**TITLE: Ambivalence in rehabilitation: thematic analysis of the experiences of lower limb amputated veterans**

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Research Paper

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**ABSTRACT**

**Background:** Knowledge about the organization and factors of importance to rehabilitation of veterans with lower limb amputation is sparse. The aim of this study was, therefore, to improve understanding of the influences of ‘military identity’ on the organization of rehabilitation services and to investigate those factors influential in achieving successful rehabilitation, including interprofessional collaboration between different sectors involved in the rehabilitation of veterans with lower limb amputations.  
**Methods:** We used a qualitative exploratory design, triangulating interviews and participant observation. Data were generated using in-depthsemi-structured interviews (n=6) exploring in-hospital and post-hospital rehabilitation in Danish veterans after unilateral lower limb amputation due to trauma. We conducted four sessions of participant observation, during weekly post-hospitalization rehabilitation and included field notes in the dataset.

**Results:** Two main themes emerged: “Experiencing different identities” and “Experiencing discontinuity in rehabilitation”. The first theme illustrated how veterans actively shift between the identities of disabled person, wounded veteran and athlete according to the context. The second theme illustrated the frustration of negotiating military versus civilian mindsets during rehabilitation and lack of coordination between the public healthcare system, municipal services and the military.

**Conclusion:** Veterans live with shifting identities after returning to civilian life, increasing their awareness of the transition from active service to a new life as a civilian. During rehabilitation, it is important to acknowledge the disparities between the military and civilian mindsets and to integrate the different sets of values, such as structure versus autonomy.

**Keywords:** Qualitative, interviews, participant observation, amputation, lower limb, trauma

**INTRODUCTION**

The involvement in the Afghanistan (Operation Enduring Freedom) and Iraq (Operation Iraqi Freedom) coalitions resulted in 8,358 coalition fatalities and 49,897 US wounded service members in the period from 2001 to 2016 1, 2. The Danish history of participating in international peacekeeping and peacemaking operations changed in 1992 when the Danish government decided to lead a more active security policy. Since then some 66,518 soldiers have been deployed to military missions all over the world 3. Fifty-six Danish soldiers died and 266 were wounded in combat from 1992-2016, corresponding to a mortality rate of 0.08% and a morbidity rate of 0.4% 3, 4. The mortality and morbidity of veterans is primarily caused by improvised explosive devices and rocket attacks 5. The complexity of lower limb amputation caused by these devices entail a long rehabilitation period for the wounded service members often followed by long-term contact with the healthcare system due to ongoing prosthesis adjustments 6, 7.

Until 1963, the Defence Command, Denmark managed a military hospital for the treatment and rehabilitation of war veterans. Since then, these services have been provided by the public healthcare system in an up-front tax paid welfare system. The Copenhagen University Hospital is the primary receiving hospital for the military forces. Civilians and veterans, therefore, receive their rehabilitation together in the same environment and by the same staff.

The Danish Veteran Center was established in 2011 as a service to support soldiers, veterans and their families before, during and after missions8. The dual purpose was to offer support while increasing acknowledgment for the service to the country. The provision of support is for life, providing inter-professional services by military psychologists and social workers assisting with jobs and education. The center has a coordinating function between the military and civilian services.

Acute postoperative in-hospital rehabilitation of veterans after an amputation is crucial as the likelihood of 1-year survival increases among veterans receiving rehabilitation 9. Higher level of amputation, presence of back pain, long duration and high severity of phantom pain along with fewer years of education were all found to be determining factors for health related quality of life (HRQoL) among veterans with lower-limb amputation 10. Furthermore, rehabilitation-related factors such as lower limb strength and balance is significantly related to ability to perform high-level mobility activities 11, participation in sports activities and a high physical activity level is associated with better HRQoL 10, 12 and seeking social support is positively associated with social adaption and lower rates of depressive symptoms in this cohort 13. However, knowledge about the organization in-hospital and post-hospitalization rehabilitation and on motivational factors of importance to rehabilitation among veterans with lower limb amputation is sparse. The aim of this study was, therefore, to increase understanding of the military identity influence on the organization of rehabilitation and investigate factors of importance for successful rehabilitation services, including inter-professional collaboration between different sectors involved in the rehabilitation of Danish veterans with lower limb amputations.

