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Lived experiences of Jamaican hospital patients with delayed wound healing

Christopher F. Ekpo, Edith M. Duff, Ellen Y. Bailey, Jascinth L.M. Lindo *

The University of the West Indies School of Nursing, Faculty of Medical Sciences, The University of the West Indies, Jamaica

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ABSTRACT

Introduction: Many individuals suffer from chronic or complex wounds that can be very difficult to heal and cause severe pain and hardship. In the absence of any evidence based local information on the topic, this study explored the lived experiences of Jamaican hospital patients with delayed wound healing using physiological, psychological, socio-cultural, developmental and spiritual perspectives.
Methods: A qualitative descriptive study design with a purposive sampling method was used to select five patients, two males and three females (aged 33 years old to 56 years old) from a regional hospital in western Jamaica, who were recruited into the study. They each had a single chronic ulcer on an extremity. Following ethical approval and informed consent, individual interviews were conducted and thematic analyses were done on the data.
Results: Diabetes mellitus and infection were the etiologic factors in their delayed wound healing. All of the participants experienced social isolation, low self-esteem, "frustration", job loss/loss of man hours, financial dependence and impaired physical mobility. They desired improved communication with healthcare personnel, more supportive and caring attitudes from family and caregivers; as well as enhanced learning experiences to acquire the self-care skills needed for all aspects of diabetes control and wound care.
Conclusions: The patients' lived experiences and stated needs should be noted by all caring health professionals. Future interventions and care plans should address all the perspectives experienced and described by these patients.

Key Words: Chronic disease, Delayed wound healing, Diabetes, Lived experiences, Self-care skills, Social isolation

1. INTRODUCTION

Most persons will experience some type of wound in their lifetime. Many will suffer from chronic or complex wounds that can be very difficult to heal and cause severe pain and hardship.[1] While the healing of wounds is uneventful for most persons, there is a growing cohort of clients that suffer from delayed wound healing with profound impact on the sufferer and healthcare provider.[2,3]

The term delayed wound healing is healing that takes longer than anticipated given appropriate therapy. The Wound Healing Society defined a chronic wound as one that has failed to proceed through an orderly and timely repair process to produce anatomic and functional integrity.[4] The label chronic or delayed was applied to wounds in which compromised healing was anticipated, usually because of complex underlying pathologies such as diabetes mellitus, vascular disease, malignancy, malnutrition, or morbid obesity.[5–8] Other factors which adversely affected wound healing included drug use, hypoxia, the presence of another wound, nutritional

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*Correspondence: Jascinth L.M. Lindo; Email: jaslindo@hotmail.com; Address: The University of the West Indies School of Nursing, Faculty of Medical Sciences, Mary J Seivwright Bldg., 9 Gibraltar Camp Way, The University of the West Indies, Mona Campus, Kingston 7, Jamaica.

problems and tissue necrosis. Diabetes delays wound healing by diminishing sensation and arterial inflow; protein calorie malnutrition and deficiencies of vitamin A, C and zinc also impair the normal wound healing mechanism.[9]

Older adults are more prone to delayed wound healing because the protective layers of the skin diminish with age, placing them at greater risk of injury.[10] Advanced age is associated with an increase in prevalence of multiple causative factors, including cardiovascular disease, diabetes mellitus and simple wear and tear.[11] Extremity ulcers, including venous, arterial and neuropathic (diabetic) ulcers and pressure related wounds account for serious morbidity especially in adults.[12]

Patients with chronic wounds often require assistance in performing daily tasks and activities such as walking and bathing and the inactivity can lead to further comorbidities such as obesity associated with a sedentary lifestyle. The impact of the resulting loss of self-esteem, continued pain and possible depression can be difficult to quantify.[1] A chronic wound can control life as the individuals may have to cope with specialized devices or beds, lack of mobility, dressing changes, drainage, odor, clothing limitations and sleep deprivation.[13] Wet shoes and stockings and the accompanying odor often interfere with normal social or family interactions.[14]

A non-healing wound may prevent continued employment with attendant psychological and economic ramifications and may contribute to time lost from work, job loss and adverse effects on finances.[15] Patients often experience extreme fear, anger, depression and a negative self-image.[16] Clients with delayed wound healing may suffer neglect which can lead to malnutrition and further morbidity and higher mortality rates such as that associated with the diabetic foot.[17]

While pain emerged as the most profound experience of chronic leg ulceration, leakage and smell also caused a great deal of distress especially as they were often associated with repeated infections. Irregular dressing of an exuding wound may further delay healing as an overly wet wound may damage the wound bed and surrounding skin.[18] Odor or malodor was often the result of a multiplication of and colonization by microorganisms in a heavily exuding wound.[19]

