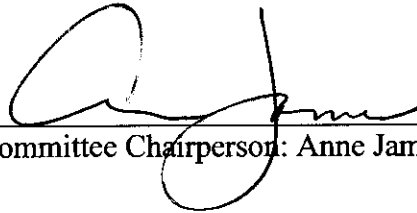


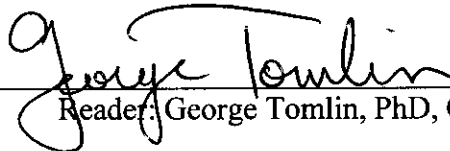
Facilitating Psychosocial Adjustment to Traumatic Amputations:  
Perspectives of Occupational Therapists

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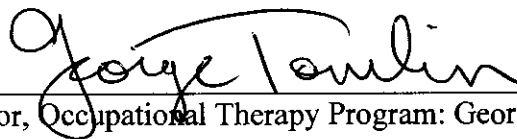
This research, submitted by Jessica Malinowski, has been approved and accepted in partial fulfillment of the requirements for the degree of Master of Science in Occupational Therapy from the University of Puget Sound.



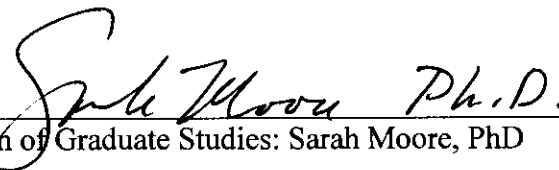
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### **Abstract**

The purpose of this qualitative study was to explore the perspectives and experiences of three occupational therapists in the United States in addressing psychosocial reaction and adjustment in the treatment of individuals with traumatic amputations. Occupational therapists with extensive experience working with clients with traumatic amputations were selected as participants. Data from the participant interviews revealed two major themes: (1) Individuals' internal resources and response to amputation influence psychosocial adjustment and (2) Occupational therapists addressing psychosocial reactions in individuals with traumatic amputations in the context of treatment.

The first theme "Individuals' internal resources..." had two subthemes: (a) the influence of individuals' internalized resources and responses, and (b) family support, culture and background. The second theme, "occupational therapists addressing psychosocial reactions..." had two subthemes: (a) occupation based, client centered treatment, and (b) therapeutic use of self. These themes demonstrated that individuals' pre-morbid coping skills and external supports are crucial factors in adjusting to a traumatic amputation, and that occupational therapists' use of meaningful activities and a therapeutic use of self, as well as appropriate timing of treatment can give the best support to the client. This study suggests that understanding a client on a deeper level and finding out what is motivating to that client are the best ways to promote psychosocial adjustment to a traumatic amputation.

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Traumatic amputation of a limb or body part can result from numerous events, including work injuries, recreational or sporting accidents, and war related injuries (Stubblefield & Armstrong, 2008). Regardless of the origin, traumatic amputations can cause the individual to feel a loss of what makes them who they are, and may seriously impact the individual's ability to be independent and participate in life situations. While rehabilitation professionals have traditionally been successful in improving the physical functioning of people with amputations, the psychosocial factors related to traumatic and emotionally distressful events are often neglected (Desmond & MacLaughlan, 2002).

Psychosocial reaction to an amputation can be defined as the response of an individual to a life-altering traumatic event, which may result in depression, body image problems, and a decline in social interactions (Hamill, Carson, & Dorahy, 2010). Psychosocial adjustment involves an adaptive response to a substantial life change by an individual (Moorhead, Johnson & Swanson, 2008). Occupational therapy (OT) recognizes that the debilitating effects of a traumatic amputation may adversely impinge upon the individual's self worth and integration in society (Ramsey, 2004). Primary concerns of individuals with amputations were reported as "fear of the unknown, loss of self-esteem, loss of self-confidence, fear of rejection, and loss of occupational roles," (Smurr, Gulick, Yancosek, & Ganz, 2008, p. 162). Each of these concerns is within the scope of OT practice. All members of the rehabilitation team should provide psychological support (Smurr et al., 2008), however occupational therapists may be especially well suited to incorporate psychosocial support into treatment, given OT's holistic view of the client.