**METHODS**

*Design*

We used a qualitative exploratory design, triangulating semi-structured one-on-one interviews and participant observations during post-hospitalization rehabilitation sessions to investigate organizational and inter-professional collaboration of the rehabilitation of veterans with lower limb amputations. The interview method was chosen to obtain detailed insights of personal experiences and perspectives. Participant observation was chosen as a way to gain insight into the cultural and social aspects between people and to provides us the opportunity to follow-up on specific questions in relation to the interviews 14.

*Participants*

We applied a pragmatic approach of purposefully sampling participant’s 15due to a limited number of Danish veterans with lower limb amputations. Eligible participants were identified through a register of wounded veterans in Denmark organized by the receiving hospital of wounded military personal: Copenhagen University Hospital. Inclusion criteria were selected to obtain a homogenous group of patients that had experiences both of in-hospital and post-hospital rehabilitation. Participants had to be unilateral transtibial or transfemoral lower limb amputees and to be outpatients or to have finished with in-hospital rehabilitation, in order to receive an invitation to participate. Eleven eligible veterans fulfilled the inclusion criteria and were invited to participate in this study. A physiotherapist at the Copenhagen University Hospital contacted the eligible patients and provided them with oral and written information about the study.

*Data generation - interviews*

Individual in-depth semi-structured interviews were conducted by the first author from November 2014 to February 2015, at the location of choice by the participants (e.g. in the participant’s home or at the University). The interviews were conducted in a quiet environment and were planned to last approximately 1½-2 hours. The interview guide consisted of open-ended questions focusing on in-hospital and post-hospitalization rehabilitation. Participants were encouraged to reflect primarily on elements related to their physical rehabilitation. Our main questions were; what are important factors for successful rehabilitation, what motivates you, and how should rehabilitation be organized?

*Data generation – participant observation*

The first author conducted participant observation during four weekly rehabilitation sessions. These post-hospital rehabilitation sessions were open for all wounded veterans who were willing to attend voluntarily and able to participate after the initial in-hospital rehabilitation. A physiotherapist employed at the hospital led the rehabilitation that was located at a military training facility. All rehabilitation sessions lasted two hours and observations focused on the social relationships among the participants. The first author participated actively in the training sessions, wrote field notes on cultural and social interactions between the participants immediately after each session and included the field notes in the dataset.

*Analysis*

Data (field notes and transcripts of interviews) were analyzed using inductive latent thematic analysis, as described by Braun and Clarke 16. Firstly, all transcripts and field notes were read in full length without coding. Secondly, all data extracts were initially coded and the search for underlying themes began by combining the emerging codes. Thirdly, all data extracts were classified in relation to the identified themes. This same process was repeated for the whole data corpus. Any coherent patterns found within the data were then identified. An iterative process, allowing any themes and subthemes to emerge and be redefined until a solid structure was found. Finally, all data extracts that did not fit into any of the themes were once again investigated for identification of additional themes. All interviews were transcribed verbatim and coded in NVivo (v10.2.0 QSR International Pty Ltd.) by the first author. However, in order to enhance the rigor of the analysis, the emerging themes were discussed among all authors (investigator triangulation) allowing more in-depth analysis and better interpretation of findings. Data saturation was reached when a theme appeared with comprehensive descriptions, pertinent examples, and were considered generalizable 17.