The incidence of chronic wounds in the USA was expected to rise significantly to an estimated five to seven million per annum.[10] In India, the prevalence of chronic wounds was estimated at 4.5 per 1,000 population whereas, in China, the incidence of leg ulcers in surgical hospitalized patients was 1.5% to 20.3%.[20–22] More than 75,000 legs were amputated in Mexico for diabetic neuropathy during the year 2000.[23] A study of 300 diabetic patients in Cameroon recorded an incidence of 26.6% for foot ulceration.[24] In Zimbabwe, pressure ulcers were more common among patients with acquired immune deficiency syndrome (AIDS).[25] However, in India, they were associated with systemic conditions including diabetes, atherosclerosis, tuberculosis and leprosy.[21] As in other developing nations, the problem of chronic wounds in India was exacerbated by demographic factors such as low literacy rates, poor access to healthcare, inadequate clinical power and poor healthcare infrastructure.[26]

The prevalence of active foot ulcer varies from approximately 1% in certain European and North American studies to more than 11% in some African countries. The incidence of chronic wounds varies with reported rates of 0.2% to 1% of the population in developed countries having a venous ulcer, 0.5% having pressure ulcers and up to 15% of persons with diabetes may develop a wound.[11] In the USA, estimates suggested that as much as $12 billion USD was spent yearly to treat chronic leg wounds and pressure ulcers.[27] Within Australia, the cost of inpatient care of chronic wounds was estimated at $8,734.00 AUD per admission.[2] Australia's national health expenditure on wounds such as ulceration of the legs was estimated at $365-$654 million AUD.[2] However, there were no such estimates for Jamaica or elsewhere in the Caribbean.

1.1 Aims and objectives

The aim of this study was to explore the lived experiences of patients hospitalized in Jamaica with delayed wound healing. It will describe some of the challenges that Jamaican patients encounter during the prolonged wound healing process for the greater understanding of nurses and other healthcare providers. The objectives of the study were to describe the clients perception of the factors that may have led to delayed wound healing, the psychological outlook of patients with delayed wound healing and determine any socio-cultural effects of delayed wound healing on patients.

1.2 Theoretical underpinnings of the study

This descriptive qualitative inquiry was deemed necessary after reflecting on Betty Neuman's systems model of nursing[28] in caring for clients requiring chronic care. The model purports nurses promote stability of the client system by accurately assessing possible effects of environmental stressors. It identifies five variables contained in all client systems including physiological, psychological, socio-cultural, developmental and spiritual.[29] These variables were used to develop a framework for understanding the issue at hand.

Polit and Beck (2012) describes phenomenology as a method by which nurse researchers gain insight into the clients' lived experiences.[30] Phenomenology, though ideal was avoided; heeding the pitfall of labelling the study as either "Heideggerian or Husserlian" phenomenology without fully understanding "the underpinnings and philosophical assumptions".[31–33] In contrast, this qualitative descriptive study draws from naturalistic inquiry and purports a commitment to studying the clients experience with chronic wounds in its natural state with interpretations of low-inference and of general consensus among researchers.[32]

2. METHODS

2.1 Research design

A qualitative descriptive design which incorporated eclectic qualitative methods of various textures, tones, and hues was used for this study which was conducted at a regional hospital in western Jamaica. Adult patients with a chronic wound (present for longer than eight weeks) admitted to the any of the three surgical wards at the hospital were eligible for recruitment for this study. Twelve in-patients who met the inclusion criteria were engaged. The clients were all of African ethnicity and each had a single chronic ulcer on an extremity. The homogenous strategy of the purposive sampling method was used to select five consenting patients who were judged to be willing to share their experiences, typical of the population and particularly knowledgeable about the issues for the study.[34] A minimum of five participants was recommended for qualitative inquiries.[30]

2.2 Data collection

Following informed consent, a pretested semi-structured, open-ended, in-depth interview guide was used to conduct private individual interviews with the respondents regarding their lived experiences with delayed wound healing. Questions were asked with follow-ups to elicit information on patients' experiences and verbal and nonverbal cues were also noted. Interviews were continued until saturation of themes was obtained.[35] The interviews did not exceed one hour and on two occasions a second interview was needed to achieve saturation of the data.