Research and published expert opinions provide evidence that supports the necessity for facilitating positive psychosocial adjustment in people with traumatic amputations (Hamill et al., 2010; Horgan & MacLachlan, 2004; Saradjian, Thompson & Datta, 2008; Unwin, Kacpersek, & Clarke, 2009), which is crucial for occupational therapists as they seek to assist individuals to return to all aspects of meaningful occupation. While there is a substantial amount of research on the occurrence and physical rehabilitation of people with amputations, including prosthetic devices and rehabilitation strategies, there is little published research on how occupational therapists address psychosocial factors in these cases. OT literature on psychosocial adjustment suggests that therapists provide clients with informative materials or recommend they meet other people with amputations (Gulick, 2007). Research conducted on the use and disuse of prostheses for individuals with amputations has shown that the emotional and psychological factors surrounding an amputation influence how likely it is that the individual will continue using assistive technologies and prosthetic devices, as well as continue therapy (Callaghan, Condie, & Johnston, 2008). Callaghan et al. (2008) suggested that incorporation of psychosocial adjustment in treatment may positively influence therapy outcomes. A better understanding of the psychosocial elements that treating therapists have observed and addressed will help all occupational therapists attend to psychological adjustment in their future clients.

## **Background**

**Incidence of amputations in the United States.** The number of people living with amputations in the United States (U.S.) is increasing as better medical techniques have been developed and the rate of amputation resulting in fatality has declined (Stubblefield & Armstrong, 2008). There are 150,000 people in the U.S. currently living with amputations (Stubblefield & Armstrong, 2008), many requiring rehabilitation in order for the people affected

to return to their pre-amputation lives. Approximately 56,912 lower-limb amputations, and 1,908 upper-limb amputations occur per year in the U.S. (Morris, 2008). While most non-combat lower extremity amputations are a result of peripheral vascular disease and diabetes, almost 75% of upper extremity amputations are a result of trauma (Stubblefield & Armstrong, 2008).

**The team involved in rehabilitation.** Adjustment to a traumatic amputation requires the whole rehabilitation team to support the individual on every level of his or her recovery. Team members may include physicians, prosthetists, occupational therapist, physical therapists, psychologists, vocational counselors, and social workers (Stubblefield & Armstrong, 2008). While each professional has a different role, the overarching goal is a return to participation in meaningful life roles in a way that is satisfying to the client. Many factors involved with the amputation and rehabilitation need to be taken into consideration, including surgical interventions and wound healing, as well as the prescription and fitting of a prosthesis or other assistive technology to maximize independence. Additionally, the psychosocial and emotional concerns of the individual require attention (Horgan & MacLachlan, 2004). According to an editorial by Gallagher (2004), typically the focus of rehabilitation professionals is the physical function of the affected limb, while the concerns of the client are social acceptance and personal independence.

**Affects of a traumatic amputation on the individual.** The evidence supports that both upper and lower extremity amputations impact an individual's quality of life, social participation and mental health (Burger & Marincek, 1997; Ham & Cotton, 1991; Hamil et al., 2008, 2010; Horgan & MacLachlan, 2004). Upper extremity amputations can significantly impact participation in activities of daily living (ADL), as the hands are the primary tool used to interact with the environment and others. Lower extremity amputations impact overall functioning, and

particularly impact functional mobility. Burger and Marincek (1997) studied 228 individuals under the age of 51 with lower extremity amputations due to injury and found that one half to two thirds participated less frequently in social activities post-amputation, and that their free time activities changed or decreased. Overall, participants reported that after the lower extremity amputations had occurred, they spent most of their free time at home, with limited social interactions (Burger & Marincek, 1997).

Use of a prosthetic device can assist the individual in participating in meaningful activities as well as providing the cosmetic appearance of a typical limb, however, they may not be appropriate or necessary for all individuals (Stubblefield & Armstrong, 2008; Unwin, et al., 2009). Incorporation of a prosthetic device into routine use may also be influenced by psychosocial reaction. Fifty percent of individuals with amputations using a prosthesis will discontinue use of the device within the first five years of fitting (Callaghan et al., 2008). The abandonment decision has been found to be influenced by ease of use, appearance, comfort, swelling and other factors (Cummings, 2000). If emotional and psychological factors surrounding an amputation influence use or disuse of a prosthesis (Callaghan et al., 2008), it is valuable to determine best ways to support psychosocial adjustment to a person with a traumatic amputation. While the ability of a prosthesis to support individuals' occupational performance may vary, the decision to abandon the device should be based on the clients' functional needs rather than a response to psychosocial challenges.

Robertson (1992), researcher and expert in counseling individuals with disabilities, the progression of adapting to an amputation varies drastically from person to person. A phenomenological study of 8 individuals, 18 months post-amputation, revealed trends in the adjustment of these individuals (Hamill et al., 2010). This study reported that participants

struggled to some degree with the loss of independence and how that loss affected them the rest of their lives. The experience related to social stigma of the amputation was another common report from the participants, as well as the internalized embarrassment and stress that resulted from the lack of social acceptance. Another theme that emerged was the struggle of participants with their new identifying characteristic of “disabled” (Hamill et al., 2010). Although this study was composed of individual accounts of living with amputations, it did not offer any insight into methods to address these issues in rehabilitation. Additionally, only three of the participants in this study had acquired the amputation due to trauma. Separate focus on either purely trauma related amputations or on amputations secondary to vascular disease may have strengthened this study by, revealing more specific themes.

