From Steps to Strides: The Foot Trail of Individuals Using Lower Extremity Prosthesis

Louisse Grace Antolin[1], Cazzandra Nicole Benabese[2], Mariano Rafael Florentino[3], Jesse James Mayugba[4], and Yessamin Ringor[5]

Abstract

This study explored the lived experiences of persons with disabilities (PWDs) who use lower-extremity prosthetics, focusing on the unique challenges they face in performing activities of daily living (ADLs), including their coping mechanisms, while adapting to their prosthetic devices. Using a qualitative descriptive design with a phenomenological approach, the researchers interviewed six (6) individuals from the 1st district of La Union. Data was collected through semi-structured interviews and was analyzed using Colaizzi's method of thematic analysis. Findings showed that while prosthetic devices helped restore a sense of normalcy and independence, this feeling was often conditional and did not fully replicate before amputation experiences, they noted that their current capabilities were not the same as before, highlighting limitations in activities like walking long distances or performing daily tasks. Some participants described their early stages of prosthetic use with physical pain, muscle adjustments, and fitting difficulties. Additionally, prosthesis use was often situational, primarily used when going out, and presented functional challenges. Issues such as poor fit, discomfort from weight changes, and reduced physical strength were common. Lastly, many participants reported experiencing stump pain, pressure, and sweating, especially during prolonged use and for them to cope, they adopted various strategies such as taking breaks, removing the prosthesis for rest, using canes to relieve pressure, and applying ointments or lotions to reduce skin irritation.

Keywords: *Lived Experiences, Lower Extremity, Normalcy, Physical Limitations, Persons With Disabilities, Prosthetics*

1. Introduction

Losing a limb is not just a physical transformation—it's a life-altering experience that reshapes how individuals move, interact, and engage with the world around them. A person's mobility, independence, and quality of life are all heavily impacted when they lose a lower limb by amputation. People with disabilities (PWDs) are defined by the National Council on Disability Affairs as those who have chronic physical limitations that prevent them from fully participating in society on an equal basis with others. Those who have had a limb surgically removed (Harvard Health Publishing, 2024) are considered amputees because of their physical restrictions (RA 7277, as revised by RA 10754). Amputees still face psychosocial obstacles like bias and stigma (The Unpopular Truth About Biases Toward People With Disabilities, 2019), even though prosthetic devices are intended to restore mobility and functional independence (Wong & Edelstein, 2019). They also still struggle to perform basic activities of daily living (Kooiman et al., 2023).

From simple mechanical designs to sophisticated microprocessor-controlled systems, lower extremity prostheses provide substantial advantages in terms of user comfort, energy conservation, and gait stability (Stokosa, 2024; Gailey et al., 2020). Materials like silicone, titanium, and carbon fiber have improved these devices' use, performance, and longevity (Hasanain et al., 2019; Karim et al., 2024). For prosthesis users to accomplish everyday chores like walking, cooking, or taking public transportation,

they frequently need to modify their motions, surroundings, and routines in spite of technical developments (Ramstrand et al., 2022; Roberts et al., 2023). This study aimed at looking into the lived experiences of amputees, with a particular focus on their daily use of prosthetic devices and the functional, social, and psychological effects of prosthesis use.

Globally, persons with disabilities (PWDs) using lower limb prostheses encounter persistent challenges in performing daily activities, despite technological advancements. In high-income countries, modern prostheses can enhance mobility but are still often met with discomfort, high maintenance costs, and difficulties adapting to varied environments. In low- and middle-income settings, users frequently depend on outdated or poorly fitted devices, face limited access to rehabilitation services, and experience social or cultural barriers that hinder optimal use. These challenges contribute to frustration, discomfort, and reduced participation in daily and community life, which shows the need for context-specific support and interventions.

Individuals with lower extremity prosthetics in local communities experience both increased independence and ongoing daily challenges. Despite technological advancements, many users face a gap between the ideal performance of their devices and the realities of navigating public spaces, managing self-care, and maintaining mobility (WHO, 2020). Comfort, stability, and usability remain significant concerns (Karim et al., 2024). This study aims to highlight not only these difficulties but also the coping strategies users develop. Understanding their lived experiences can inform more personalized healthcare and support services (DeLisa & Gans, 2014). Beyond physical needs, psychological and social aspects are often overlooked. Many users report feelings of isolation due to a lack of community awareness and understanding (Fitzgerald et al., 2021; Beedie et al., 2019). Thus, alongside better technology, there is a need for holistic, inclusive support systems.

A survey by the National Council on Disability in the Philippines revealed that 43,367 individuals with leg amputations face significant physical, psychological, socio-economic, and spiritual challenges. A primary difficulty is the process of integrating a prosthesis, which requires relearning how to walk by turning it from a conscious, difficult act into a new, natural habit. To cope, amputees rely on support from loved ones, mastering their assistive devices, and maintaining spiritual beliefs. However, while family support is strong, there is often limited assistance from government and community resources to address these widespread challenges.

Thus, this study aimed to describe the lived experiences of individuals who are using lower-extremity prosthetics. Specifically, it aimed to describe their lived experiences with using lower extremity prosthetic devices when dealing with activities of daily living, including the challenges they encountered and their coping mechanisms. Additionally, this study aimed to benefit several groups. For prosthetic users, it fosters a sense of community, validates their struggles and achievements, and supports their emotional and psychological well-being. Healthcare professionals may gain valuable insights to better tailor treatment and rehabilitation plans to individual needs. LORMA Colleges, particularly the College of Physical Therapy, the study findings may help enhance the curriculum and promote patient-centered, empathetic care. The study also supports researchers in deepening their understanding of disability and rehabilitation, while offering a foundation for future research. Lastly, the study encourages

readers to reflect on attitudes toward disability, promoting advocacy for accessibility and inclusive healthcare.