Validity and reliability were achieved by bracketing the researchers' views, building rapport and encouraging candor, listening intently while preparing to ask the next question, keeping on track and handling personal emotions.[30,33] The interview guide was pretested using two patients from the University Hospital of the West Indies, who met the sampling criteria. This ensured its appropriateness and the extent to which it comprehensively captured the lived experiences of the patients.[30]

2.3 Data analysis

Four researchers had input into the interpretation of the data including a postgraduate student and three nursing faculty who supervised the research. Transcription of data obtained from the interviews was conducted followed by contents analyses. The analysis process began with preexisting coding systems which were modified as the themes emerged. To ensure accuracy, the researchers returned several times to the original tape recording and transcripts to validate findings and to incorporate any new data into the emerging themes. All researchers achieved consensus on the final conclusion of the analysis.

The University of the West Indies and the Regional Health Department's Ethics Committees both approved the study and the rights of the participants were protected. All information was kept confidential. Patients with altered consciousness and or any condition which prevented them from giving informed consent were excluded from the study.

3. RESULTS OF THE STUDY

In this section the demographic characteristics of the clients are described and findings are presented based on the objectives of the study and the emerging themes.

3.1 Demographic characteristics of respondents

Five participants: two males and three females were interviewed. The youngest respondent was 33 years old and the eldest was 56 years old. Three of the respondents were married, two were single and all had one to three children as dependents. All participants had a means of livelihood prior to their prolonged hospitalization. One was an electrician, one a small scale farmer and three were self-employed and operated small restaurants or retail stores (see Table 1). Four had single ulcers on the lower extremity and one had a single ulcer on an upper limb.

Table 1. Demographic characteristics of respondents ($n = 5$)

Sex	Age (years)	Marital status	Occupations	Number of children
Male	38	Married	Electrician	One
Female	33	Single	Self employed	Three
Female	56	Married	Self employed	Three
Female	55	Married	Self employed	Three
Male	44	Single	Farmer	Two

Themes were identified on the etiologic, psychological and sociocultural effects of delayed wound healing. Specific themes also emerged on the developmental (physical and economic) and spiritual effects of the problem.

3.2 Client's perspective on causes of illness

All of the participants had been diagnosed with diabetes mellitus for periods of 5-15 years, had fungal infections, gangrene and trauma as predisposing factors to their chronic extremity ulcer formation.

> "They told me it was fungus that was on my foot but they did not tell me what type of fungus it was. I know I had diabetes, it is now three years since the first amputation".

> "They say I am not controlling the diabetes and I got the wound when I fell down".

> "I was washing some clothes and after that, I felt my finger started burning, I went to the doctor who gave me antibiotics and pain killer but it did not help".

The above statements when probed, revealed a lack of knowledge on the part of the participants despite the duration of their diabetes mellitus. The participant who was told he had a "fungus" had a below knee amputation three years before and was cautioned about the possibility of amputation of the other leg.

3.3 Interaction with health system

The informants expressed their frustration with healthcare providers, especially physicians, who were apparently held responsible for inadequate client education and poor communication. They appeared to be of the view that the nurses did what the doctors instructed them to do while the doctors could have done more to ameliorate their conditions.

> "The doctors did not do their job well because they didn't do anything to stop the spread of gangrene and fungus and I don't feel good about their attitude".

> "I feel very bad because they don't say whether they are going to cut my foot or not but kept me here until it became smelly and filled with pus".

> "I don't have problem with the nurses because they dress my foot every day and they are not doctors. They just follow the doctors' orders".

Although the anger and frustration were directed mostly to the attending physicians, modern day nursing was considered by the informants to be more than just "wound dressing". Therefore, in the absence of information from physicians, the level of advocacy and teaching on the part of the nurses were also considered by the informants to be inadequate. All of the respondents knew that the delay in the wound healing was due to their underlying diabetes. The emerging theme was infection with the respondents mentioning diabetes, "whitlow", gangrene, fungus and trauma.

3.4 Categories and themes identified

Table 2 summarizes the reported categories and themes identified in analyzing the transcript.

Table 2. Summary of categories and themes revealed

Categories	Themes
Cause of illness	Infection and delayed wound healing not attributed to diabetes
Psychological outlook	Low self-esteem, anger and frustration
Sociocultural effects	Reduced support from family and friends, withdrawal, social isolation, sleep pattern disturbance
Activities of daily living and ability to earn a living	Job loss/loss of man hours, financial dependence/strain, impaired mobility, self-care deficit
Spiritual life	Decreased enthusiasm and resilience
Interaction with health system	Inadequate communication and patient education

3.4.1 *Psychological outlook*

Low self-esteem

Respondents admitted feeling "down" and not being able to participate in social activities as they used to do. *"I felt down, I couldn't go out and party"*.