**Treatment of psychosocial reaction to a traumatic amputation.** While there is no doubt that traumatic amputations can be especially distressing to the individual, treatment of the psychological effects of an amputation is often left to the psychologist or psychiatrist (Engstrom & Van de Ven, 1993). Increased participation in social activities can lead to better mood and self-esteem, which in turn can improve the individual’s overall quality of life and motivation to continue rehabilitation. A qualitative study examining adjustment to lower limb amputations concluded that high levels of positive psychosocial adjustment predicted better functional success with a prosthesis and better physical adaptation to the amputation itself (Unwin et al., 2009). Therapists need to consider not only the amputation, but the individual with the amputation as a whole person, in order to promote the most successful rehabilitation outcomes (Gulick, 2007). The rehabilitation team members, including occupational therapists, psychologists and others, can support the psychosocial health of the client by collaborating throughout.

**Current occupational therapy literature.** Only three studies addressing psychosocial adjustment of clients after amputation were found in the occupational therapy literature. A case study by Krenek and Vasquez (2006) recounted the treatment of seven Iraqi men who had been subjected to crude amputation of their right hand, culturally the hand used to shake hands and feed oneself with. Occupational therapists in the U.S. recognized how debilitating this event was to these men and their ability to be accepted in their culture, and fitted all seven men with right upper extremity prostheses. The study provided a list of goals for treatment, all focused on the biomechanical use of a prosthetic device. The authors did note an observable camaraderie developed among the seven men throughout this experience (Krenek & Vasquez, 2006). Further analysis of the role this camaraderie played in the rehabilitation of these men could have been extremely useful in understanding peer support and its influence on positive adjustment to traumatic amputations.

Gulick (2010) provided a short case study describing her work with male client with a traumatic upper extremity amputation, including support for psychosocial adjustment after his amputation. She detailed concern for his community reintegration, the importance of gaining his trust, his lack of self-esteem, and the challenges he faced with his new self-perception. The author gave detailed accounts of her work with him, working on reintegration into the grocery store and cafeteria, gradually using his prosthetic hand, assisting him in problem-solving how to face different situations and how she worked to gain his trust (Gulick, 2010). While this exemplary story demonstrated how an occupational therapist could incorporate psychosocial issues into treatment of an individual with a traumatic amputation, the author's treatment and the tools she used were specific to that one client and may not apply to other individuals with traumatic amputations or in different settings in which occupational therapists see clients.



Occupational therapists are required to set goals for their clients in order to bill, and under occupational therapy standards, goals should be based on meaningful occupations. If clients have a negative psychosocial reaction to a traumatic amputation that limits social engagement, independence, or other activities, it may be appropriate to write a goal focused on psychosocial outcomes. In a case study of an individual with a shoulder disarticulation due to a work injury, Canelon (1993) included an occupational therapy goal of assisting the individual with psychosocial adjustment to his amputation. The therapist provided the client with a video on amputations and psychosocial adjustment, and noted at discharge the limited psychosocial adaptation by the client. Whether the video was determined to be the best treatment or the only treatment known to that occupational therapist was not stated, leaving out the critical reasoning of the therapist on this aspect of the treatment of the client. This case study indicated that therapists need a greater arsenal of tools that they can use to address psychosocial reaction, especially when one effort proves ineffective.

Gulick (2007) noted OT's role in rehabilitation of those with amputations, including the need to identify and attend to psychosocial issues. No further details were offered in this study on specifics of how occupational therapists can facilitate psychosocial adjustment, beyond referring the individual to meeting other people with amputations (Gulick, 2007).

Communication with and witnessing of other people with amputations are reported to be especially helpful to an individual with a new amputation, as are group treatment sessions (Ham & Cotton, 1991). However, group treatment and communication with other individuals with traumatic amputations may not be feasible in every therapy setting. Additionally, Smurr et al. (2008) suggested, including counseling and reassurance of the individual, empathetic interactions with the client and family, use of the Amputee Coalition of America to set up a peer visit,

engagement in therapeutic outings, and developing life skills to support psychosocial adjustment. While methods suggested by Gulick (2007), Ham and Cotton (1991) and Smurr et al. (2008) are plausible means of assisting clients in psychosocial adjustment to their amputations, they do not emphasize therapeutic use of self, nor do they require the therapist to acquire any knowledge about treatment methods, or make any direct engagement in the client's psychosocial adjustment. No research was found on how often occupational therapists do incorporate psychosocial adjustment into their treatment, or on the effectiveness of current treatments.

