

Satisfaction and adherence of patients with amputations to physiotherapy service at public hospitals in KwaZulu-Natal, South Africa

Chetty Verusia, Dunpath Tanuja, Meghnath Simira, Mothalal Sarisha,
Sewmungal Varuna, Kunene Ursula, Ntshakala Thalente

Physiotherapy Department, Westville, UKZN, Private Bag X54001, Durban, 4000

Abstract

Background: Individuals who have undergone a lower limb amputation require comprehensive rehabilitation from the multidisciplinary team to ensure optimal treatment outcomes and social integration. Physiotherapists play a pivotal role within the multidisciplinary team and offer patients physical and psychosocial rehabilitative care. Determining patients' satisfaction levels and exploring factors affecting adherence to physiotherapy interventions can inform practice and improve service delivery of rehabilitation within resource poor settings such as South Africa.

Objectives: To determine the level of satisfaction with physiotherapy services rendered to acute and sub-acute in-patients with lower limb amputations and to explore factors affecting adherence to physiotherapy intervention.

Methods: A prospective survey of 35 patients with lower limb amputations from four public hospitals in South Africa was undertaken. A modified version of the Hampstead rehabilitation centre patient satisfaction questionnaire was utilised.

Results: Majority of participants were satisfied with the physiotherapy services whilst a few reported dissatisfaction. Three themes emerged whilst exploring the patients' experience relating to adherence to physiotherapy programmes. Themes included service delivery, patient-therapist interaction and participation barriers and facilitators.

Conclusion: Recommendations aimed to improve quality of care and healthcare outcomes thereby enhancing the participants' adherence to the physiotherapy programme.

Keywords: amputation, patient satisfaction, patient adherence, physiotherapy.

DOI: <http://dx.doi.org/10.4314/ahs.v15i2.19>

Introduction

Patient satisfaction within the rehabilitation framework needs to be established as it affects the success of management and adherence to treatment regimes. Satisfaction with healthcare services often impacts the quality of care and has consequent effects on the marketability of essential services.¹ Although, patient satisfaction is multidimensional and can be jaded by emotion, rehabilitation professionals can use the feedback to improve or modify practice.²

Furthermore, by exploring the factors that affect adherence to rehabilitation, professionals can understand the effect of emotion and personal experience on the service offered. Patients with lower limb amputations are among the rehabilitation recipients of ongoing care. They have multiple physical, psychological, environmental and socio-economic barriers and require patient-centred, comprehensive rehabilitation from the multidisciplinary team to ensure optimal treatment outcomes, social integration and economic self-sufficiency. Physiotherapists are an essential component of the multidisciplinary team², and offer patients the future of optimal function in daily life. Patient co-operation and willingness to participate in the rehabilitative process is a key element of physiotherapy, as it is a scope of practice involved with the functioning of individuals, as well as optimizing independency³.

The subjective nature of patient satisfaction research in rehabilitation contributes to an individuals' focus on the emotive paradigm. Patients who are positive about treatment tend to adhere to the therapy regimes and offer good feedback to other individuals regarding the

benefit of such services.^{1,2} Facilitators of patient satisfaction highlighted in the literature was the development of an effective communication basis with the therapist; the patient is treated with humility and acknowledged as an individual and when the therapist displays confidence in the patient as well as themselves.⁴ Patients who are pessimistic may be inclined to perpetuate negative experiences to friends and family and may not adhere to rehabilitation routines.^{1,2} By gaining an understanding of patient perspectives the authors of this paper sought not only to determine the satisfaction of patients but further sought to explore factors that affect adherence to rehabilitation.

Methodology

Design: In order to achieve the objectives of this study, the authors chose a prospective cross-sectional survey design with use of both open-ended and closed-ended questions.

Recruitment and selection of participants: Purposive sampling was employed in the selection of four public hospitals in the province of KwaZulu-Natal, South Africa. All four sites service amputee in-patients in the acute and sub-acute phases of rehabilitation.

Ethical considerations: Ethical clearance was obtained from the University of KwaZulu-Natal and permission was granted from the relevant authorities at study settings. Voluntarily consent for participation in the study was confirmed and no incentives were offered for participation in the study.

Inclusion criteria: Thirty-five adult in-patients with lower limb amputations met the inclusion criteria which included the following: patients had to have received physiotherapy for more than two sessions; they had to be within the acute and sub-acute stages of healing and had to be cognitively sound.