*Ethics*

The study complied with ethical principles for medical research as described in the Helsinki Declaration 18. Written informed consent was obtained from all participants prior to the interviews. The participants were informed that the interviews were audio recorded. Participation in this study was voluntary, anonymous, and confidential. The Danish data protection agency approved the handling of data (RH#30-1337). The participants’ names were changed to pseudonyms and personal information about age and time since amputation were presented in clusters, in order to maintain anonymity.

**RESULTS**

Six men with a median age of 32 years (range 25-46) and median time since amputation of 5.7 years (range 2-17) identified from the register of wounded veterans served as participants. Of the eleven veterans with lower limb amputations approached for participation in the study, six consented to take part and completed interviews. All participants were injured by improvised explosive devices and they all had life saving surgery in a field hospital and were subsequently transferred to the receiving hospital in Denmark for further surgery and treatment. All participants included in this study used a prosthesis. The dataset consisted of six transcribed interviews and field notes from four weekly rehabilitation sessions of participant observation (four of the six interviewed participants took part in the weekly rehabilitation sessions), fig. 1. During analysis, two main themes emerged: “Experiencing different identities” and “Experiencing discontinuity in rehabilitation”.

*[Insert table 1 here]* Title:Participant characteristics

*Table 1 legend:* Table 1: Participants presented with pseudonyms and characteristics on age and time since amputation, presented in cluster to maintain anonymity, level of amputation and information on whether they were observed during participant observation or not.

*[Insert figure 1 here]* Title:Study flow diagram

*Figure 1 legend:* Figure 1: Study flow diagram of eligible, included and analyzed data.

**Theme I: Experiencing different identities**

This theme describes how the participants actively chose different identities in different contexts: Disabled Person, Wounded Veteran and Athlete. The three identities were dynamic and changed according to the situation (see Figure 2). The identities described a continuum from negative to positive experiences.

***Disabled Person***

The identity of a disabled person is inherently negative as it describes a deficit. The participants shunned the stigma of disability as they actively tried to appear as normal as possible in public. One of the benefits of being disabled was the disabled person parking permit, for which they all were eligible. They all acquired the permit but none of the participants used it for fear of appearing disabled: “*We all [veterans with amputations] have that disabled person parking permit - but none of us use it.*”[Ken 31-46 years]

The participants took a negative view on disability because they associated it with old age and victimization. *“I found it difficult to relate to the others [non-veteran amputees] as they were at least 60 [years old], had diabetes, their arms were crossed, and they felt sorry for themselves… and you felt - come on!... It felt like we were from two different worlds with different ambitions for rehabilitation and for our subsequent lives.”* [Brian 31-46 years]

Consequently, they applied various strategies to hide their disability, such as covering their prosthesis: “*People can stare, but I get fed up explaining what happened [I lost my leg]*.” [Paul 25-30 years]

Although the participants tried to hide their disability, they could not escape it. If they wished to join a sports club, they were confronted with clubs that catered for the disabled, e.g. the Danish Association of the Physically Disabled with the slogan “a life with possibilities”. *“Many tried out wheelchair basket as it was part of the Invictus Games and was gripped deeply. They have now started in some clubs in the real disability life, in disability clubs, or normal sport if you can call it that… Here they meet other [people with disabilities] and can become role models.“* [Robert 31-46 years]  
In this case, the participants were forced to identify with the disabled, whether they wanted to or not. “*I don’t see myself as disabled, but I have to relate to this some places.”* [Robert 31-46 years]

***Wounded veteran***

The participants identified with the ambiguous term “wounded veteran” in certain settings. The term presents a juxtaposition of negative and positive connotations, as the wounded is unfortunate, while the veteran is primarily celebrated for sacrifice and heroism.