**Need for further research.** Greater research is needed to determine OT's involvement in the treatment of psychosocial adaptation post-traumatic amputation. A literature review (Desmond & MacLachlan, 2002) found that even within psychology research, detailed accounts of psychosocial well-being after an amputation are limited. Additionally, they concluded that previous research focused on negative psychosocial outcomes of an amputation, not on positive outcomes. There is an evident need to document the knowledge of occupational therapists with experience in treating individuals with traumatic amputations and explore the clinical judgment and knowledge used in treatment decision making. Obtaining a profile of best practices of occupational therapists experienced in treating individuals with traumatic amputations may reveal whether further research and development of new treatment approaches are necessary. Therefore, the purpose of this study was to examine how U.S. occupational therapists treating individuals with traumatic amputations address psychosocial reaction and promote positive adjustment in treatment, as well as their accounts of the outcomes of methods used to facilitate psychosocial adjustment.

## **Method**

### **Research Design**

A qualitative design was used in this study in order to document the experiences and insight of occupational therapists on treating individuals with traumatic amputations (Schmid, 1981). The use of in-depth interviews allowed for an understanding of the therapists' experience with the specific population of interest (Rubin & Rubin, 2005). While there are many accounts of the experience of the individuals with amputations, only two studies were found expounding on the occupational therapist's insight with this kind of client (Canelon, 1993; Gulick, 2010). While the case study depicted by Canelon did detail therapy goals, including assistance in psychosocial adjustment, this report gave little detail of the occupational therapist's experience working on this goal. The case study by Gulick provided additional insight as to how she addressed psychosocial reaction during OT treatment; however her methods were specific to one client and may not be appropriate for other people with traumatic amputations. In order to develop a profile of best practices of occupational therapists with ample experience and clinical reasoning in this area of OT, it was determined that semi-structured qualitative interviews with occupational therapists treating this population would give insight that surveys would not. The Guba model of trustworthiness was used in order to strengthen the rigor of this study (Krefting, 1991).

### **Participants**

The population of interest was practicing occupational therapists in the U. S. who have worked with individuals with traumatic amputations. This subset of occupational therapists was small and specific, making it relatively difficult to locate participants who have the targeted experience. Recruitment of participants employed network sampling, utilizing OT faculty recommendations and suggestions, first seeking suggestions from the research committee faculty

(Kielhofner, 2006). Three occupational therapists were selected, which was determined to be a sufficient number to observe trends in the participants' reports, given the time and resources available for the study. Inclusion criteria consisted of work experience of treating at least 5 individuals with traumatic amputations in the last 10 years, at least 1 in the last 2 years, as well as having at least 10 total years experience as a practicing occupational therapist. While the participants are unique in their ample experience treating individuals with traumatic amputations, selection of therapists from common practice areas improved the applicability of this study (Krefting, 1991). In order to maintain confidentiality, the participants were assigned pseudonyms.

Andrea had 23 years of experience working as an occupational therapist, and had worked for over 10 years in hand therapy, 4 years in upper extremity amputation rehabilitation, in pediatrics, and at an army medical center. She was also a certified hand therapist. She reported that she had treated a total of 150 people with traumatic amputations, and 20 in the last two years. She had published articles on amputation and prosthetics. Brittney had been an occupational therapist for 21 years, and had worked primarily in a level 1 trauma hospital, specifically working in burns. She had treated over 80 individuals with traumatic amputations, with 15 being in the last two years. Last, Cody had experience working as an occupational therapist for 12 years, including work in acute care, outpatient and home health. He had treated 10 individuals with traumatic amputations, including 2 in the last 2 years. Additionally, he had the unique circumstance of having a below elbow upper extremity amputation himself, which resulted from a traumatic accident before he became an occupational therapist, approximately 15 years prior to this study.

## **Procedures**

The study was approved by a university Institutional Review Board before being implemented. Upon locating participants via network sampling, participants were contacted to schedule initial interviews. Prior to the interviews consent forms were presented to the informants, including consent to be audiotaped. In preparation of administration of the interviews, the researcher underwent a practice interview with a university professor experienced with treating individuals with amputations in order to strengthen the interview process. All three participants were interviewed in private locations, at the participants' convenience. Each occupational therapist was first interviewed for 1 hour to 1.5 hours by the author. Interviews were audio recorded and field notes were taken by the interviewer. The first interview question was a "grand tour" inquiry about the therapist's experiences treating clients with traumatic amputations (Spradley, 1979), however, follow-up questions were used to maintain a general focus in the interviews as needed (see Appendix). Follow-up interviews of about 30 minutes were done 1-2 months later, in which additional questions were asked that the author deemed essential for the study, as well as member checking with participants on preliminary findings from the initial interviews. Two of the follow-up interviews were conducted in person, and one was conducted by phone. The one phone interview was audio-recorded, and the participant was asked to verbally reconfirm consent to being audio-recorded.

