extremities for any wounds, redness, tenderness, or other relevant concerns for health before proceeding.
3. Feet thoroughly cleaned with baby wipes.
4. Toenail polish removed, as necessary.
5. Toenails sanded with electric nail sander and trimmed with nail clippers, as needed.
6. Calluses sanded will electric sander, trimmed, and/or filed as needed.
7. Heels filed, as needed.
8. Feet thoroughly cleaned with baby wipes.

9. Lotion applied, as needed.
10. Toenails painted, as participant preferred.
11. Clean pair of socks provided.

This list was designed in accordance with foot care nursing guidelines (WOCNCB, 2021). Participants were then informed that at any point during foot care, first aid will be performed as needed. Thorough nurse-provided foot care was performed by the researcher, including answering of questions/patient education regarding foot care, and any counseling as appropriate.

Data Collection

At the completion of the foot care process, the researcher recorded the interview. In total, this process of the intervention and data collection was projected to take 30-45 minutes and in reality took approximately 30 minutes.

Survey Instrument

The raw narrative data was collected in face-to-face, semi-structured interviews that were recorded and transcribed during the analytical framework. The main instrument used for data collection was a healthcare semi-structured interview guide (Appendix F) of open-ended questions asked directly about lived experience in accordance with hermeneutic phenomenology.

Data Analysis

Data analysis was completed via coding of thematic elements within the texts and framework of nursing theory. Interviews were recorded and transcribed by the researcher, then coded by hand to retain the inflections and other elements of speech (Peoples, 2021) that could be relevant in analysis, and can be missed in the use of software. Inductive, in-vivo coding was utilized as the first cycle. The second cycle was focused coding to further clarify the most salient categories (Saldaña, 2021) and evaluate the findings (Miles et al., 2020).

Results

Six participants fulfilled eligibility requirements, demonstrated consent, and completed answers to the semi-structured interviews. The length of interviews was shorter than expected, ranging from one minute and 29 seconds to five minutes and 55 seconds. This impacted the amount of material available for data analysis. In concordance with the agreement for confidentiality, no demographic information was collected from each participant and state of foot health was not quantified. For data analysis purposes, and to avoid repeats, participants were assigned numbers in chronological order of the interview, i.e. P1 for the first participant, P2 for the second, and so forth.

Themes

Five main themes emerged in process of data analysis of the interviews. These main themes included: 1) apprehension to enjoyment, 2) self-criticism, 3) importance of hygiene, 4) inclusion of anecdotal experience, and 5) attitude of the practitioner. No themes were exclusive to any one day. Overall, the distribution of this thematic content is noted in the table below:

Table 1

Emergent Themes Derived from Analysis of Semi-Structured Interviews

Theme	Participant						Total
	P1	P2	P3	P4	P5	P6	
Apprehension to Enjoyment		X	X	X	X	X	5
Self-Criticism			X	X	X		3
Importance of Hygiene	X	X	X		X	X	5
Inclusion of Anecdotal Experience		X	X		X	X	4
Attitude of Practitioner		X	X	X	X	X	5

Apprehension to Enjoyment

This theme encompassed the evolution over the course of the intervention from unease to enjoying the experience. One participant who presented as quite anxious noted that the foot care itself was “relieving, stress relieving. Just the little bit that you did; relaxing and it took away my concern and I felt good. I liked it.” A relieved participant stated succinctly: “you actually did a great job.” Another participant commented:

> “There is no bad part, um, showing you my fucking ugly ass feet ... [the best part of foot care was] that you were cool about it, you're quick and you laughed with me about the ticklish shit, that I didn't kick you!”

Another participant noted one of their barriers: “I feel like I avoid feet people, like people avoid the dentist, because I don't like people touching my feet. It's one of those things I'm like ah, maybe not!”

Self-Criticism

This theme encompassed the emotions that participants brought up over the course of the intervention that were focused specifically on self-criticism. When asked about the worst part of foot care, one participant self-referenced: “My pinky toe. Because I don't know what it is, but it hurts. It's hard for me to like, like dig it out with like ... it's like surgery almost, just to get it to like, happen.” The other two participants noted issues that “because I kind of let [foot hygiene] go” and that their feet “have become so ugly!”

Importance of Hygiene

This theme encompassed highly common statements made regarding cognizance of the importance of hygiene to maintain healthy feet. One participant said:

> “I'm told there's a lot of important parts about your feet. If you, if they get infected and shit, a lot of things go downhill from there like your teeth and shit. It's just more tedious and nobody likes feet really.”

Another participant noted that the specific act of foot care was especially important: “Yeah, it's like taking care of *you*, like take your time … do your hair you don't rush through it - it's not going to be the way you want it!”