“*Being a wounded veteran gives some advantages due to the public appeal.*” [Ken 31-46 years]

The identity of veteran is, however, a double entendre itself as it instils either admiration or disapproval according to who sanctioned the war. *“One calls it “veteran”, and in my world you are a veteran when you have been on an international mission… However, as I got fired [from the military due to not being suitable for front line missions] I find this lifelong military seal a bit odd“* [Brian 31-46 years]

The participants adopted the identity of a “wounded veteran” if convenient, but not in their daily life and work. “*I don’t tell people my story unless they ask me directly… Nobody wants pity… But sometimes being a wounded veteran can give some advantages.*” [Gary 25-30 years]

***Athlete***

The identity of athlete was positive as the participants valued fitness. *“To be in good shape is important for me. Training for something is always a strong motivational factor, and doing it together with someone is always a lot easier… afterwards it always gives extra energy and a feeling of satisfaction which is a strong.”* [Paul 25-30 years]

They all participated to some degree in either weekly training sessions, training camps or in more specific programs leading up to an event such as Cross-country skiing or Invictus Games initiated by Prince Harry to inspire recovery, support rehabilitation and generate a wider understanding and respect for wounded, injured and sick servicemen and women. Due to the military background, all of the participants were in good shape before the injury and viewed their body as a necessary tool to do their job. The participants perceived physical training as an integrated part of their identity and ongoing testing of physical performance and participation in events were motivating factors:

“*No matter how bad a situation you find yourself in, sports have always been the tool that I have used since I took my first step as a child.”* [Steve 25-30 years]

The participants were familiar with frequent high intensity training and regular tests for physical fitness in the military. “*As soldiers we had to stay in physically good shape and were used to be tested regularly – I missed this during my rehabilitation.”* [Gary 25-30 years, field note]

***Summary of theme I***

In summary, the participants actively chose different identities according to the social situation. Depending on the social context of the situation the participants chose the identity they found most suitable for the given situation, e.g. bringing a training bag (athlete) at the first day in a new social context avoiding the disability to be center of attention or using the “wounded veteran” phrase when fundraising even though feeling ambivalence towards the military identity this phrase implies. Although the participants were impaired, they did not see themselves as disabled. The identity of a wounded veteran was ambiguous and could be avoided or used as an advantage. The participants preferred the identity of athlete, which was closest to their pre-injury identity of being ‘fit for fight’.

Figure 2 presents a continuum of identities used by the participants. The identities are not mutually exclusive but are presented in line with the participant’s interpretation of the identity ranging from the predominantly most negative associations (disabled) to the predominantly positive (athlete).

*[Insert figure 2 here]*Title:Continuum of identities

*Figure 2 legend:* Figure 2: Continuum of identitieswith associations.

**Theme II Experience of discontinuity in rehabilitation**

The second theme describes the participants’ experiences of the organization of rehabilitation (see Figure 3). The sub-themes were “Military versus civilian mindset” and “Physical rehabilitation versus psychosocial reintegration”.

***Military versus civilian mindset***

In general, the participants were frustrated negotiating the military and civilian mindset. This was accentuated when they crossed the boundaries between military and civilian rehabilitation services.

“*There is too big a difference between civilians and military personnel. The public healthcare system should not provide rehabilitation for military personnel, this should be provided within the military.*“ [Steve 25-30 years]

The participants acknowledged that the medic competencies were only available in the civilian healthcare system and that it would be a waste of resources to have military hospitals in such a small country with a good public healthcare system. However, the participants in general found it difficult to adapt to the public healthcare system. “*I missed a sense of order, structure and regimes during my rehabilitation – basically, the military mindset.*“ [Ken 31-46 years]

The authoritarian mindset of the military clashed with the contemporary goals of the civilian healthcare system, where patient involvement and shared decision-making are important values. The participants preferred commands to choices, because choices were experienced as unprofessional. The participants had more confidence in military personnel that gave unwavering commands and were often confused when health care professional attempted to involve the participants in shared decision-making.

“*It is the sloppy attitude of the system, like ‘If you feel like taking ten more (push-ups)’ that is wrong. The physiotherapist should know what is best for me and say:’ do ten of these because this would benefit you’.*“ [Ken 31-46 years]

However, the participants did agree with the concept of shared decision-making in situations where they would achieve the best results. The active lifestyle of the participants required their prosthesis to be fitted as quickly and as precisely as possible, as in professional athletes. This could only be achieved through shared decision-making between veterans and healthcare professionals.