2. Methodology

Research Design

A qualitative descriptive design with a phenomenological approach was utilized to explore the lived experiences of persons with disabilities using lower-extremity prostheses, with emphasis on activities of daily living (ADLs). The method prioritized rich, first-person narratives to understand how prosthetic use affects the user's daily mobility, self-care, and social participation. By capturing participants' unique realities and shared meanings, the approach enabled the researchers to generate insights into common challenges and coping strategies. This design was selected to produce comprehensive and contextually relevant findings that can inform both academic knowledge and practical interventions.

Participants and Locale

The research was conducted around the first district of the province of La Union. Specifically, two (2) were from San Fernando City, two (2) from San Juan, and two (2) from Bacnotan. A total of six (6) participants met the inclusion criteria. The inclusion criteria specifically included that all participants must provide consent and be willing to participate in the study, have undergone lower extremity amputation regardless of the level of amputation, must be residents of the First District of the Province of La Union, and be above eighteen (18) years of age. The participants represented a diverse range of backgrounds and occupations. Among these six participants, one serves as the president of Persons With Disabilities (PWD) organization, one owns and operates a flower shop, one performs gardening and household tasks, another is responsible for tending livestock care, specifically tending to cows, one is a senior high school student, and another is employed as a construction worker.

Data Gathering Tool and Procedure

The researchers conducted face-to-face interviews using semi-structured questionnaires, following ethical guidelines and obtaining permissions from institutional and local authorities. Participants were identified through barangay coordination and provided informed consent before the interviews. Data collection continued until saturation was reached. Colaizzi's method was used for thematic analysis, following all seven steps to ensure accuracy and credibility. All information was kept confidential, securely stored, and permanently deleted after the study.

3. General Themes and Concepts

The researchers conducted a thematic analysis to qualitatively assess the data and identify various subthemes and themes derived from the participants' responses in an unbiased manner. After analyzing the data and examining through all of the participant responses, three major themes emerged: (1) Footprints of Change with sub-themes; (1.1) Same Path, New Pace, (1.2) The Ground Beneath My Feet, and (1.3) Functionally Adapting; (2) Rocky Road with sub-themes; (2.1) Instabilities of Steps, (2.2) Foot Trails From the Past, and (2.3) Hesitant Steps; (3) Steps Beyond Pain (3.1) Fit to Move, (3.2) Silent Battles and, (3.3) Tailoring Actions. "Footprints of Change" depicts the lived experiences of participants as they redefine normalcy and identity while adjusting to life with a prosthesis on an emotional and physical level. "Rocky Road" encapsulates the lived experiences of participants, highlighting the hurdles

associated with prosthesis use, such as physical discomfort, environmental obstacles, and emotional difficulties. “Steps Beyond Pain” drew attention to the personal experiences of participants and the coping strategies the participants employed to surmount pain, stigma, and functional constraints. In their entirety, these themes provided profound understanding of the functional and emotional experiences of prosthesis users, while emphasizing the necessity for extensive societal, therapeutic, and policy assistance to improve their reintegration and overall quality of life.

1. Footprints of Change

The major theme, “Footprints of Change,” encapsulates participants' emotional journeys, resilience, and adaptability post-amputation. It highlights progression from initial pain—as Participant 2 recalled, "at first it was hard, especially the first time using it, it’s painful and all of my muscles will adjust"—to a reconstructed sense of normalcy where the prosthesis becomes integral to their identity and ability to thrive. Despite persistent struggles like Participant 3’s statement, “it doesn’t feel normal anymore, because you can’t really control the other leg and it’s painful,” and challenges such as Participant 1’s "sometimes it’s hard, sometimes it’s easy, depending on the terrain or surface," individuals demonstrate unwavering strength, cultivating renewed confidence and well-being. This theme underscores the need for a comprehensive emotional and psychosocial framework in prosthetic rehabilitation, recognizing personal resilience as vital, and is explored through "Same Path, New Pace," "The Ground Beneath My Feet," and "Functionally Adapting."

1.1 Same Path, New Pace

The sub-theme focuses on participants' hard-won feeling of "normal" despite limb loss. Participant 2 shared, “For me, it’s normal because I’m already used to it,” reflecting an internalization of this new lifestyle, while Participant 6 remarked, “It is similar to how things were before, it’s like I am still complete,” indicating a reclaimed sense of wholeness (Gallagher & Desmond, 2015). However, a duality exists: Participant 5’s statement, “I feel normal because of the artificial leg,” shows the prosthesis enables movement but also reminds them of loss (Dordunu et al., 2024). Social perception influences this, as Participant 2 noted, “It feels normal to me, even if other people look at me differently,” highlighting internal acceptance versus external judgment (Tennant et al., 2022). Selective prosthesis use, such as Participant 1’s "I only use my prosthesis when I have to go somewhere," or Participant 4’s "I use it when, like, I’m going out," further reveals efforts to appear capable in public (Lundberg et al., 2021).

1.2 The Ground Beneath My Feet

The sub-theme explores the practical and emotional realities driving selective prosthesis use and acknowledging persistent limitations. Participants like Participant 4 (“I also have the other one, that one I use when I go out”) and Participant 1 (“it is more comfortable for me to use crutches”) opt for devices based on convenience and comfort, often due to pain and fatigue, as Participant 3 lamented, "it’s painful and the muscles are adjusting" (Salminger et al., 2020). Public use also helps manage perceptions, aiming to appear "normal" (Nunn et al., 2020). Despite adaptation, a painful awareness of irrevocable change persists, with Participant 3 stating, “You can’t really do the things you could do before... it doesn’t feel normal anymore,” and Participant 6 noting, “I’m not as strong as I used to be, like when I was complete,” reflecting a decline in physical strength (Schaffalitzky et al., 2019; Highsmith et al., 2016; Highsmith et al., 2024). This

acknowledgment reflects a realistic perspective, forging a new normal despite loss (Gallagher & Mulhall, 2017).