Data collection instrument: A modified version of the Hampstead rehabilitation centre patient satisfaction

questionnaire² was utilised. For purposes of this study, the instrument was translated into isiZulu prior to a pilot study. The survey comprised twelve closed-ended questions that required responses using a five point Likert scale on satisfaction of physiotherapy services. The questions were positively phrased which deferred from the original survey² as the negative questions proved to be a challenge for participants during the pilot stage of this study. Content validity was ensured through having the questionnaire appraised by researchers in the field. The final data collection instrument consisted of three sections. Section 1 had questions related to demographic data. Section 2 included the modified Hampstead rehabilitation centre patient satisfaction questionnaire² and Section 3 included 4 open-ended questions related to factors that affect adherence to treatment.

Data analysis: With the assistance of a statistician, the data from the questionnaire was analysed using the Statistical Package for Social Sciences (SPSS) version 21.0 and was reflected as descriptive statistics. Cronbach's Alpha which measures internal consistency of the questionnaire was also computed. The authors opted for a thematic analysis⁶ for the four open-ended questions. Trustworthiness and credibility were ensured during the qualitative analysis stage to ensure rigor.⁶

Results

Thirty five patients participated in the study, 14 were female and 21 male. Majority of the participants were married. The mean age was calculated to be 56 years. Twenty four patients were of African ethnicity, 8 Indian, 2 White and 1 of Mixed descent. One participant had a tertiary education while the other patients were unemployed or had low income jobs.

Table 1 illustrates the results of the closed-ended questions and the frequencies of responses. The general trend reflected that majority of the participants were satisfied with the Physiotherapy service. Cronbach's alpha was computed to determine the internal consistency of responses and revealed a score of 0.847 which indicates a high level of consistency.

Table 1: Patient satisfaction with physiotherapy services

	Strongly agree	Agree	Unsure	Disagree	Strongly disagree
1. My physiotherapist gave me good advice and treatment	25.7%	57.1%	0%	11.4%	5.7%
2. I did receive enough physiotherapy	17.1%	42.9%	5.7%	31.4%	2.9%
3. My physiotherapist listened to my concerns	25.7%	60%	5.7%	8.6%	0%
4. My physiotherapist answered my questions in a way that I could understand	28.6%	62.9%	5.7%	2.9%	0%
5. My physiotherapist involved me in decisions regarding my physiotherapy care	28.6%	42.9%	14.3%	14.3%	0%
6. My physiotherapist provided me with adequate explanations or instructions regarding my treatment	37.1%	37.1%	2.9%	22.9%	0%
7. My physiotherapist involved me in physiotherapy plans during my stay	17.1%	48.6%	11.4%	22.9%	0%
8. My physiotherapist was kind, caring and courteous	37.1%	62.9%	0%	0%	0%
9. The timing and location of physiotherapy was convenient	28.6%	54.3%	11.4%	5.7%	0%
10. The physiotherapy treatment area was neat and clean	40%	45.7%	11.4%	2.9%	0%
11. My privacy, dignity and comfort during physiotherapy was considered	40%	51.4%	0%	5.7%	2.9%
12. Overall, I found the physiotherapy service satisfactory	31.4%	57.1%	8.6%	2.9%	0%

The data from the open-ended questions are reflected in Table 2 as three emergent themes namely: Service de-

livery, Patient- practitioner interaction and Participation barriers and facilitators.

Table 2: Thematic representation of patient's experiences with physiotherapy services