“*I’m not a senior citizen. Only optimal fitting can fill my requirements… The doctor knows exactly how surgery was done, the prosthetist exactly what fittings can be done and the physiotherapist exactly how to avoid complications after fitting changes.*” [Gary 25-30 years]

***Physical rehabilitation versus psychosocial reintegration***A recurring theme among the participants was the lack of coordination between the hospital services, the municipal rehabilitation services and the military. Physical rehabilitation is only one parameter in a complex rehabilitation process. All participants stressed the importance of collaborative practice in the organization of rehabilitation and psychosocial reintegration. In particular, the participants felt that they had to be proactive to clarify their future job situation, which was a major source of concern and a demotivating factor for some. “There have been a lot of confusions. Its like they [Health workers and social workers] don’t even talk. First time I heard from the social worker he asked “When do you think you are ready again?”, I was doing my job, my physical rehabilitation and still trying to get up on my feet, in that situation one has to be mentally strong. ... [however] when I needed him [social worker] I could not get a straight answer to my questions.“ [Robert 31-46 years]

The military had declared the participants unsuitable for front line missions, which required them to reconsider their post-military job situation, education or career. All participants had been in contact with social workers at the Danish Veteran Center and all experienced uncoordinated collaborative practices, having a negative effect on their sense of belonging to the military:

”*To this date, I still haven’t figured out what they do and why.*” [Brian 31-46 years]

The lack of collaboration between public and military services was a source of frustration as was the lack of continuity between in-hospital and post-hospitalization rehabilitation. The participants missed a sense of continuity between physical rehabilitation and psychosocial reintegration. The missed continuity included having effective strategies that would lead to a job, the need for the psychosocial reintegration to be better coordinated and a mutual coordination and professional understanding between the military, social workers, psychologist and health care personnel. The participants expressed the need for a ‘navigator’ or a case manager to negotiate their situation. ”*It could have been nice with a kind of big brother to lean on in this chaotic period, one that had an impact and could speak up one one’s behalf.*” [Paul 25-30 years]

***Summary of theme II***

The participants preferred a rehabilitation program that integrated the military and civilian mindsets including both military structure, in terms of weekly appointments being coordinated between different instances, as well as, flexibility in terms of a better collaboration between military and civilian rehabilitation services integrating physical rehabilitation and psychosocial reintegration.

*[Insert figure 3 here]* Title: Discontinuity in rehabilitation

*Figure 3 legend:* Figure 3: Military and civilian mindset with associations.

**DISCUSSION**

We aimed to increase our understanding and investigate factors of importance for rehabilitation of veterans with lower limb amputations. Our main results were expressed in the two themes: “Experiencing different identities” and “Experiencing discontinuity in rehabilitation”. The first theme described how veterans handled their readjustment to society by shifting their identity to fit the situation. The second theme illustrated the veterans’ frustration as they tried to negotiate military and civilian mindsets. They experienced poor collaboration between military and civilian services supporting physical rehabilitation and psychosocial reintegration.

The first theme describes two major identity transformations from military to civilian and from able-bodied to disabled. This is not the first transitional experience of the participants. Brunger et al. (2013) describe transitions of servicemen as becoming a soldier, military conditioning, loss upon return to civilian life and bridging the gap 19. They use the metaphor of ‘No man’s land’ to describe the experience of being ‘neither here nor there’ during transitions of identity. Young recruits surrender their identity in their initial process of socialization to the military and construct their new identity during resocialization. In our study, the transformation back to civilian life produced ambivalent identities in our participants. They did not return to their pre-military identity, but had to construct an appropriate identity for new life as a civilian, and in our case, as an amputee. Furthermore, the participants were declared unsuitable for front line missions and were discharged from the military forces. In this new situation, the participants needed to construct a new and appropriate identity. Early discharge, as shown in our study, runs contrary to practice in other countries, where up to 13% of veterans are able to return to active duty after their amputation 20.The public healthcare system has a responsibility to help the veterans in their readjustment and reintegration.