1.3 Functionally Adapting

The sub-theme captures how participants find new ways to navigate life after limb loss, emphasizing personal choices over a return to their pre-amputation state. Some use their prosthesis selectively, for instance, "its purpose is to protect myself when standing up" at events, while others prefer crutches for comfort, challenging assumptions about full-time prosthetic reliance (Sorenesen et al., 2022). Even imperfect prosthetic use makes meaningful contributions: one shared, "Even if it's not the same as before, it still helps me," and another said, "I can go to school without much difficulty," showcasing reintegration into daily roles (Morgan et al., 2022). A particularly moving insight came from a participant who stated, "I can do activities of daily living with courage," highlighting the bravery required for everyday tasks, as courage plays a central role in managing both body and emotions (Dordunu et al., 2024). These stories emphasize that true functionality stems from the courage to adapt and keep going, even when the path has changed.

2. *Rocky Road*

This theme captures the continuous physical and emotional adjustments required in living with a prosthetic limb. While prosthetic devices offer the potential for mobility, participants emphasized that each step involves navigating discomfort, instability, and a world not designed for their needs. The experience extends beyond the physical—it is an emotional journey shaped by loss, frustration, and resilience (Krause et al., 2023; Wong et al., 2021). Users described the daily tension between striving for independence and confronting the device's limitations, underscoring the strength needed to move forward despite persistent barriers.

2.1 Instabilities of Steps

This subtheme highlights the persistent challenge of poor prosthetic fit, particularly with belts, which leads to instability, discomfort, and emotional frustration. Participants described the belt as "uncomfortable" (Participant 3) and "loose" due to weight changes (Participant 1, Participant 6), with Participant 1 sharing, "I lost weight, so the belt does not fit properly." These physical issues reflect a deeper emotional burden of feeling unsupported. Improvised fixes like adding foam (Participant 4) reflect both resilience and the unmet need for adaptable designs. Weight fluctuations and body changes also heightened users' sense of restriction—P1 noted becoming thinner post-stroke, while Participant 3 warned, "You should not be fat… you can't wear your prosthesis anymore." These experiences underscore the psychological strain of living in a body that must remain unchanged for the device to work (Chowdhury et al., 2023). Pain during movement was another major concern. "It's painful for the muscles when going up" (Participant 3), and "I couldn't handle it because it was painful… like really painful" (Participant 4), emphasizing how discomfort becomes a daily obstacle. Heat and sweat worsened this, making the prosthesis "painful on the stump" (Participant 1, Participant 6). Environmental discomfort—like sweating, chafing, and overheating—exacerbated wearability issues (Geurts et al., 2022; Turner et al., 2022; El-Hadidi et al., 2023). These findings echo the need for prosthetics that adjust to changing body shapes and mitigate thermal stress (Dudek et al., 2020). Improved

materials and customizable designs could ease both physical strain and the emotional toll of persistent discomfort.

2.2 Foot Trails From the Past

This subtheme captures the deep emotional and functional loss felt by participants who could no longer return to their former routines. Statements like “I can’t do the things I used to do back then” (Participant 1) and “I have limitations… not like before” (Participant 5) reflected not just physical restrictions but the erosion of personal identity. Participants described hesitating before simple tasks (Participant 6) and needing mental and physical preparation just to move (Participant 4), revealing the emotional weight of adaptation. Even with acceptance, the pain of exclusion lingered—“It still hurts when I can’t join simple activities with others” (Participant 2). These reflections echo findings by Murray and Forshaw (2022) on disconnection from one’s past self, and Zidarov et al. (2021), who stress the grief of losing not just a limb, but a way of life. Emotional resilience, as emphasized by Lehmann et al. (2021), was evident in all participants, suggesting the need for holistic rehabilitation that addresses both psychological and physical recovery.

2.3 Hesitant Steps

This subtheme highlights the internal hesitation and emotional vulnerability prosthesis users experience in public and social settings. While not always tied to physical discomfort, this hesitation stems from fear of judgment and feeling different. Participant 2 reflected, “Mentally, it can be bothering because of other people… Am I different? Do I have differences?”—revealing a quiet struggle with identity and social perception. Similarly, Participant 1 noted, “I don’t use it very often because it can be very annoying,” suggesting emotional fatigue and disconnection from the device. These experiences reflect the internalized social stigma discussed by Gallagher and MacLachlan (2021), where users alter self-perception due to how others see them. As Murray and Forshaw (2022) emphasize, the desire to appear “normal” often conflicts with the visibility of limb loss, creating barriers to social participation. Addressing these emotional challenges through peer support, social education, and more user-friendly prosthetic design can help reduce the silent burden of difference and promote confidence in public spaces.

3. Steps Beyond Pain

The "Steps Beyond Pain" theme explores the significant tension between endurance and distress in the daily lives of lower extremity (LE) prosthesis users, emphasizing the conflict between the pain caused by the device and the desire for mobility and normalcy. Participants noted that while their prosthesis is crucial for independence, it often causes considerable pain from issues like poor socket fit, which creates a daily struggle (Nair et al., 2020). This constant negotiation between function and discomfort has tangible effects, as increased pain severity is directly linked to lower prosthesis satisfaction and reduced participation in daily activities (Sions et al., 2022). This theme was further explored through three subthemes: (1) Fit to Move, (2) Silent Battles, and (3) Tailoring Actions.