Theme	Sub-Theme	Category	Node
Service Delivery	Conduct and Professionalism	Well equipped	"Throughout my physiotherapy sessions my therapist made sure I was okay and managing well with my therapy. The physiotherapist always treated me with respect and in a dignified manner. They show genuine care and ensure my privacy at all times."(Code 23)
		Knowledgeable	
Above and Beyond			
Holistic approach			
		Respect	
Patient-Practitioner Interaction	Communication is key	Everyday language	"the physiotherapist always greets me with a smile and explains everything that I need to know in a way I can understand, they do not use complicated medical words when talking to me."(Code 25)
		Motivation	"If I am making any progress in my physiotherapy, my therapist involves me and provides feedback to me, and I like this... They always involve me in my treatment sessions and include me in the decisions pertaining to my care."(Code 26)
	Progress feedback and Benefits of exercise		
Participation facilitators and barriers	Organizational and environmental	Use of correct equipment	"I think they should spend a bit more time with patients. I have been treated for five minutes. I get to move my leg up and down, in and out... I think overall they need to spend more time with patients." (Unhappy tone)(Code 15)
		Privacy	
Sufficient treatment space			
Adequate treatment time			
		Benefits of Group therapy	" the class is enjoyable because we interact with each other and we make jokes, it is fun...I enjoy the amp class and I benefit a lot from it" (Code 18)
		Reflection and Feedback	
		Pain experience	"Sometimes I wake up in the morning feeling down and not feeling like doing the exercises. Sometimes the medication they give me makes me feel tired and feeling like sleeping. The pain from the wound makes me stop doing the exercises." (Code 14)
		Psychological factors	
		Stigma	
		Social integration	
		Self-goals	"Maybe I'm lazy. It's a very demotivating experience to lose a limb and I feel more discouraged not to do the exercises. I felt and still feel terrible. In think I should have been referred to a psychologist." (Code15)
			"We do not go to the gym, I do not know why. When we are doing the exercises everyone see me and laugh at me when I lift up the stump."(Code 11)

Discussion

Results of Survey

Results of the survey indicate that patients were generally satisfied with the physiotherapy service. Patients who are satisfied with the service delivery are adherent to therapy regimes and will in turn perpetuate positive reference and referrals to the rehabilitation practice¹. A study by Stiller² iterates the necessity for assessing patient satisfaction as it is a valuable component in the evaluation of health-care outcomes in healthcare settings. A positive outcome indicates a good standard of physiotherapy care but the recommendations need to be addressed to optimize quality of care offered in practice.

In an endeavour to explore amputee in-patients satisfaction and adherence to the physiotherapy service three pertinent themes emerged i.e. Service delivery, Patient-practitioner interaction and participation barriers and facilitators.

Service delivery

The three sub-themes that emerged included the therapist's conduct and professionalism, protection and safety and lastly collaboration and communication. Within the therapists' conduct and professionalism sub-theme, the personal and professional qualities of the physiotherapist are considered essential particularly in situations where patients' privacy is threatened. Respect and empathy were expressed as fundamental in quality care as cited in another study.⁹ The bioethical principle of non-maleficence where health care providers should avoid causing harm to their patients was echoed, by the therapist's conduct in this study. They ensured patients' safety was maintained as a priority in management.¹⁰ The first intent to do no harm is the foundation of medical ethics in every situation, and results subsequently lead to the development of a mutual trusting relationship between patient and physiotherapist which ensured satisfaction with the service.¹⁰ On the contrary this principle was not upheld in the management of a single patient in this study and this resulted in feelings of fear and dissatisfaction during the intervention sessions.

Patient-practitioner interaction

The communication between the patient and practitioner was explored as this influenced patient satisfaction and adherence to physiotherapy treatment. Effective communication consisted of educating patients on

their condition, clear instructions and offering feedback to patients on their progress. Analogously, Beattie¹¹ found a positive correlation with patient-practitioner interaction and satisfaction with therapy. The shared information, education and time spent with the patient reflected greater patient fulfilment. Patients' were encouraged by the therapists' use of lay language and empathetic listening skills. Congruently, Brokalaki¹² emphasized patients distaste for technical language, poor feedback and depersonalized care when communicating with their practitioner. The patients in this study believed that gaining feedback through constructive reporting offered them a clear understanding of their progress continuum. When these were ensured, patient satisfaction and adherence was secured.

Motivation was a driving force that encouraged patients' to adhere to therapy. Patients showed appreciation toward their physiotherapists when the therapist encouraged their active involvement in their personal health and care. As a result, motivation and feedback offered to patients' on their progress, positively affected compliance to their ward exercise program. Functional outcome can be affected by patients' levels of motivation and in turn can result in positive rehabilitation outcomes of treatment¹³. A rehabilitation regimen was studied in patients with bilateral amputation of lower extremities and once again motivation reappeared as a contributing factor¹⁴.