Medical distinctions are powerful and people with amputations are often labeled as disabled 21. The participants in our study preferred to view themselves as persons with resources rather than deficits, but had to face their identification as disabled in certain situations, e.g. when joining a sports club or obtaining a parking permit. The veterans are not alone in their need to realize their potential. General adjustment to life after lower limb amputations is found to increase over time suggesting that amputees need time to accept their limb loss 22. The expectation to return to “normality” is well described in the literature, but is often described with awareness of restrictions in the “new normal” 23-25. To the contrary, we found that our participants did not have these restriction barriers: this could be due to the acceptance of their limb loss (due to the time since the amputation) 22 and related to a feeling of luckiness of still being alive after their trauma 26. It has been estimated that 15% of the world’s population live with a disability 27, and the disabled are increasingly being recognized in larger organizations as the Paralympics and Invictus Games. These events focus on abilities and help the construction of positive identities. They also push the industry to develop more sophisticated prosthetics.

The identity of a wounded veteran was associated with ambivalence among the participants, despite the strong group feeling that exists among military personnel 28. Our findings support earlier studies that suggest that the military identification is locally situated for former military employees 29, 30 and that the participants only use the military identification when this is convenient or beneficial. The ambivalence expressed by the participants can be viewed as a social phenomenon. The sociologist Richard Jenkins defines social identity as a mix of self- and group-identification (both internally-orientated) and categorization of others (externally-orientated) 31, 32. The identity of wounded veteran illustrates the military orientation, but our participants stressed that they were leaving the military because they were no longer fit for action. This increases the ambivalence toward the military orientation. In addition, civilians that did not sanction the war challenged the transition to veteran. The Danish involvement in the Iraq and Afghanistan coalitions were highly debated leading to the veterans not feeling that their contributions is acknowledged among parts of the civil population 33.

The participants recognized themselves as a special patient group in need of individually tailored rehabilitation based on military values. The good physical shape and athletic mindset of veterans differs from almost every other patient group receiving rehabilitation in the public healthcare system. Our findings of the importance of goal setting are not, however, unique to the veteran amputee: indeed, it has been argued that tendencies to pursue goals have an impact on the uptake of rehabilitation services and stronger goal adjustment tendencies are associated with general adjustment to amputation and a have a positive effect on elderly civilian amputees 22.

The participants preferred an identity as athletes because this reflected a proactive lifestyle, more in-keeping with their military training. In line with our findings, the athletic identity was investigated in a study of former and present servicemen and showed that endurance and exercise are fundamental elements in the military identification 29. Nonetheless, the guidelines for rehabilitation of lower limb amputees only recommend sports participation after rehabilitation ended 34, 35. A recently published study concluded that being physically active can help veterans with lower limb amputations get a feeling of being “normal again” while engaging in sport activities as they did before their trauma36. The results of this study suggest that participation in sports should be an integrated part of the entire rehabilitation process.

The second main theme identified in our study was *experience of* *discontinuity in rehabilitation*. Our participants identified themselves as a group needing comprehensive and coordinated, yet individually tailored rehabilitation, which is supported by other studies 37, 38. A cornerstone in the military mindset is the authoritarian structure 37, 38. The participants are used to a strict chain of command with asymmetric relations and a clear hierarchy in the military, which clashes with the goal of shared decision-making in the public healthcare system. Shared health decisions were regarded as unprofessional by the participants in our study, because it was experienced as lack of knowledge in the healthcare professionals. In certain situations, this has caused problems in the relationship between the veterans and their health care providers, causing unnecessary skepticism and mistrust from the participants towards the civil health care system.