## **Data Analysis**

Data for this study consisted of the initial 60-minute interviews with the three participants, as well as follow-up interview data. All audio recorded interviews were transcribed verbatim by a professional transcriptionist and the transcriptions were checked for accuracy by the author. Data analysis began with open coding, which consisted of identifying and describing

concepts that emerged from the data. Codes were then organized into categories. Axial coding was then used to relate categories and subcategories to develop themes (Strauss & Corbin, 1998). Once themes were developed, the researcher analyzed the data for any alternative explanations (Marshall & Rossman, 1999).

Open-ended questions and participant-guided interviews fostered credibility of the study, and aided in obtaining truth value. In order to strengthen the accuracy and validity of the findings, member checking was done by presenting preliminary findings from the initial interviews to the participants. A research supervisor conducted peer review for accuracy of completeness. The researcher maintained an audit trail to track development of themes and data analysis. Self-reflective scrutiny of the researcher's personal biases and preconceived assumptions by way of a field journal also supported the auditability of the study.

### **Results**

The three occupational therapists who participated in this study had ample experience working with individuals with traumatic amputations; however, each had varying backgrounds, with experience working in different occupational therapy settings, and each had different personalities and therapy styles. Despite differences among the participants, interview data across all participants revealed two major themes that were consistent across all interviews. The first theme was influences on reaction to a traumatic amputation and the rehabilitation process, in which the participants primarily discussed the characteristics of individuals with traumatic amputations and individual adjustment to the amputation. Influences on reaction subthemes included individuals' internalized factors and individualized reactions to traumatic amputations, as well as family support, culture and background. The second major theme was how occupational therapists addressed psychosocial reactions in individuals with traumatic

amputations in the context of treatment, including occupation-based and client-centered approaches to treatment, and therapeutic use of self.

### **Influences on Reaction to a Traumatic Amputations and the Rehabilitation Process**

**Individuals' internal resources and response to amputation influence psychosocial adjustment.** Participants were asked whether they had observed any patterns in the relationship between client characteristics and adjustment to traumatic amputations. All participants noted repeatedly that basic client demographics (gender, diagnosis, etc.) were insufficient for predicting psychosocial responses, and instead people tended to react on an individualized level to their amputation and subsequent life. In discussing possible reasons why there are a variety of ways individuals react and respond to traumatic amputations, Cody reported, "I almost wonder more so if the responses seemed related to personalities, not just mechanism of injury....But I think that personality—some people just tend to bounce back." During further discussion of individualized reactions to traumatic amputations, the participants explored the concept that coping styles individuals had prior to the traumatic event appeared to play a role in how individuals with traumatic amputations reacted to and lived with their amputations.

Traumatic amputee—again, this comes back to how you were raised—I think all of us deal with loss a lot based on how we were raised and how you approach any obstacle in life. I have a flat tire—are you going to sit and cry on the side of the road? Or are you going to figure out how to change it? Or are you going to call AAA? Are you going to be resourceful? Same thing with any kind of loss—what is your MO for dealing with obstacles? (Andrea)

The participants stressed that the outlook of an individual prior to the traumatic event was often a precursor and influenced how clients rehabilitate after their injury. Brittney discussed this, noting;

If people are....really negative about everything and a simple cold takes them down, they are not exactly the easiest person to rehabilitate. People that take things in stride see it as a just a bump in the road, not a cliff—they are much

easier to work with to get back. It is not as big of a mental struggle as well as a physical struggle.

Brittney further discussed this topic and indicated that preferred coping strategies appear to predict how an individual reacts to a traumatic experience. A client's predisposition can foreshadow how they will respond to a traumatic event such as an amputation.

**Family support, culture and background.** Participants also believed that family support, upbringing and culture played an important role in clients' psychosocial adjustment.

Cody explored this concept noting

The social support makes a huge difference. The individual that comes in that doesn't have a lot of friends visiting, that doesn't have any family visiting—versus the individual that there is a million people in the room, 20 signs and loads of balloons and flowers and there is always somebody there in support—that stuff all kind of goes together. But those are the individuals—any diagnosis quite frankly—that seem to do better—with that support system.