Inclusion of Anecdotal Experience

This theme encompassed the reflective statements made by participants about how foot care had demonstrated importance, not in the experience itself, but how the lack of footcare had manifested in negative consequences for others. In response to the final interview question (“Is there anything else you would like me to know?”) a participant noted:

> “I think generally taking care of your feet, you have to be [doing so] because you walk on 'em. You see a lot of people out here who are using drugs, who don't take care of their feet or in the hospital losing your toes, gangrene... that's no joke, 100%. I think how you take care of, just like you're taking care of these feet from... Yeah, just like people who don't have the ability to do that I've seen a lot...”

Attitude of Practitioner

This theme encompassed feedback about how the interaction of the participant with the foot care provider made an impact on the experience. A participant noted:

> “Um, you being very personable I'm sure helped a lot. Like if, If it was with someone who didn't, who couldn't like hold a conversation as well. I imagine it would be a lot more awkward ... Being personable is good!”

Another participant equated overall attitude with quality of care:

> “Here you're very gentle, very gentle and very slow, and calm in what you do. You don't rush through, you take your time you don't rush through it, which is good because that's how people get cut. That's how people get, uh, nail infections.”

Discussion

The findings from analysis of these interviews were especially interesting because the comments and feedback were not about the method of cutting toenails, or the methodology of the intervention, or that the nail polish was quite runny. Instead, participants focused on themes in line with Swanson's Theory of Caring and the therapeutic aspects of care, as discussed more fully below.

These results imply the importance of creating models of foot care that are evidence-based and focused on hygiene, the most common theme in this study. As stated in the background and literature review sections, the importance of hygiene and foot care are intertwined. In D'Souza et al.'s review of foot care conditions for homeless populations, it is noted "people experiencing homelessness are faced with complex challenges and are at high risk of illness due to inequities and disparities in access to health care services" (2022, p. 1), and these barriers have been noted as especially pertinent to populations with severe mental illness (Rosenbaum, 2016). This research, although limited in sample size (Saldaña, 2021) suggests healthcare providers and female-identifying, unhoused adults with SMI are united in their concerns about the importance of foot care hygiene for the population at large. Data suggests that hygiene resources for foot care such as showers, clean and dry socks and shoes, as well as medical follow-up for infections and other relevant concerns such as diabetes should be offered as a higher priority for unhoused individuals with SMI than awareness or educational campaigns. The value of hygiene in the short and long term is already known to this population, so an expanded model for the provision of hygiene supplies and access to related services is recommended.

Swanson notes that relationship-based care in a healing environment is an organizational condition of caring (1991), and this became especially apparent in the feedback from participants across coded themes of apprehension to enjoyment, inclusion of anecdotal experience, and attitude of the practitioner. Even though this intervention was designed to be about the specificities of experiencing footcare in a given moment, participants valued the therapeutic conditions of care and were concerned

about others in situations without foot care. Recommendations for the future include educational protocols for the delivery of future evidence-based foot care that can be designed in a manner that is more specific to care of unhoused individuals and not clinic-focused. Participants value taking time for care and doing so thoughtfully and see it as an experience that causes anxiety and avoidance but is recognized as helpful. Incorporating therapeutic and relationship-based care as a priority in providing foot care will be essential for foot care practitioners in the future.

Limitations

Over the course of the study, several limitations existed which are common for phenomenological research: low sample size, time limitations, and bias within the participant sample (Peoples, 2021). The sample size of six participants is considered low for a qualitative study, but it is still considered to be an acceptable amount in phenomenological research (Peoples, 2021). The time to do the interviews was short due to the weekly 3-hour period in which the data could be collected. However, this was expected due to limited days available after study approval. Bias within the participant sample due to the self-selecting nature of the study (in contrast to random sampling) is inherent for phenomenological studies. As a result this was known to be a limitation that would exist moving forward. Due to the nature of the study, delineations were put into place that would not be perceived as limitations such as the decision to not collect demographic data, the self-selection process, and the single semi-structured interview designed to be condensed into five questions.

Conclusion

For unhoused women with severe mental illness, nurse-provided foot care and its implicit "caring" ethos positively impacts the provision of care. This research project called attention to the need for increased access and provision of hygiene supplies and the relevance of incorporating evidence based, therapeutic, and relationship-based therapeutic foot care. The process of addressing these issues

will require focusing on development of models for hygiene access, and incorporating the importance of a Swanson's Theory of Caring derived education protocol.

