

Research Paper

Journey of an Amputee: Overcoming Limitations and Pursuing Extra-ordinary Sports

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ABSTRACT

This qualitative study proposes to explore the journey of a 25-year-old amputee (Anshul Bansal), from his life before amputation to his life after prosthetic fitment. The study aims to investigate the effects of amputation on personal life, the journey of adapting to use of prosthetic limb, and finally the pursuit of sports with prosthetic limb. Data was collected through a semi-structured interview, and thematic analysis was used to identify key themes. The results suggest that the journey of adapting to prosthetic may be challenging and requires a lot of patience, time, and perseverance through multiple trials and errors. Prosthetic fitment can be a life-changing experience. When a person adapts well, prosthetic limb boosts confidence and may enables user to pursue sports like mountaineering and paragliding. The study highlights the importance of motivation, hunger to do more to unleash the real potential of one's own self despite adversities.

Keywords: *Amputation, Qualitative Case Study, Extreme Sports, Prosthetics, Motivation for Amputees*

Amputation is a life-changing event that often comes with physical, emotional, and psychological challenges (Behera & Dash 2021; 2022). However, with the help of modern prosthetic technology, amputees can lead a more functional life (Chen, et al., 2021; Gailey & Roach, 2020). In this study, we explore the journey of a 25-year-old amputee (Anshul Bansal), who underwent below-knee amputation after a severe road accident in 2018. Anshul's journey provides insights into the challenges faced by amputees and the opportunities that modern prosthetic technology provides.

His journey may become an inspiration to many people with disabilities. He has shown that disability does not limit a person's potential and that anyone can achieve their goals with determination and hard work. This study aims to explore his journey as an amputee and his

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life after prosthetic fitment. The study focuses on understanding the challenges that he faced and how he overcame them.

METHOD

The study is a qualitative study, and data was collected through a semi-structured interview with the amputee. The researcher conducted an in-depth interview with Prosthetic user, which lasted for 45 minutes. The interview was recorded, and the data were transcribed. The interview focused on his life before amputation, the amputation procedure, the journey of adapting to prosthetic, and life after prosthetic fitment. The Prosthetic fitment and the interview were conducted in Artificial Limb Center of the Northern Railway Central Hospital, New Delhi. Informed consent was taken from the subject before conducting the interview. The data were analyzed using thematic analysis to identify key themes (Houghton et al., 2015; Stake, 2005).

RESULTS

The analysis revealed four key themes: life before amputation, journey of adapting to prosthesis, life after prosthetic fitment, and pursuing sports. Amputee's life before amputation was active and full of dreams and he aspired to join defense forces. The accident shattered his dreams, he underwent four surgeries including a below-knee amputation. The journey of adapting to prosthetic limb was challenging, requiring patience, perseverance and time. His life after prosthetic fitment was a life-changing experience that boosted his confidence, enabled him to pursue sports like mountaineering and paragliding. Pursuing such extreme sports allowed him to overcome his limitations and set an example for differently-abled people.

Theme 1. Life before amputation: Subject's life before amputation was full of activity and sports. He was a bronze medalist in 0.22 shooting during his NCC days and dreamed of joining the defense.

"I was the active young chap since childhood and did dream about joining the defense. I was NCC cadet and in that period of time I was bronze medalist in .22 shooting."

However, his life took a different turn when he met with a road accident in his final year of college. He underwent four surgeries, to recover from his injuries. His first prosthetic fitment was in June 2018, which changed his life.

"Yeah, total of 4 surgeries of amputation took place, 1 month of muscle debridement of thighs, 1 surgery of removal of fibula head, 1 surgery of skin replacement."

Theme 2: Journey of adapting to Prosthesis: Subject's journey as an amputee was challenging. He had to adapt to his prosthetic, which took a lot of time and effort. He faced injuries and had to try out different sockets to feel comfortable. However, he did not give up and continued to explore his capabilities.