Participation barriers and facilitators

The theme of Participation barriers and facilitators explored organizational and environmental factors, the therapy rendered to patients and personal factors. This theme encompassed the barriers and facilitators that impeded satisfaction and thus affected adherence. The organizational and environmental subtheme incorporated various factors that contribute to an effective therapy session. This included using the correct equipment, ensuring privacy, ensuring sufficient treatment space and adequate treatment time. Petek Ster¹⁵ in their study also proposed that the duration of treatment and consultation time plays an important role in the satisfaction of patients. The study argued that treatment time is affected by the therapist's workload, the condition being treated, organizational aspects and the relationship the therapist shares with the patient.¹⁵ In Stiller's² study recommendations to improve the physiotherapy service

included the equipment; the study did-not detail the challenges with the availability or suitability of equipment. In this study however, participants complained about the lack of equipment as well as the availability during therapy sessions which is common in resource poor settings.

Focusing on ensuring privacy, patients were encouraged by the therapists' handling and maintenance of their privacy during rehabilitation sessions. Karro¹⁶ emphasized the importance of patient privacy in securing the patient's dignity and confidentiality. The South African Patients Right Charter states that "Privacy is a right", thus individuals' privacy should always be ensured and protected by the healthcare provider.¹⁷

Personal barriers to adherence to rehabilitation included the aspects that affected the well-being of participants and included pain experienced, feelings of being emotionally burdened, stigmatization and psychological issues. Pain often caused patients' to be averse to exercises. Although pain is a barrier to rehabilitation and limits function¹⁸, it is a factor that can be managed by physiotherapists. A study of in-patient physiotherapy rehabilitation of amputee patients proved to reduce bodily pain and aided in patients' functional ability¹⁹.

A study by Horgan and MaclaChlan²⁰ stated that in the acute phase post amputation psychological factors such as depression contributed to patients having lower levels of mobility, greater levels of activity restrictions, increased feelings of vulnerability and poor self-rated health. However, a study of amputee patients receiving psychosocial rehabilitation for the management of pain medication as well as behavioural problems proved to be successful.²¹ The referral of patients' to psychosocial therapy in this study would aid rehabilitation. Furthermore, issues of stigma and emotional grief could be addressed with psychosocial rehabilitation by a trained professional within the multidisciplinary team.²¹ A patient-centred, multi-disciplinary team approach is crucial in addressing the emotional, social and physical needs of amputee patients.² Some patients in this study were not referred timeously to other active members of the team despite the evident need; this implied a lack of effective collaboration between healthcare professionals. A study by Chetty and Maharaj²² identified the importance of teamwork but also added that impediments

to collaboration were communication barriers and lack of understanding of roles within the team.

Amongst the facilitators of participation in therapy was patients' setting their own self-goals. This ensured that they were motivated to perform their exercise programme. Stiller² recommended that patient and practitioner should work together in setting achievable goals for rehabilitation and should be guided by patient's expectations of therapy. Other patients were motivated socially to return home so that they could be reunited with their friends and family. Furthermore, many of the patients were the breadwinners of their household hence they were obligated to speedily recover so they could return to work and provide for their families. Pre-operative employment proved to favourably affect the post-operative functional ability of patients in a study by Pohjolainen and Alaranta²³. Career path and achievement also positively influences amputee patient's psychosocial status and subsequently will affect patients' well-being and health.²⁴ Some patients in the study adhered to therapy regimens as they were driven to achieve their premorbid state of functioning as self-sufficient individuals.²⁴

The design of the therapy regime was influential on the adherence of patients. A stimulating exercise programme was adhered too and a lack of lustre regime was abandoned. Group therapy was a major contributor to patients' adherence with regards to their exercise regimen. It promoted a feeling of social support and the shared experiences kept patients motivated. Results in the study by Lubcke¹⁰ were in keeping with the current study as participants' felt encouraged and supported when exercising with individuals with similar conditions.

Conclusion

The findings in the study support the importance of evaluating patient satisfaction and factors affecting adherence in offering quality rehabilitation in health care. Although it is specific to the context of the study, it is valuable in emphasizing the importance of evaluating health care delivery. It provides healthcare practitioners' with tools to not merely evaluate care but to further improve the standard of delivery.² The study could be undertaken at regular intervals at single sites incorporating multiple service providers as an essential measure to impact health care outcomes in resource poor settings such as South Africa.

Conflict of interest

The authors report no real or perceived vested interests that relate to this article (including relations to pharmaceutical companies, biomedical device manufacturers, grantors, or other entities whose products or services are related to topics covered in this manuscript) that could be constructed as a conflict of interest.