3.1 Fit to Move

This sub-theme highlights crucial adaptive strategies: proactive rest breaks, managing limb pressure, and diligent skin care. Participant 1 stated, “I’ll just remove it and give my amputation a time to rest,” and Participant 4 added, “I take breaks when it starts to hurt.”

Participant 6 explained, “So when it’s painful, you really need to let it rest for 2 to 3 days before you can use it again,” and Participant 5 confirmed, “As long as I get enough rest, I won’t have any difficulties in moving my prosthetic leg and won’t feel pain anymore.” Consistent rest avoids complications (Lee et al., 2021) and leads to higher satisfaction (Miller et al., 2017). For pressure management, Participant 1 used his cane: “That’s why I use my cane when I’m wearing my prosthesis to reduce pressure on my stump.” Participant 4 said, “I also take off the sock so it can... you know, breathe.” Participant 5 noted, “I rest after prolonged standing through sitting to reduce the weight and pressure over my amputated leg.” These strategies are supported by Alluhydan et al. (2023) and Turner et al. (2021) for preventing skin damage and discomfort. For skin care, Participant 1 applied lotion: “I apply lotion over my stump so it would be moisturized for healthier skin, less pain when putting on my prosthesis, and I can move properly.” Participant 3 mentioned, “when it aches, I put efficascent oil,” and Participant 4 noted “baby oil over my stump to moisturize.”

3.2 Silent Battles

This sub-theme delves into the emotional and psychological challenges users face. They often choose silent compliance over confrontation when faced with social indifference. Participant 2 described his resigned response: “when they don’t want to give me that accessible seat, I have to sit somewhere in the middle, I will be like ‘okay’ and I won’t even bother about it anymore.” Participant 3 shared: “when I enter, I say, ‘Can you scoot over?’, and others won’t, I’ll just say ‘thank you’, like they’re still making it difficult for me.” Participant 6 added, “when they don’t want to scoot over so I can sit near the door, I will just let it go.” Despite these, strong social support networks are crucial. Participant 1 expressed gratitude: “I’m really thankful for my family, for supporting me, taking care of me, and helping me a lot so I felt like I did not struggle much.” Participant 5 acknowledged, “I’m thankful for the people around me for supporting me in life and to ease my burden in my daily activities.” Participant 6 found, “With the presence of my mother that helped me with problems I slowly regained my will.” A mindset of stoic endurance is also prevalent. Participant 2 stated, “If I’m struggling, I’m coping very well because I’m already used to this kind of life.” Participant 5 shared, “When it’s hard for me, I will bear with it because I have to and for me to continue living.” Participant 6 affirmed, “I’ll just bear with it because I will be able to rest after work.” Studies by Roşca et al. (2021), Alessa et al. (2022), and Calabrese et al. (2023) highlight the significant emotional distress and the crucial role of mental health support for amputees.

3.3 Tailoring Actions

This captures the deliberate and ingenious modifications users implement in daily living (Mattick et al., 2022). The strategic use of assistive devices is prominent. Participant 1 explained, “That’s also why I often use my crutches, or when going up, I use my cane for support.” Participant 6 relied on crutches: "I waited, I only used crutches." This aligns with research on improving balance and managing demands (Omana et al., 2021). Users also meticulously adapt their body movements to tasks. Participant 3 described, "you have to sit, then the prosthesis has to be straightened." Participant 5 noted, “I rest after prolonged standing through sitting to reduce the weight and pressure over my amputated leg so my stump will not be painful.” Such adjustments are vital for managing energy and safety (Chadwell et al., 2020). Behavioral modifications, like

avoiding heavy loads, are significant. Participant 4 stated, “I don’t really carry anything heavy.” This aligns with studies that experienced users modify activities to prevent injury (Mattick et al., 2022). Users also adapt to environments. Participant 6 recounted testing his prosthesis at the seashore: “I ran like it was normal…” Even on "upsloping" terrain, he'd "just bear with it because I will be able to rest after work.” Assessing and adapting to environments is a significant factor for confident ambulation (Omana et al., 2021).

4. Conclusion

Synthesis

People with lower extremity prosthetics faced a variety of intricate physical, psychological, and social difficulties that had a big impact on their quality of life. Although prosthesis increased mobility and promoted a feeling of normalcy, users frequently experienced physical discomfort, diminished strength, and short endurance, particularly when using them for extended periods of time or when crossing uneven terrain. Due to these restrictions, some people only used their prosthesis in social situations or on public excursions, depending on wheelchairs or crutches at home. This conditional usage mirrored psychological reactions such body image issues and social stigma awareness, in addition to physical strain, and frequently led to decreased engagement in social and professional activities. Consequently, users experienced feelings of inadequacy, loneliness, or dissatisfaction that impacted their mental health and self-esteem. Individuals used coping strategies like relaxation periods, assistive technology, and changing daily schedules to deal with these difficulties. These strategies helped people stay functional but also restricted their liberty. In order to foster functional independence, psychosocial resilience, and an enhanced quality of life for prosthetic users, these findings underscored the significance of comprehensive rehabilitation strategies that addressed not only prosthetic fitting and physical training but also emotional support, social reintegration, and environmental accessibility.