Implications for Advanced Practice

All advanced care practitioners will have patients with feet meeting the eligibility criteria for this study. Ideally, with the identification of care gaps, further studies will delve into hygiene access model and foot care education modifications to best serve unhoused adults with SMI, which is an immense barrier to care. Greater understanding of steps to prioritize offering footcare to this population in the future is needed. This includes understanding the importance of a caring therapeutic relationship, which will be a shift from current practice of only focusing on process adherence. Recommendations include offering foot care services or resources in the clinic such as a visual examination of patient's feet, offering nail trims, and discussing hygiene barriers in a nonjudgmental manner. As opposed to only focusing on the minutiae of foot care, building a rapport so that concerns may be openly discussed is in line with therapeutic and relationship-based care.

Sustainability

Several directions may be utilized to sustain this project in further Doctor of Nursing Practice or general College of Nursing work. Stakeholders such as nurses who provide foot care at shelters, day centers, or supported housing staff would be interviewed to add dimensionality to the phenomenological exploration. Other diresctions may include the creation of tailored training plans that incoporate considerations for foot care in populations with SMI and expanding upon this project with a larger population base, interview length, and multiple sites. Further focus on the site itself could foster sustained and mutual relationships for the organization and the Seattle University College of Nursing, which could include securing grants, program development for foot care, or a similar service.

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Appendix A

Image of Foot Care Set-Up

Appendix B

Recruitment Flyer

College of Nursing
Seattle University
IRB FY2023-008

Stop in to GLA for FOOT CARE
& to SHARE YOUR EXPERIENCE with a Registered Nurse!

DROP-IN DURING WOMEN'S SPA DAYS ON TUESDAYS!
April 25
May 2 & 9

You can participate if you meet the criteria:

- Female gender identity
- Able to communicate in and understand English
- 18+ years old
- Self-reported diagnosis and/or strong suspicion of one or more psychiatric diagnosis
  - This includes substance use disorders!
- Agree to receive foot care **(~30 min)** & participate in a brief recorded, confidential interview **(~10-15 min)** about your experience of nurse-provided foot care -

Eligible participants who complete the interview will also receive a
$20 Fred Meyers Gift Card!

Appendix C

Eligibility Requirements Script

The following script will be verbally utilized by the principal investigator to determine eligibility of participants.

I am going to list the eligibility requirements. Please answer "yes" if the statement does apply to you and "no" if the statement does not apply to you. Please ask for any clarification as needed.

- Do you identify as female?
- Do you understand and are you able to communicate in English?
- Are you 18 years of age or older?
- Have you previously been informed by a healthcare provider or believe to have a diagnosis of one or more mental illness that makes life challenging (to include: major depressive disorder (MDD), any anxiety disorder, bipolar disorder, psychotic disorder) and/or substance use disorder?
- Do you understand that foot care is a healthcare service and as such is not without physical risks?
- Do you agree to receive foot care, which will consist of you sitting in this chair for up to 1 hour, having your feet cleaned, toenails and calluses trimmed and sanded as needed, feet cleaned again, lotion applied, and, if you would like, toenails painted?
- Are you willing to respond to some interview questions about your experiences with foot care?
- Are you willing for me to record our final interview with my iPhone and voice recorder, or if you object, would you be more comfortable with me taking handwritten notes?
- Do you understand that at any point you can stop the process or interview without any repercussions?

All answered with YES: eligible to move to next step
Any answered with NO: individual is not eligible

If the participant requests any clarification regarding any aspects of the above questions, the principal investigator will expound, clarify, or otherwise simplify as pertinent.

Appendix D

Consent Process Script

Template for principal investigator to verbally summarize research, prior to obtaining consent.

(1) Background for Consent:

TITLE: Nurse-Provided Foot Care for Populations with Severe Mental Illness: A Phenomenological and Nursing Caring Theory Approach

INVESTIGATOR: Sarah Foster RN, doctoral student at Seattle University

PURPOSE: You are being asked to participate in a project that seeks to investigate how people with severe mental illness and/or substance use disorder(s) are impacted by and directly experience nurse-provided foot care**.** After receiving foot care for 30-45 minutes *[foot care described, see Section 8.3 on IRB application*], you will be asked to complete a verbal recorded (or handwritten by PI) survey which will take about 10-15 minutes.

SOURCE OF SUPPORT: This study is being performed as partial fulfillment of the requirements for the **doctoral** degree in nursing practice at Seattle University.

RISKS: There are no known risks associated with this study. However, as with any healthcare service, there is a low risk of physical injury. First aid supplies are ready and provided in the unlikely event that you receive a cut. If there is any perceived negative emotional response and/or undue stress, the patient will be directed to appropriate staff and/or the Crisis Connections Hotline.