References

1. Keith RA. Patient satisfaction and rehabilitation services. *Arch Phys Med Rehabil* 1998; 79:1122–8.
2. Stiller KGC, Drury C. Evaluating inpatient satisfaction with a physiotherapy service: A Rehabilitation Centre Survey. *International Journal of Therapy and Rehabilitation* 2009; 16(7):376-83
3. Hills R, Kitchen S. Toward a theory of patient satisfaction with physiotherapy: Exploring the concept of satisfaction. *Physiotherapy Theory and Practice* 2007; 23(5): 243-254.
4. Mangset M, Dahl T E, Forde R, Wyller T B. 'We're just sick people, nothing else'... factors contributing to elderly stroke patients' satisfaction with rehabilitation. *Clinical Rehabilitation* 2008; 22(9): 825-835.
5. Belza BT, Kinne S, Patrick DL, Ramsey SD. Does Adherence Make a Difference? Results From a Community-Based Aquatic Exercise Program. *Nursing Research* 2002; 51(5):285-91.
6. Creswell J W, Plano Clark V L. Designing and conducting mixed methods research. (2nd ed.). Thousand Oaks, CA: Sage, 2011
7. Darren George PM. SPSS for Windows Step by Step, A Simple Guide and Reference. 4th ed: Allyn & Bacon; 4 edition (August 19, 2002) Language: English; 2003. 61 p
8. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative research in psychology* 2006; 3(2):77-101.
9. Van der Eijk M, Faber M J, Al Shamma S, Munneke M, Bloem B R. Moving towards patient-centered health-care for patients with Parkinson's disease. *Parkinsonism & related disorders* 2011; 17(5): 360-364.
10. Lübcke A, Martin C, Hellström K. Older adults' perceptions of exercising in a senior gym. *Activities, Adaptation & Aging* 2012; 36(2), 131-146.
11. Beattie PF, Pinto MB, Nelson MK, Nelson R. Patient satisfaction with outpatient physical therapy: instrument validation. *Phys Ther* 2002; 82: 557–65.
12. Brokalaki E I, Sotiropoulos GC, Tsaras K, Brokalaki H. Awareness of diagnosis, and information-seeking behavior of hospitalized cancer patients in Greece. *Supportive care in cancer* 2005; 13(11): 938-942.
13. Greive A C, Lankhorst G J. Functional outcome of lower-limb amputees: a prospective descriptive study in a general hospital. *Prosthetics and orthotics international* 1996; 20(2): 79-87.
14. Watkins AL, Liao S J. (1958). Rehabilitation of persons with bilateral amputation of lower extremities. *Journal of the American Medical Association*, 166(13), 1584-1586.
15. Petek Šter M, Švab I, Zivcec Kalan G. Factors related to consultation time: experience in Slovenia. *Scandinavian journal of primary health care* 2008; 26(1): 29-34.
16. Karro J, Dent A W, Farish S. Patient perceptions of privacy infringements in an emergency department. *Emergency Medicine Australasia* 2005; 17(2): 117-123.
17. Patients' Rights Charter. <http://www.doh.gov.za/docs/legislation/patientsright/charter.html>. (Accessed 31/8/2014)
18. Schoppen T, Boonstra A, Groothoff J W, de Vries J, Göeken LN, Eisma W H. Physical, mental, and social predictors of functional outcome in unilateral lower-limb amputees. *Archives of physical medicine and rehabilitation* 2003; 84(6): 803-811.
19. Pezzin LE, Dillingham TR, MacKenzie E J. Rehabilitation and the long-term outcomes of persons with trauma-related amputations. *Archives of physical medicine and rehabilitation* 2000; 81(3): 292-300.
20. Horgan O, MacLachlan M. Psychosocial adjustment to lower-limb amputation: a review. *Disability & Rehabilitation* 2004; 26(14-15): 837-850.
21. Frierson RL, Lippmann SB. Psychiatric consultation for acute amputees: Report of a ten-year experience. *Psychosomatics* 1987; 28(4): 183-189.
22. Chetty V, Maharaj SS. Collaboration between health professionals in the era of antiretroviral therapy. *Journal of the Association of Nurses in AIDS Care* 2013; 24(2): 166-175.
23. Pohjolainen T, Alaranta H. Predictive factors of functional ability after lower-limb amputation. In *Annales chirurgiae et gynaecologiae* 1980; 80:36-39.
24. Olugbemi Olukolade T, Alao I, Adebisi A A. The Role of social support and need for achievement on psychological well-being of below the knee amputees. *IOSR Journal Of Humanities And Social Science* 2013; 18(1): 23-27.