Recommendations

Prosthetic users are advised to practice consistently, have patience with the adaptation process, and employ coping mechanisms that are both physical and emotional, such as support groups, assistive technology, and self-care routines. Along with routinely checking the state of their residual limb, they should also notify their prosthetist or therapist right away if they have any problems with the prosthetic fit. However, it is recommended that medical practitioners encourage progressive, achievable rehabilitation objectives, offer constructive criticism, and give comprehensive care that attends to both psychological and physical requirements. In order to guarantee comfort and functionality, they must give priority to appropriate prosthesis fitting through regular follow-ups.

It's critical that readers and the general public realize that using a prosthetic is a complicated and individual journey that calls for patience, assistance, and modification. Understanding the difficulties that go beyond simply using a technology encourages compassion and support for inclusive settings. Last but not least, it is recommended that future researchers explore the lived experiences of prosthetic users in greater detail, paying particular attention to psychosocial factors, the effects of varying degrees of amputation, and the efficacy of mental health interventions and support networks that facilitate successful prosthesis integration and community engagement.

References

Alessa, M., Alkhalaf, H. A., Alwabari, S. S., Alwabari, N. J., Alkhalaf, H., Alwayel, Z., & Almoaibed, F. (2022). The psychosocial impact of lower limb amputation on patients and caregivers. Cureus. https://doi.org/10.7759/cureus.31248

Alluhydan, K., Siddiqui, M. I. H., & Elkanani, H. (2023). Functionality and comfort design of lower-limb prosthetics: A review. Journal of Disability Research.

Amputee. (2025). Cambridge Dictionary: https://dictionary.cambridge.org/us/dictionary/english/amputee#google_vignette

Beedie, A., Smith, A., & Jones, R. (2008). The social experiences of individuals with prosthetic limbs: Isolation and support. *Journal of Disability Studies*, 12(3), 45-60.

Bisht, R. (2024, May 28). Dr. Renu Bisht, Author at. https://researcher.life/blog/article/author/renu_bisht/

Browning, R. C., Modica, J. R., Kram, R., & Goswami, A. (2007). The effects of adding mass to the legs on the energetics and biomechanics of walking. Medicine and Science in Sports and Exercise, 39(3), 515–525.

Calabrese, L., Maffoni, M., Torlaschi, V., & Pierobon, A. (2023). What Is Hidden behind Amputation? Quanti-Qualitative Systematic Review on Psychological Adjustment and Quality of Life in Lower Limb Amputees for Non-Traumatic Reasons. Healthcare, 11(11), 1661. https://doi.org/10.3390/healthcare11111661

Cash, T. F., & Pruzinsky, T. (2002). *Body image: A handbook of theory, research, and clinical practice*. Guilford Press.

Chadwell, A., Diment, L., Micó-Amigo, M., Morgado, N., & Worsley, P. (2020). Technology for monitoring everyday prosthesis use: A systematic review. Sensors, 20(18), 5265. https://doi.org/10.3390/s20185265

Chowdhury, R. H., Reaz, M. B. I., Ali, M. A. B., Bakar, A. A. A., Chellappan, K., & Chang, T. G. (2023). Current trends and challenges in lower-limb prosthetics: A review. *IEEE Access*, *11*, 21450–21471. https://doi.org/10.1109/ACCESS.2023.3240717

Creswell, J. W., & Poth, C. N. (2017, November 23). *Qualitative Inquiry and Research Design Choosing among Five Approaches*. Scientific Research Publishing. Retrieved November 10, 2024, from https://www.scirp.org/reference/referencespapers?referenceid=2155979

Creswell, J. W., & Poth, C. N. (2018). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (4th ed.). SAGE Publications.

Deci, E. L., & Ryan, R. M. (2000). *The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior*. Psychological Inquiry, 11(4), 227-268.

DeLisa, J. A., & Gans, B. M. (2014). *Rehabilitation medicine and the future of disability: An integrative approach*. New York, NY: Springer.

Diego, R. V. S. (2019). Life after Amputation: a case study. Abstract Proceedings International Scholars Conference, 7(1), 530–549. https://doi.org/10.35974/isc.v7i1.1139

Dordunu, R., Adjei, C., Kyei, J., & Ani-Amponsah, M. (2024) Experiences of persons with lower limb amputation after prosthetic rehabilitation in Ghana: A qualitative inquiry, https://pubmed.ncbi.nlm.nih.gov/37615618/

Dudek, N. L., Marks, M. B., Marshall, S. C., & Chardon, J. P. (2020). Skin problems in an amputee population. *Archives of Physical Medicine and Rehabilitation*, *97*(2), 276–282. https://doi.org/10.1016/j.apmr.2015.10.092

El-Hadidi, M., Saeed, M., Alsaleh, M., & Al-Adwan, H. (2023). Thermal challenges in prosthetic socket design: A systematic review. *Journal of Prosthetics and Orthotics*, *35*(1), 40–48. https://doi.org/10.1097/JPO.0000000000000447

Engel, G. L. (1977). *The need for a new medical model: A challenge for biomedicine*. Science, 196(4286), 129-136.

Ethical principles of psychologists and code of conduct. (2017). American Psychological Association. Retrieved November 10, 2024, from https://www.apa.org/ethics/code

Fitzgerald, M., Roberts, R., & Kelly, J. (2021). Psychological and social aspects of living with prosthetics: A comprehensive review. *Disability and Rehabilitation*, 43(5), 123-130.