3.4.2 *Socio-cultural effects*

Reduced support from family and friends

The respondents verbalized not having all the support they needed from family and friends. *"They don't visit as I want them to but when I ask, they say things are hard"*.

Withdrawal

The respondents verbalized feelings of depression and trying to "cage in" and not wanting to be in the presence of friends, family and other visitors. They expressed the feelings of wanting to be by themselves. *"Sometimes I want to be left alone"*. *"Sometimes I get so sad and don't want anybody to visit me"*.

Social isolation

Social isolation also stood out as one of the themes as respondents said they experienced being "despised" by friends, family and the general public. *"When the leg got the fungus, so many people did not want to come around me". "Sometimes they tell me they smell the wound. Even if they don't tell me, I notice the way they make their faces when they come around me".*

Sleep pattern disturbance

Respondents expressed changes in their sleeping pattern which they attributed to variable issues such as pain, psychological trauma and general discomfort. *"Sometimes it affects how I sleep; I feel the pain and think about it a lot". "I don't sleep well, I am always very uncomfortable".*

3.4.3 *Activities of daily living and ability to earn a living (developmental)*

Job loss/Loss of man hours

All the respondents had different occupations or businesses before the ailment, but expressed the inability to continue working or having to hire extra hands to assist them in the execution of their businesses. *"I get work where I have to go to certain locations but I can't do that anymore". "My husband and I did the business but since I am in hospital we hired somebody to assist and have to share the income to pay the person".*

Financial dependence/strain

Respondents stated that they became financially dependent on their relatives and friends after their illness. Some verbalized having to do that against their will or character and some who had savings had depleted them with the long hospitalization experience. *"When I want something, majority of times I have to be calling my relatives and friends and sometimes they don't have it to give me and I am not used to that". "Now I have to depend on people to assist me and I have to be satisfied with whatever I receive". "When I have to buy medication, when the hospital pharmacy does not have it, it is very hard". "It is draining my savings because I keep spending but not making money".*

Impaired mobility

Respondents stated that the chronic nature of their wounds had taken a toll on their ability to move about even before they were hospitalized. *"I am always here; this wound has prevented me to even go out to look for a new job". "I couldn't get up and wash my clothes". "It took me 45 minutes to rake the leaves in my yard but since this wound, before admission I would use almost two hours to do the same thing and when I finish, I feel as if I have done an entire day's work".*

Self-care deficit

The chronic condition had a profound impact on much of the respondents' activities of daily living as they all admitted having lost the ability to do one thing or the other. *"I can only tidy myself but can't bathe". "I can't bathe myself or even comb my hair". "Before admission, I could not take care of my home anymore".*

Figure 1. Adaptation of Betty Neuman's Systems Model (person paradigm) reflecting the lived experiences of Jamaican hospital patients with delayed wound healing

3.4.4 *Spiritual life*

Decreased Enthusiasm

All the respondents verbalized a decrease in their ability to participate in church activities. There was an inference of resignation and waiting for God's time in the healing process. *"I feel spiritually down but God has never failed me; though I am not able to worship as I used to". "Right now, I feel down and struggle to pray at times".*

This study was guided by the person paradigm of the Betty Neuman's systems model which proposes the human being as a client system which is layered multidimensional.[28] Figure 1 shows a model constructed based on the lived experience of clients with chronic wounds in the Jamaican setting. The client's perception of the causes of the illness and interactions with the health system are new constructs included in the model.

The respondents' lived experiences of delayed wound healing included themes on the cause of the wound and the psychological, socio-cultural, developmental (economic and physical) and spiritual aspects of their lives (Box 2). The respondents were 33 to 56 years old and were younger than those in the study of Goldberg and Beitz (2010) who reported the lived experiences of clients, who were older than 65 years.[11]

Infection emerged as the main theme when participants were asked how they viewed the causes of their unhealed wounds. All the participants had a history of diabetes mellitus of five to 15 years duration, yet they did not primarily attribute their delayed wound healing to diabetes but to "infection". Poor circulation in the limbs of a diabetic patient slows the healing process. Diabetes impairs wound healing by diminishing sensation and arterial inflow.[9] Infection can lead to an affected limb being amputated as some of the participants had already experienced. This regional hospital had an average of 41 lower limb amputations in diabetics for each of the years from 2005 to 2010.[36]

The patients blamed the physicians and to a lesser extent, the nurses for allowing their wound infection to progress. This suggested a deficit in communication and a need to improve the quality of the diabetes education offered to assist clients in foot protection, better self-care and control of their diabetes. The psychological impact of delayed wound healing contributed to their low self-esteem, anger and frustration which were the common themes in this study. Each participant stated that at "one point or the other" they preferred to be left alone and not be visited by anybody. Depression among clients with chronic wounds has also been previously reported.[1,37]