The participants in our study found it frustrating when the information was delivered without an understanding for their military mindset. Furthermore, they were overwhelmed by their responsibilities when physical rehabilitation was not accompanied by psychosocial reintegration. This communication gap between patients and health care providers is in line with the results of previous studies and has negative impact upon the psychosocial reintegration of veterans 39-41 . Discontinuity in rehabilitation between health sectors is a general issue 42, but in our population, discontinuity was particularly pronounced: although the participants’ in our study were highly motivated for rehabilitation, the public healthcare system encourages patients to take responsibility for their own readjustment and reintegration, but the veterans reportedely would prefer an approach more aligned with their military mindset.

Our study could be perceived as limited by the small sample size and the heterogeneity of the sample: ranging from young to middle-aged men with recent versus old amputations. However, data saturation was reached on all themes and the trustworthiness of our study was improved by triangulating methods and investigators 43. The overlap of participants in interviews and observations enabled us to follow up on certain issues. Credibility was assured by the use of a widely accepted research methodology and the triangulation of experienced researchers. Our findings were supported by external literature and we believe there might be transferability to other veterans with other diagnoses, such as spinal cord injuries and to amputees in general and specifically the younger traumatic amputees.

# The most extensive guideline, the VA/DoD Clinical Practice Guidelines for lower limb amputation recommends that interventions should be patient-centered and delivered by an interdisciplinary team approach 44. The guideline states that the interdisciplinary approach and coordination is vital, which is in line with our findings. However, the guidelines only focus on the content and do not address the mode of delivery which is seen as important based on our findings.

An update of this guideline is currently in progress. It is our recommendation, as a result of this study, that the military versus civilian mindset and matters of identity are further investigated and recommendations on modes of delivery are identified in the updated guideline.

In conclusion, our study showed that veterans actively chose different identities according to the social context. Our findings suggest that it is essential to integrate the military and civilian mindsets during the physical rehabilitation of veterans, to improve their sense of coherence during readjustment to civilian life, in order to facilitate psychosocial reintegration. It is, therefore, critical that the rehabilitation services offered to veterans with lower limb amputations incorporate elements like autonomy, structure, clear orders and ongoing physical testing. Currently, however, veterans are rehabilitated within the civil public health care system where patient involvement and collaborative practice are valued as key elements. There is, therefore, a need to plan rehabilitation interventions based on a military mindset in order to optimize interventions in veterans with lower limb amputation.

**DECLARATION OF INTEREST**

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**IMPLICATIONS FOR REHABILITATION**

Recommendations for the improvement of rehabilitation of amputated veterans include:

* Rehabilitation professionals working with veterans should focus on abilities instead of disabilities, in order to support their active identity
* Rehabilitation professionals working with veterans should understand and integrate military key components, such as autonomy, structure, clear expectations, goal setting and ongoing ongoing testing and adjustment of goals
* Rehabilitation professionals working with veterans should facilitate collaboration between civilian and military rehabilitation services, in order to secure both physical and psychosocial reintegration

**Table 1**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Pseudonym** | **Age:** | **Time since amputation** | **Level of amputation** | **Participant observation** |
| Ken | 31-46 years | 2-5 years | transtibial | Yes |
| Paul | 25-30 years | 2-5 years | transtibial | Yes |
| Robert | 31-46 years | 6-17 years | transfemoral | No |
| Gary | 25-30 years | 2-5 years | transtibial | Yes |
| Steve | 25-30 years | 2-5 years | transtibial | Yes |
| Brian | 31-46 years | 6-17 years | transtibial | No |

Figures and legends

**Figure 1 Study flow diagram**

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*Figure 1 Study flow diagram of eligible, included, and analyzed data.*

**Figure 2 Continuum of identities**



*Figure 2 Continuum of identities with associations*

**Figure 3 Discontinuity in rehabilitation**

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*Figure 3: Military and civilian mindset with associations.*