Fougeyrollas, P., Boucher, N., Edwards, G., Grenier, Y., & Noreau, L. (2019). The Disability Creation Process Model: A Comprehensive explanation of disabling situations as a guide to developing policy and service programs. *Scandinavian Journal of Disability Research*, *21*(1), 25–37. https://doi.org/10.16993/sjdr.62

Gailey, R., Gaunaurd, I., Raya, M., Kirk-Sanchez, N., Prieto-Sanchez, L. M., & Roach, K. (2020, January 17). Effectiveness of an Evidence-Based Amputee Rehabilitation Program: A Pilot Randomized Controlled Trial. *Physical Therapy*, *100*(5), 773-787. https://doi.org/10.1093/ptj/pzaa008

Gailey, R. S., & Clark, C. R. (2004). *Atlas of Limb Prosthetics: Surgical, Prosthetic, and Rehabilitation Principles.* (2nd Edition ed.). American Academy of Orthopedic Surgeons.

Gallagher, P., & Desmond, D. (2015). Body image, self-esteem, and quality of life in adults with prosthetic limbs: A review of the literature. *Prosthetics and Orthotics International, 39*(4), 315–321. https://www.researchgate.net/publication/230662588_Quality_of_Life_in_People_with_Lower-Limb_Amputation

Gallagher, P., & MacLachlan, M. (2000). Positive meaning in amputation and thoughts about the amputated limb. *Prosthetics and Orthotics International*, *24*(3), 196–204. https://doi.org/10.1080/03093640008726548

Geurts, A. C. H., van de Port, I. G. L., & Mulder, T. (2022). Pain and discomfort in lower limb amputees using a prosthesis: A qualitative investigation. *Disability and Rehabilitation*, *44*(6), 898–906. https://doi.org/10.1080/09638288.2020.1772019

Global Disability Innovation Hub. (2023). *Annual Report on Innovation and Disability Rights.*

Guba, E. G., & Lincoln, Y. S. (1989). *Fourth generation evaluation.* SAGE Publications.

Hasanain, M., Sellahewa, L., & Mathie, T. (2019). *Advanced materials in prosthetic liners and cosmetic covers: A review*. Journal of Biomedical Materials Research Part B: Applied Biomaterials, 107(4), 1234–1245. https://doi.org/10.1002/jbm.b.34214

Heavey, E. (2013). The multiple meanings of 'disability' in interviews with amputees. *Commun Med*, *10*(2). 10.1558/cam.v10i2.129

Highsmith, M. J., Andrews, C. R., Millman, C., Fuller, A., Kahle, J. T., Klenow, T. D., Lewis, K. L., & Bradley, R. C. (2016). Gait training interventions for lower extremity amputees: A systematic literature review. *Technology and Innovation, 18*(2–3), 135–144. https://pmc.ncbi.nlm.nih.gov/articles/PMC5218520/

International Society for Prosthetics and Orthotics (ISPO). (2024). *State of Prosthetic Care in Low- and Middle-Income Countries.*

K.R., P., & S., S. (2021). Application of Colaizzi's method of data analysis in phenomenological research. In Yenepoya (Deemed to be University) & Yenepoya Nursing College, *Medico-legal Update: Vol. Vol. 21* (Issue No. 2).

Karim, A., Khan, M., & Patel, R. (2024). The gap between technology and user experience in prosthetics: A qualitative analysis. *Journal of Assistive Technologies*, 18(2), 75-90.

Karim, M. R., Siddiqu, M. I. H., Assaifan, A. K., Aijaz, M. O., & Alnase, I. A. (2024, March 19). Nanotechnology and Prosthetic Devices: Integrating Biomedicine and Materials Science for Enhanced Performance and Adaptability. *Journal of Disability Research*, *3*, 1-10. 10.57197

Kooiman, V. G. M., van Staveren, E. S., Leijendekkers, R. A., Buurke, J. H., Verdonschot, N., Prinsen, E. C., & Weerdesteyn, V. (2023, January 12). Testing and evaluation of lower limb prosthesis prototypes in people with a transfemoral amputation: a scoping review on research protocols. *Journal of NeuroEngineering and Rehabilitation*, *20*(1). https://doi.org/10.1186/s12984-023-01125-8

Krause, P., Hoellwarth, J., Kehrer, M., & Wilke, H.-J. (2023). Quality of life and functional outcomes in lower limb prosthesis users: A narrative review. *Prosthetics and Orthotics International*, *47*(1), 3–12. https://doi.org/10.1097/POR.0000000000000413

Lathouwers, E., Díaz, M. A., Maricot, A., Tassignon, B., Cherelle, C., Cherelle, P., Meeusen, R., & De Pauw, K. (2023, January 13). Therapeutic benefits of lower limb prostheses: a systematic review. *Journal of NeuroEngineering and Rehabilitation*, *20*(7). https://doi.org/10.1186/s12984-023-01128-5

Lee, D. J., Repole, T., Taussig, E., Edwards, S., Misegades, J., Guerra, J., & Lisle, A. (2021). Self-management in persons with limb loss: A systematic review. *Canadian Prosthetics & Orthotics Journal, 4*(1), 35098. https://doi.org/10.33137/cpoj.v4i1.35098

Lehmann, C., Decker, J., & Lange, F. (2021). Psychological adaptation after lower-limb amputation: The role of resilience. *European Journal of Physical and Rehabilitation Medicine*, *57*(5), 715–723. https://doi.org/10.23736/S1973-9087.21.06784-3

Lewis, J. (2009). *Redefining Qualitative Methods: Believability in the Fifth Moment.* Sage Journals. https://journals.sagepub.com/doi/10.1177/160940690900800201

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry.* SAGE Publications.

Lundberg, M., Hagberg, K., Bullington, J., & Hermansson, L. (2021). Experiences of returning to daily life after lower limb amputation: A qualitative study. *Disability and Rehabilitation, 43*(8), 1106–1115. https://pmc.ncbi.nlm.nih.gov/articles/PMC8189153/

McLaughlin, J., & Goodley, D. (2008). Seeking and rejecting certainty: Exposing the sophisticated lifeworlds of parents of disabled babies. Sociology, 42(2), 317-335.