"Journey was quite challenging as prosthetic is the foreign part for a body so it took whole lot of time just to adapt, whole lot of injuries, trying out every other socket just to feel better, as what I understood is that every amputee does have their own kind of problems and they need to do hit and trial method. It took me like 2 years just to know fully about prosthetics. No doubt i started doing trekking in 2019 April but it was extremely painful experience."

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“Life after prosthetic fitment wasn't easy but it was the only thing to get so yeah it was a life changer for me, I started exploring more and more and got enough confidence to take more risk in life. I started with athletics and in 3 state games I have 3 gold 5 bronze and 2 silver medals, and won bronze medal in nationals too.”

During the interview, Subject raised concerns about the high cost of prostheses in India and emphasized the significant role played by his prosthetist and the hospital in providing him with motivation and boosting his confidence during the initial phase of prosthetic fitment.

“Being an amputee in India is really difficult for a lower class and middle-class family. Prosthetics cost is way too much in India and if we talk about the avg. cost of it with which a person can do good activitiesin below knee it costs like 1.7 lakh including annual maintenance of 40,000 rupees, whereas in above knee it costs around 4 lakh rupees. Fortunately, my father is in govt. job and that too in Indian Railways. When my accident happened few people, I know from Delhi railway came to visit me and they told us about Northern Railway Central hospital and its Artificial Limb Center (ALC) and this was the place where I met DR. M.C. DASH sir and got introduction to prosthetics, I was eager to get the high-profile prosthetic.

After 6 months of my accident, I got my first prosthetic from ALC and I was bit disappointed as it was k2 level foot but under the guidance of the professionals they made me understand why it is necessary to start with basics and eventually helped me to get better and better on every step. Dash sir always took the charge and helped me with the prosthetics regularly. After few months in 2019 they gave me k3 foot from which I was able to get back into mountaineering as well in athletics in which I earned medals. And then after that ALC (Artificial Limbs Center) again gave me the opportunity to get my hands on k4 level foot which was the biggest milestone. It was because of Dr. Dash sir and the entire orthopedics department of Northern Railway Central Hospital (NRCH) who had put so many efforts after seeing my performance in every field. And just because of it I was able to do paragliding solo and create a record. All these things and achievements wouldn't have been possible without their help that too constantly or on every step.”

Theme 3: life after prosthetic fitment: Subject's prosthetic had a significant impact on his personal life. It made his life much simpler and gave him the confidence to do things independently.

“Prosthesis made life much simpler and gave me enough confidence to do my own things all by myself again. Initially I did lose all the hopes when I just started to wear it but with time it made me self-efficient. I still goes into the bad zone when I get injuries and not able to wear it but in the end, it has become my buddy who carries me everywhere.”

Theme 4: Pursuing extreme sports: He started with athletics and won several medals in state games and one bronze medal in nationals. He then moved on to mountaineering and climbed three 6000er peaks, attempted one 7000er, and one 8000er peak, achieving a maximum height of 7030m. He then took up paragliding, becoming India's first amputee paraglider pilot in March 2023.

“I always wanted to be in extreme sports only and as earlier I use to do trekking so I thought to go for expeditions in mountaineering. I never wanted to do those things where people do adjustments like done in Para athletics so I chose mountaineering as it will be done similar

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like normal people do from both legs , after that only i did the paragliding also without any adjustments.”

“I started doing mountaineering and did really well I climbed 3 6000er peak attempted 1 7000er and 1 8000er too but as mountaineering is all about nature failed in it. I have achieved max. Height of 7030mtr and looking up for more opportunities in it in kind of sponsorships.

I am more inclined towards extreme sports and with it recently in March 2023 I became India's first amputee to become paraglider pilot I did solo flying. And now exploring more of the extreme sports to show that disability cannot turn you down.”

He further added that he still faces challenges, such as injuries that prevent him from wearing his prosthetic, but he considers it his buddy, which carries him everywhere.