BENEFITS: You will receive thorough nurse-provided foot care, to include cleaning of feet, trimming and sanding of nails and calluses as applicable, application of lotion and/or new socks as desired, answering of questions/patient education regarding foot care, and any counseling by the registered nurse as appropriate. Potential societal benefits include reduced health care expenditures due to preventative foot care, increased willingness for marginalized populations to engage in care, and evidence-based research that could influence how foot care is provided to populations with severe mental illness.

INCENTIVES: Participation in the project will require no monetary cost to you. You will receive socks, the file used on you, the toe separators if you would like, and a $20 Fred Meyers gift card at the completion of the interview.

CONFIDENTIALITY: Your name or any information that would be considered to be an "identifier" will not be written down or recorded. Your name will never be used in any public dissemination of these data (publications, presentations, etc.), and any data disclosed that might identify you will be redacted. All research materials will be stored on this voice recorder, iPhone, and notebook as needed, with no connection to the cloud or internet. Human subjects research regulations require that data be kept for a minimum of three (3) years. When the research study ends, any identifying information will be removed from the data, or it will be destroyed. All of the information you provide will be kept confidential,

although as I am a mandatory reporter confidentiality will be broken in the event of any concerns of serious harm to yourself or others; please ask for clarification on this as needed.

RIGHT TO WITHDRAW: Your participation in this study is *voluntary*. You may withdraw your consent to participate at any time without penalty. Your withdrawal will not influence any other services to which you may be otherwise entitled and you will receive the $20 Fred Meyers gift card regardless.

SUMMARY OF RESULTS: A summary of the results of this research will be supplied to you, at no cost, upon request. This will be available by the end of June 2023. If you would like to be provided with the results, please email me at sfoster@seattleu.edu.

(2) Consent Process:

1) Assessing capacity to consent:
    a) *"What do you know about the goals of this research and why we're here today?"*
        i) At which point the principal investigator and the individual will engage in a brief discussion about research intentions/goals
    b) *"What does 'consent' mean to you?"*
        i) Proceed to verbal consent process
2) Kathryn Whitehill and Janice Duffell, the GLA program manager and director, respectively, will have assessed patients per their specialties (will confirm degrees/specializations).
3) As part of this process, the PI as an RN with 3+ years of experience in psychiatric and SUD nursing will assess their cognitive capacity and ask specific consent questions:
    a) *"What other questions or concerns do you have for me?"*
    b) *"Do you consent to this study?"*
4) Assessing understanding of when confidentiality will be broken:
    a) *"As a Seattle University student, I may be required to break confidentiality in accordance with state law if disclosure is necessary to prevent or lessen a serious or imminent threat to the health or safety of a person or the public. Do you consent to these conditions?"*
5) Not stated to participants: Individuals who do not meet criteria but have gone through the consent process will still receive an incentive gift card.

Appendix E

Post-Interview Study Information for Participants

Thank you so much for participating! 😊

TITLE: Nurse-Provided Foot Care for Populations with Severe Mental Illness: A Phenomenological and Nursing Caring Theory Approach

INVESTIGATOR: Sarah Foster, RN

PURPOSE: This project seeks to investigate how people with severe mental illness and/or substance use disorder(s) are impacted by and directly experience nurse-provided foot care**.**

SOURCE OF SUPPORT: This study is being performed as partial fulfillment of the requirements for the doctoral degree in nursing practice (DNP) at Seattle University. Questions regarding the study process can be directed to me and/or Seattle University's review board: irb@seattleu.edu.
***SUMMARY OF RESULTS*:** A summary of the results of this research will be supplied to you, at no cost, upon request. This will be available **by the end of June 2023.** If you would like to be provided with the results, please email me at sfoster@seattleu.edu. I will also plan to provide paper copies to GLA!

Appendix F

Semi-Structured Interview Questions

- *As these are semi-structured interview questions, order and clarification varies as needed on a case-by-case basis: If the participant requests any clarification regarding any aspects of the above questions, the principal investigator will expound, clarify, or otherwise simplify as pertinent.*
- Start by reminding participant:
    - Expected time to complete: 10-15 minutes.
    - This interview will be recorded or handwritten notes will be taken without any identifying information; the interview will be transcribed, coded, and be held confidentially for 3 years as required by Seattle University.

Interview Questions:

1. What was the experience of foot care like for you – physically, mentally, and/or emotionally?
2. What were the best and worst parts of foot care, and why?
3. What were the most and least important parts of foot care for you, and why?
4. Have you ever had foot care in a health care setting before, and why or why not?
5. Is there anything else you would like me to know?