Mainella, F. M., & Smedema, S. M. (2019). The experience of disability and the formulation of self: An exploration of the adjustment to disability model. *Rehabilitation Counseling Bulletin, 62*(2), 115–125. https://doi.org/10.1177/0034355218773783

Masten, A. S. (2001). *Ordinary magic: Resilience processes in development*. American Psychologist, 56(3), 227-238.

Mattick, K., Oldfrey, B., Donovan-Hall, M., Magomere, G., Gakunga, J., & Holloway, C. (2022). Experiences of lower limb prosthesis users in Kenya: a qualitative study to understand motivation to use and satisfaction with prosthetic outcomes. Disability and Rehabilitation, 45(26), 4478–4488. https://doi.org/10.1080/09638288.2022.2152875

Merriam, S. B., & Tisdell, E. J. (2015). *Qualitative Research: A Guide to Design and Implementation* (4th ed.). Jossey-Bass.

Miller, C. A., Williams, J. E., Durham, K. L., Hom, S. C., & Smith, J. L. (2017). The effect of a supervised community–based exercise program on balance, balance confidence, and gait in individuals with lower limb amputation. *Prosthetics and Orthotics International*, *41*(5), 446–454. https://doi.org/10.1177/0309364616683818

Morgan, S., Lilijenquist, K., Kajilich, A., Gailey, R., Amtmann, D., Hafner, B.(2022). Mobility with a lower limb prosthesis: experiences of users with high levels of functional ability. Journal of Prosthetics and Orthotics, https://www.tandfonline.com/doi/abs/10.1080/09638288.2020.1851400

Morse, J. M., Barrett, M., Mayan, M., Olson, K., & Spiers, J. (2002). Verification strategies for establishing reliability and validity in qualitative research. *International Journal of Qualitative Methods, 1*(2), 13-22.

Mousavi, S. B., Lecic-Tosevski, D., Khalili, H., & Mousavi, S. Z. (2020). To be able, or disable, that is the question: A critical discussion on how language affects the stigma and self-determination in people with parability. *International Journal of Social Psychiatry*, *66*(5), 424–430. https://doi.org/10.1177/0020764020913308

Mousavi, S. B., Lecic-Tosevski, D., Khalili, H., & Mousavi, S. Z. (2020). To be able, or disable, that is the question: A critical discussion on how language affects the stigma and self-determination in people with parability. International Journal of Social Psychiatry, 66(5), 424–430. https://doi.org/10.1177/0020764020913308

Mueller, P., & Hook, K. (2006). *Ethics in qualitative research.*

Murray, C. D., & Forshaw, M. J. (2022). The experience of amputation and prosthesis use for adults: A qualitative meta-synthesis. *Disability and Rehabilitation*, *44*(7), 958–970. https://doi.org/10.1080/09638288.2020.1764102

Norlyk, A., Martinsen, B., Hall, E., & Haahr, A. (2016). Being In-Between. SAGE Open, 6(3), 215824401667137. https://doi.org/10.1177/2158244016671376

National Council on Disability Affairs | Empowering Inclusion of Persons with Disabilities. (n.d.). https://ncda.gov.ph/

Nunn, T., Bourke, R., & Jay, K. (2020). "If I wear it, I feel better": Identity and stigma in prosthesis use among lower-limb amputees. *Disability Studies Quarterly, 40*(3). https://dsq-sds.org/index.php/dsq/article/view/7053

Oliver, M. (1996). *Understanding disability: From theory to practice*. St. Martin's Press.

Omana, H., Madou, E., Montero-Odasso, M., Payne, M. W., Viana, R., & Hunter, S. W. (2021). The effect of dual-task testing on the balance and gait of people with lower limb amputations: A systematic review. PM&R, 13(12), 1376–1389. https://doi.org/10.1002/pmrj.12702

Patton, M. Q. (2015). *Qualitative research & evaluation methods: Integrating theory and practice*. SAGE Publications.

Patton, M. Q. (2015). *Qualitative Research and Evaluation Methods* (4th ed.). SAGE Publications.

Praveena, K. R., & Sasikumar, S. (2021). Application of Colaizzi's method of data analysis in phenomenological research. Med Leg Update, 21(2), 914-918.

Quintero, H. A., Reznick, E., et al. (2018). User-informed design of lower-limb prostheses: Addressing the cognitive and physical demands of daily customization. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 26(1), 187–196.

RA 7277: Magna Carta Benefits for PWDs. (n.d.). Assistance.PH. Retrieved October 29, 2024, from https://assistance.ph/benefits-persons-with-disabilities/#google_vignette

Ramstrand, N., Sterner, A., & Palmer, L. (2022). *Lower limb prosthesis users' perceptions of everyday life—A phenomenographic study*. Prosthetics and Orthotics International, 46(1), 14–22. https://doi.org/10.1097/PXR.0000000000000102

Roberts, E., Burhani, L., Lankester, R., Mobbs, A., Tigert, C., Vanvelzen, T., Campbell, J., Devlin, M., Dilkas, S., & MacKay, C. (2023). *A qualitative study examining prosthesis use in everyday life in individuals with lower limb amputations*. Archives of Rehabilitation Research and Clinical Translation, 5(3), 100301. https://doi.org/10.1016/j.arrct.2023.100301

Roșca, A. C., Baciu, C. C., Burtăverde, V., & Mateizer, A. (2021). Psychological consequences in patients with amputation of a limb. An Interpretative-Phenomenological Analysis. Frontiers in Psychology, 12. https://doi.org/10.3389/fpsyg.2021.537493