Additionally, all participants discussed how culture can significantly influence how a individual views their traumatic amputation, and the stigma and disability that follows. Hispanic males were discussed by two participants, particularly noting how the role of provider can be significantly impacted by disability. Andrea told a story of a male Hispanic client who sustained bilateral upper extremity amputations while working at a factory, noting the large impact his injury made on his ability to provide for his family.

He was a man who was fiercely independent— and if you understand anything about the Hispanic culture, that is important in this as well. He was sent home entirely dependent on his family. But, it was really important for him to still be a father figure to his daughters. So, we skipped some of the basic stuff and went right to gardening because I felt like that was important to the relationship with his daughters—they could still see him as a dad and he could still get out there and handle some equipment.

In addition to ethnic culture, the regional culture of the client can be a factor influencing an individual's support system, rehabilitation, and beliefs, for example Brittney stated;



Culture from even just within the Caucasian people, because Caucasian from a small town versus a big city—Caucasian from Eastern European background where the family is really important and strong versus non. Then you go into race culture. Big, big differences. Like the Alaskan natives are totally accepting of the person's changes—physical, mental, and everything.

The participants' recognition of the pre-morbid coping styles and external factors that influence how clients adjust to traumatic amputations allowed them to consider these factors when developing personalized treatment plans.

### **Occupational Therapists Addressing Psychosocial Reactions in Individuals with Traumatic Amputations in the Context of Treatment**

**Occupation-based and client-centered approaches to treatment.** The strongest theme among all interviews was the need to find out what is meaningful to the client in order to motivate an individual with a traumatic amputation during treatment and show the client what they are capable of doing after amputation. All participants gave multiple accounts of how they discovered important details about clients, such as what they do for work, and what leisure activities they enjoy and would like to return to. Such understandings of clients appeared to make a large difference in the psychosocial adjustment of clients with traumatic amputations. When asked what she did when faced with a client who is challenging or does not appear to be very motivated, Brittney responded;

You just have to find out what makes the person tick. What actually motivates that person? Is it riding a dirt bike? Is it playing with their grandkids? Is it doing woodworking? Is it getting back to work? You never know, so you got to find out what makes that person motivated and use it to your advantage.

Each participant gave several examples of how they have incorporated meaningful activity into their various treatments with different clients with traumatic amputations. This varied based on the participants' work setting. Andrea indicated that she has the time and opportunity to do home visits and activities as part of outpatient services, while Cody and

Brittney both worked in acute care settings and saw clients for a limited amount of time.

However, Cody did indicate that he employed therapeutic use of self to connect with clients when he stated,

And then just figuring people out. If I can figure out what makes you click, then I can figure out ways to try to help motivate you. And if you are motivated then you are going to work. And if you are going to work and you feel purpose, then you are going to work when I am not there.

All participants noted that they used meaningful activities to motivate clients and provide them with hope for their future. For example, Andrea told a story of how she used meaningful activity in therapy with a Hispanic male client whose primary concern was to regain his role as a father figure to his small children;

Like I said, the gardening. He couldn't dress himself yet and we were out gardening. But I felt like that was important for him to see that he could still have the role as father and be a teacher to his children. So yes, there are typical goals, but they always need to be modified to fit the individual.

Andrea also described how respecting this client's culture and incorporating activities that were meaningful to him allowed her to gain trust and respect from both him and his wife. She explained that the client's wife was distrustful of Western medicine and she did not engage with her husband's health care providers. However, when Andrea focused on meaningful family roles, the wife began engaging in conversations with her, indicating a developed trust in Andrea. All of the occupational therapists interviewed noted that they felt comfortable incorporating client culture and beliefs into therapy, and have frequently taken culture into consideration when treating their clients. Incorporating cultural or family customs into therapy can make treatment more meaningful and motivating.

So you have got to find out what their cultural beliefs are that way, as well as what type of thing they are going to go back into. Are they going to be segregated? Are they going to be accepted? What is going to happen there?  
(Brittney)

**Occupational therapists using therapeutic relationship.** All participants noted the importance of first developing a relationship with the client and addressing psychological factors before working on more physical needs. This was somewhat surprising, given that two of the participants worked in fast pace acute care settings, with limited time to develop relationships with clients. Andrea stated “You can’t divorce the physical body from the mind,” indicating that psychological reaction to an injury or disability is closely intertwined with physical rehabilitation and outcomes. One participant noted if necessary, planned treatment will stop for the day if she sees the client is having a really hard time and just needs to talk. Participants in this study signified the importance of addressing psychosocial issues, particularly Cody noting;

I do think the emotional thing is one of the first priorities. If they are not motivated, if they are depressed, if they are not going to work and if you know they are going to go home, and not do anything, then all of this phenomenal stuff you are doing in my opinion isn’t going to have the greatest benefit.