There is evidence to suggest that psychological distress such as depression can modulate the healing of chronic wounds. Psychological distress was a greater predictor of lengthened wound healing than demographic and medical factors.[38] This was supported the work of Williams *et al.*, (2011) in which diabetic Veterans Administration clients in the US with higher depressive scores were 33% more likely to have amputations than did their counterparts.[37] While Macdonald and Ryan (2010) acknowledged difficulties in the quantification of depression, the team concluded it was certainly real in patients with chronic wounds; highlighting the importance of the use of a holistic model such as Neuman's System Model in the care of these clients.[1,28]

Sleep pattern disturbance was a major theme noted among all participants. They expressed feelings of pain, discomfort and the odor from the wounds. A chronic wound can control a person's life in many ways including sleep deprivation.[13] The common symptoms of chronic ulceration often included pain, exudates, and odor which were frequently associated with poor sleep.[39] Participants in this study experienced reduced support from family and friends and social isolation both overtly and covertly, as some admitted that they were told by friends and relatives that the wound was odoriferous while others would show this by their facial expression. They all admitted that they had a lower turnover of visitors and friends than before they had the wound.

Phillips *et al.* (1994) reported that 58% of their respondents found that caring for their ulcer was burdensome and this had a strong correlation with social isolation.[15] Participants reported a decrease in their religious activity and communion with their creator in the form of prayer. This was a true reflection of other emerging themes of depression, withdrawal, anger and frustration described by Hopkins (2001), who reported that chronic wounds impacted the psychological health of patients particularly if it also affected their ability to perform everyday tasks.[16] While pain emerged as the most profound experience of chronic ulceration, leakage and smell also caused a great deal of distress.[40]

Self-care deficit, job loss and loss of man hours were also experienced by the participants. They stated that they were not able to cater for their simple self-care needs such as washing, bathing and even taking care of their "yards". Some reported having to give up on their previous jobs especially those that required long travel to sites while some had to hire assistants in their businesses. In short, financial constraints were a major fallout from their condition. Macdonald and Ryan (2010) reported that prolonged periods of disability in chronic wounds caused pain and discomfort.[1] This could control a person's life as they may have to cope with clothing limitations, specialized devices or beds and lack of mobility. Leg ulcers correlated with loss of time from work, job loss and adverse effects on finances.[15] In the USA, chronic leg wounds accounted for the estimated loss of two million work days per year.[41]

3.5 Limitations

The researchers acknowledge the limitations of reporting the lived experiences of Jamaican patients with chronic extremity ulcers in only one hospital in western Jamaica. We note the limitations of descriptive qualitative studies and the possibility of failure to achieve saturation of the data given that some participants were interviewed only once. However, the study explored the effect of some important lived experiences of the five affected patients, using Betty Neuman's Systems Theory concepts of the client.[28]

4. CONCLUSION

The findings of this study indicated that delayed wound healing disrupted the participants' lives psychologically, socio culturally, economically, physically and spiritually. Psychologically it manifested as low self-esteem, anger and frustration; socio culturally as withdrawal, social isolation and reduced support from family and friends; economically as loss of job and man hours leading to financial dependence. Physically it was manifested as impaired mobility and self-care deficit and spiritually as decreased enthusiasm and practice of religious obligations. The patients desired improved communication with healthcare personnel, more supportive and caring attitudes, and enhanced learning experiences to acquire the self-care skills needed for all aspects of diabetes control and wound care.

Recommendations

Appropriate education of patients living with chronic wounds and their family members is an important element in the recovery process and must be given high priority by healthcare providers. Wound-related education leads to improved quality of life of clients, continuity of care, shortened hospital stays, and reduced costs.[42] Given the socio- cultural difficulties identified among the group, social services and other members of the health team must facilitate the strengthening of client's social support system.

Finally, encouraging a caring and understanding attitude on the part of all caregivers appears to be indicated among the study populations as major barriers to effective wound care continues to be the lack of interest, enthusiasm, and knowledge shown by many clinicians and general practitioners.[42]

Further research is required using several Jamaican hospitals possibly using the patient reported outcome measures (PROM) and health related quality of life (HRQOL) approaches to quantify and better understand the impact of chronic extremity skin ulcers on Jamaican hospital patients to inform nursing interventions.[43]

CONFLICTS OF INTEREST DISCLOSURE

The authors declared no conflicts.

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