Subject has a message for all amputees and differently-abled people. He believes that people should respect and treat them equally instead of sympathizing with them. He wants to change the way people perceive differently-abled individuals and encourage them to realize their full potential. Fig1 shows the subject performing extraordinary sports.



Fig1. Anshul Bansal involved in extraordinary sports activities

DISCUSSION

The results of this study provide valuable insights into the journey of an amputee from before amputation to after prosthetic fitment. The study shows that amputation is a life-changing event that can have significant physical, emotional, and psychological effects on an individual's life. However, modern prosthetic technology has enabled amputees to lead a more functional life and pursue their dreams (Gailey & Roach, 2020; Hwang & Han, 2021).

The journey of adapting to prosthetic is challenging and requires patience, time, and hit-and-trial methods (Kwon et. Al., 2019). The process of finding the right socket and adjusting to the prosthetic can be difficult, and amputees may face injuries or discomfort along the way. However, the rewards of prosthetic fitment can be life-changing (Gailey & Roach, 2020). Our Case report shows that prosthetic fitment can boost confidence and enable amputees to pursue activities that they may not been thought possible.

The high cost of prosthetics in India poses a significant challenge for amputees who require these devices to lead a normal life. During the interview, we discussed the financial burden and limited access to prosthetics that many amputees in India face, which can result in decreased mobility and a lower quality of life. This finding is consistent with the existing literature (Chen et. Al., 2021; Sandoval & Shechtman, 2019) on Prosthetics and Orthotics, which also highlights the significant financial burden and challenges faced by this population. The study also emphasizes the critical role that Prosthetists play in clinical evaluation, choosing of appropriate socketology for each individual, supporting, motivating and mentoring amputees to utilize their prosthetic devices effectively with the optimum use of kinesiology. Point about starting with basic kinetic foot to sequentially graduate to higher kinetic levels of prosthetic foot technology is particularly brought out. By offering encouragement and customized prosthetic solutions, prosthetists can help amputees overcome the physical and emotional challenges associated with amputation (Behera & Dash 2021; 2022). This manuscript sheds light on an important issue and underscores the importance of affordable prosthetic solutions and the support of skilled prosthetists in improving the lives of amputees in India.

The study also brings out the possibility of pursuing extreme sports and going beyond perceived limitations of prosthetic limb. Our case may set an example for differently-abled people (Hwang & Han, 2021) in this regard. Our Subject's achievements in mountaineering and paragliding demonstrate that physical limitations can be overcome with determination and the right support. By pursuing extreme sports, Our Subject may have become a role model for other amputees and may have demonstrated that even extreme sports may be possible with the right mindset and support.

Overall, this study contributes to our understanding of the challenges and opportunities faced by amputees and the importance of modern prosthetic technology in enabling amputees to lead a functional and fulfilling life. The study also highlights the importance of amputee's own motivation, hunger to go beyond perceived barriers to unleash the real potential of one's own self even when one is faced with something as drastic as loss of a limb. The findings of this study have important implications for healthcare professionals, prosthetic manufacturers, and policymakers, highlighting the need for continued support and resources for amputees to ensure they can achieve their full potential.

CONCLUSION

The study highlights the importance of Prosthetists clinicians and modern prosthetic technology in enabling amputees to lead a more functional and fulfilling life. The journey of adapting to prosthetic is challenging but rewarding, requiring patience, time, and hit-and-trial methods (Gailey & Roach, 2020). Prosthetic fitment is a life-changing experience that boosts confidence and enables amputees to pursue their dreams (Behera & Dash 2021; 2022; Chen et. Al., 2021; Sandoval & Shechtman, 2019). The study contributes to the understanding of the challenges and opportunities faced by amputees and provides insights into their journey of adapting to prosthetic and pursuing extreme sports. This case report shows that all limitations can be overcome, just by developing a hunger to do more as to unleash the real potential of one's self.

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Conflict of Interest

The author(s) declared no conflict of interest.

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