All three participants indicated that they felt very comfortable addressing psychosocial reaction to traumatic amputations, and were further probed as to how they developed this comfort. The participants reported that their own personal backgrounds supported their comfort in addressing psychosocial adjustment with clients who have traumatic amputations. This was displayed by Brittney’s response;

I think life skills are what help you be a good OT and I think that is what helps you respond to your patients. Besides what you learned in school and besides what you learn on the job, I think your coping and your life skills then mixed in with all of that is what makes you a good therapist or not.

Each participant was asked about what tools of treatment they have incorporated to support individuals with psychosocial reactions to traumatic amputations. In addition to finding activities that are meaningful and enjoyable to the individual, a common response was the need for silence and listening during treatment. Supporting the individual can be more than providing

instruction and direction, but can be unspoken support. One of the participants stated that therapists and Americans as a whole are often quick to jump to fill in silence, and provide their own opinions or assumptions. She reported that silence can be an appropriate tool, and may be what the client wants, or may give them an opportunity to be listened to. She further explained,

Silence and listening. People like to advise people. I have never had an amputation so I just cannot stress that enough. [Silence and listening] is something I have learned. I think it is because I wasn't good at it for a long time. Silence is awkward for a lot of us. So that is really important.

Peer support from individuals with traumatic amputations was also indicated as an effective tool in motivating clients and allowing them to see their potential after an amputation. Brittney stated that her workplace carefully selects peers, ensuring that they are people who can motivate their clients rather than just commiserate with them about their disability. Cody stated that due to his upper extremity amputation, clients often ask him what leisure activities he is able to do, "testing the waters as to what they may be able to do."

The participants also noted the importance of being able to recognize when a client's needs are beyond your comfort, skills, or profession. Referral to other professionals was discussed during all interviews. Andrea told a story of a colleague who approached her, when not feeling comfortable treating a client,

But, what I told this therapist was, if you're not comfortable with it, don't try to address it because it will not come off well. But go find someone who is comfortable. Don't ignore his [psychosocial needs].... We have to recognize our strengths and your weaknesses and if we are not strong in the area of psychosocial—we need to make sure that client gets that support from someone if it is not us.

Use of humor was another commonality that the participants expressed they frequently used with clients with traumatic amputations. However, they all discussed that there is an art to using humor, and a therapist needs to choose wisely whether humor is an appropriate method to use with each individual client. There is a universal humanness to laughter and engaging in

joking conservation that the participants recognized to be useful during treatment. Cody even stated that after his own traumatic amputation, the first time he laughed with his brother and friends he found some hope that he could feel “normal” again and that he would be okay. Cody particularly spoke of humor and his style of therapy,

So, with patients, what do you say to them? It kind of all depends on who they are, how they respond, have they cracked a joke? Have they broke a smile? What do they respond like in the time that I have spent with them? And if somebody has got a little bit of a sense of humor or laughs a lot and likes jokes, I would probably say one thing—if they don’t, I would probably say something different.

The participants’ utilization of a therapeutic relationship with their clients, as well as incorporation of meaningful activities appeared to have resulted in effective promotion of psychosocial adjustment in clients with traumatic amputations.

### **Discussion**

This study revealed several themes that were derived from the experiences of occupational therapists treating individuals with traumatic amputations. The participants provided examples of how they have incorporated psychosocial adjustment and reintegration into treatment, and that each client should be considered on an individualized level. The findings of this study demonstrated that occupational therapists are specially equipped to facilitate psychosocial adjustment, and that the Occupational Therapy Practice Framework (OTPF) core values are effective in supporting a holistic approach to a client’s rehabilitation.

Reports from the occupational therapist participants in this study indicated that clients respond to traumatic amputations differently, and therefore clients should be considered on an individualized level when therapists are evaluating, writing goals, and developing treatment modalities. This is consistent with previous research, which has found that the process of adapting to an amputation is individualistic (Robertson, 1992), however, previous studies had not

addressed how factors such as culture and background can influence an individual's ability to adjust to a traumatic amputation. Participants noted that pre-morbid characteristics of an individual, including family upbringing, cultural backgrounds, and overall outlook on life will heavily influence clients' success in rehabilitation and coping with an amputation. This indicates the importance of developing a client's occupational profile during the evaluation process, to better understand the internal and external factors that influence the client's reaction to trauma and overall outlook on life.