Rybarczyk, B. D., Nyenhuis, D. L., Nicholas, J. J., Schulz, R., Alioto, R. J., & Blair, C. (1992). Social discomfort and depression in a sample of adults with leg amputations. PubMed, 73(12), 1169–1173. https://pubmed.ncbi.nlm.nih.gov/1463382

Salminger, S., Sturma, A., Hofer, C., Evangelista, M., Perrin, M., Aszmann, O. C. (2020). Current rates of prosthetic usage in upper limb amputees – Have innovations had an impact on device acceptance? *Disability and Rehabilitation: Assistive Technology, 15*(4), 400–405. https://www.tandfonline.com/doi/full/10.1080/09638288.2020.1866684

Schaffalitzky, E., Gallagher, P., MacLachlan, M., & Ryall, N. (2019). Understanding the benefits and limitations of prosthetic technology from the amputee perspective. *Disability and Rehabilitation: Assistive Technology, 14*(1), 60–69. https://pubmed.ncbi.nlm.nih.gov/21050130/

Schwandt, T. A. (2007). *The SAGE dictionary of qualitative inquiry* (3rd ed.). https://methods.sagepub.com/reference/the-sage-dictionary-of-qualitative-inquiry

Sions, J. M., Beisheim-Ryan, E. H., Pohlig, R. T., & Seth, M. (2022). Adults with unilateral lower-limb amputation: greater spatial extent of pain is associated with worse adjustment, greater activity restrictions, and less prosthesis satisfaction. *Scandinavian Journal of Pain*, *22*(3), 578–586. https://doi.org/10.1515/sjpain-2021-0132

Smith, J. A., Flowers, P., & Larkin, M. (2009). *Interpretative Phenomenological Analysis: Theory, Method and Research*. SAGE Publications.

Sorenesen, I., Berg, G. (2022). Facilitators and Barriers That Transfemoral Amputees Experience in Their Everyday Life: A Norwegian Qualitative Study https://onlinelibrary.wiley.com/doi/full/10.1155/2022/2256621

Stokosa, J. (2024). Prosthetic advancements in lower-limb technology. *Amputee Coalition*. https://www.amputee-coalition.org/prosthetics

Tajfel, H., & Turner, J. C. (1979). *An integrative theory of intergroup conflict*. In W.G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33-47). Monterey, CA: Brooks/Cole.

Taylor, S. E. (1983). *Adjustment to threatening events: A theory of cognitive adaptation*. American Psychologist, 38(11), 1161-1173.

Tennant, R., Joseph, C., & Thomas, N. (2022). Body image, identity, and psychosocial adaptation in limb loss: A systematic review. *Prosthetics and Orthotics International, 46*(1), 3–14. https://www.researchgate.net/publication/348434803_The_Role_of_Body_Image_on_Psychosocial_Outcomes_in_People_With_Diabetes_and_People_With_an_Amputation

The role of human thermoregulation in thermal discomfort in lower-limb prosthetics : a scoping review - Strathprints. (n.d.). https://strathprints.strath.ac.uk/92524/

The unpopular truth about biases toward people with disabilities. (2019, July 18). MSU Today. Retrieved October 29, 2024, from https://msutoday.msu.edu/news/2019/the-unpopular-truth-about-biases-toward-peop e-with-disabilities

Turner, A. P., Klenow, T. D., Kerns, R. D., & Ehde, D. M. (2022). Prosthesis irritants: The lived experience of lower-limb prosthesis users. *Archives of Physical Medicine and Rehabilitation*, *103*(8), 1572–1581. https://doi.org/10.1016/j.apmr.2022.03.007

Turner, S., & McGregor, A. H. (2020). Perceived effect of socket fit on major lower limb prosthetic Rehabilitation: A Clinician and amputee perspective. *Archives of Rehabilitation Research and Clinical Translation*, *2*(3), 100059. https://doi.org/10.1016/j.arrct.2020.100059

Turner, S., Belsi, A., & McGregor, A. H. (2021). Issues faced by people with amputation(s) during lower limb prosthetic rehabilitation: A thematic analysis. *Prosthetics and Orthotics International*, *46*(1), 61–67. https://doi.org/10.1097/pxr.0000000000000070

WHO standards for prosthetics and orthotics. (2017, February 1). World Health Organization. Retrieved October 19, 2024, from https://www.who.int/publications/i/item/9789241512480

Wong, C. K., & Edelstein, J. E. (2019). Prosthetics. In *Physical Rehabilitation* (7th Edition ed., 1325-1326, 1343). F.A. Davis Company.

Wong, C. K., Chan, C. K., & Lee, W. C. (2021). Perceived barriers of prosthetic rehabilitation: A patient-centered perspective. *Journal of Rehabilitation Research and Development*, *58*(3), 401–410. https://doi.org/10.1682/JRRD.2021.03.0045

World Health Organization: WHO. (2020, January 27). *Disability*. https://www.who.int/health-topics/disability#tab=tab_1

World Health Organization: WHO. (2023, March 7). *Disability*. https://www.who.int/news-room/fact-sheets/detail/disability-and-health

Wright, B. (1983). Physical Disability: A Psychosocial Approach (2nd ed., p. 25). New York: Harper & Row. https://doi.org/10.1037/10589-000

Zidarov, D., Swaine, B., & Gauthier-Gagnon, C. (2021). Factors related to long-term prosthesis use among persons with lower limb amputation. *Disability and Rehabilitation: Assistive Technology*, *16*(3), 285–292. https://doi.org/10.1080/17483107.2020.1738567