As discussed in the background of this study, there is limited research on the tools that can be used to facilitate psychosocial adjustment to traumatic disabilities, particularly traumatic amputations. While previous research indicated that the use of peer support to promote social-reintegration and psychosocial support following an amputation (Gulick, 2007; Smur et al., 2008), this study revealed the importance of developing a therapeutic relationship and utilizing meaningful occupations when working with clients. The current study revealed that the participants integrated psychosocial adjustment into treatment activities, and that therapists utilize a more integrated approach to facilitating psychosocial adjustment of clients with traumatic amputations.

A foundational belief of OT is that the use of activities or occupations that are meaningful to that individual should be used in therapeutic treatment and goal setting. Participation in meaningful activities and occupations provide the valuable opportunity to address both physical and psychosocial rehabilitation needs of individuals with traumatic amputations. Previous research had indicated that rehabilitation therapists were not addressing psychosocial adjustment ((Desmond & MacLaughlan, 2002), however, the participant responses in the current study indicate that occupational therapists do address psychosocial adjustment to

traumatic amputations and they do it well. Participants in this study noted that while they did not directly write goals on psychosocial adjustment or participation, they felt well equipped to incorporate psychosocial reintegration into treatment.

Hamill et al. (2010) found that individuals with amputations commonly struggle with loss of independence due to their amputations, and the social stigma, and internalized stress and embarrassment that result from disability. Incorporation of meaningful activities into treatment can show clients that they can be independent, and social reintegration can assist in alleviating embarrassment and stress from social activities. Participants in this study, regardless of work setting, indicated that they incorporate progressive, meaningful community reintegration and also noted that they consider community reintegration a vital component in a client's rehabilitation.

Based on the themes developed in the current study, a model was developed (see Figure 1). The figure displays the interrelatedness of meaningful occupations and psychosocial adjustment. As reported by the participants, positive psychosocial adjustment to a traumatic amputation can facilitate a client's participation in occupations that they consider meaningful, while poor psychosocial adjustment may impede a client's participation in meaningful occupations. Additionally, occupational therapists utilization of meaningful occupations during treatment, as demonstrated by participant accounts, can promote psychosocial adjustment to traumatic amputations. Subthemes that were revealed support the interrelated psychosocial adjustment and meaningful occupations. Internal and external influences on a client (such as premorbid coping styles, culture, family and background) influence psychosocial adjustment, while therapeutic use of self allows occupational therapists to identify meaningful occupations in the clients they treat.

**Limitations**

Given the scope of the current study, saturation of data was not achieved. Additionally, participants were selected partially due to convenience of location in relation to the researcher, and only provided specific, individualized perspectives and insight. The participants of this study had extensive experience working with traumatic amputations, which is not typical of most occupational therapists.

**Future Research**

Observations of the participants treating individuals with traumatic amputations, specifically when psychosocial adjustment is being addressed or is of particular concern would have provided additional data and insight into how the participants addressed psychosocial reaction during treatment. Additionally, interviewing new occupational therapists or therapists who treat traumatic amputations on a more occasional basis may reveal interesting findings on how the average therapist treats psychosocial reactions related to individuals with traumatic amputations and their comfort in this area. This future study may reveal whether there is a need to better educate occupational therapists on addressing underlying psychosocial issues related to injury and disability. Last, an additional study looking at how occupational therapists address psychosocial adjustment with individuals with other diagnoses (such as TBI, stroke, etc.) would be interesting, and would be fascinating to see whether the findings are similar.

**Conclusion**

From the viewpoints and experiences of the occupational therapists in this study, negative psychosocial reaction to a traumatic amputation can drastically impact the rehabilitation and reintegration of clients. Occupational therapists have the tools and special skill set that allows for incorporation of psychosocial reintegration into physical rehabilitation. A client-centered



approach to therapy, addressing each client as an individual, and finding meaningful activities, can motivate clients' through rehabilitation and make them more successful in adjusting to their lives after traumatic amputations.

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## Appendix

### Interview Protocol

#### Grand Tour Question:

Tell me a story about treating a specific client with a traumatic amputation?

#### Additional Follow-Up Questions

- Were there any obstacles in this client's treatment?
  
- 1. What are the typical goals you write for a client with an amputation?
  - What are the typical goals of the client?
  
- 2. Are there certain considerations you take when working with a client with a traumatic amputation?
  
- 3. Do you feel comfortable treating psychosocial reaction to amputations?
  
- 4. What psychosocial reactions to amputations have you observed?
  - Have these been different between traumatic and non-traumatic amputations?
  - Differences between upper and lower extremity amputations?
  
- 5. Do you write specific goals related to addressing coping or psychosocial response to an amputation?
  - Social integration?
  - Social participation?
  - Sexuality?

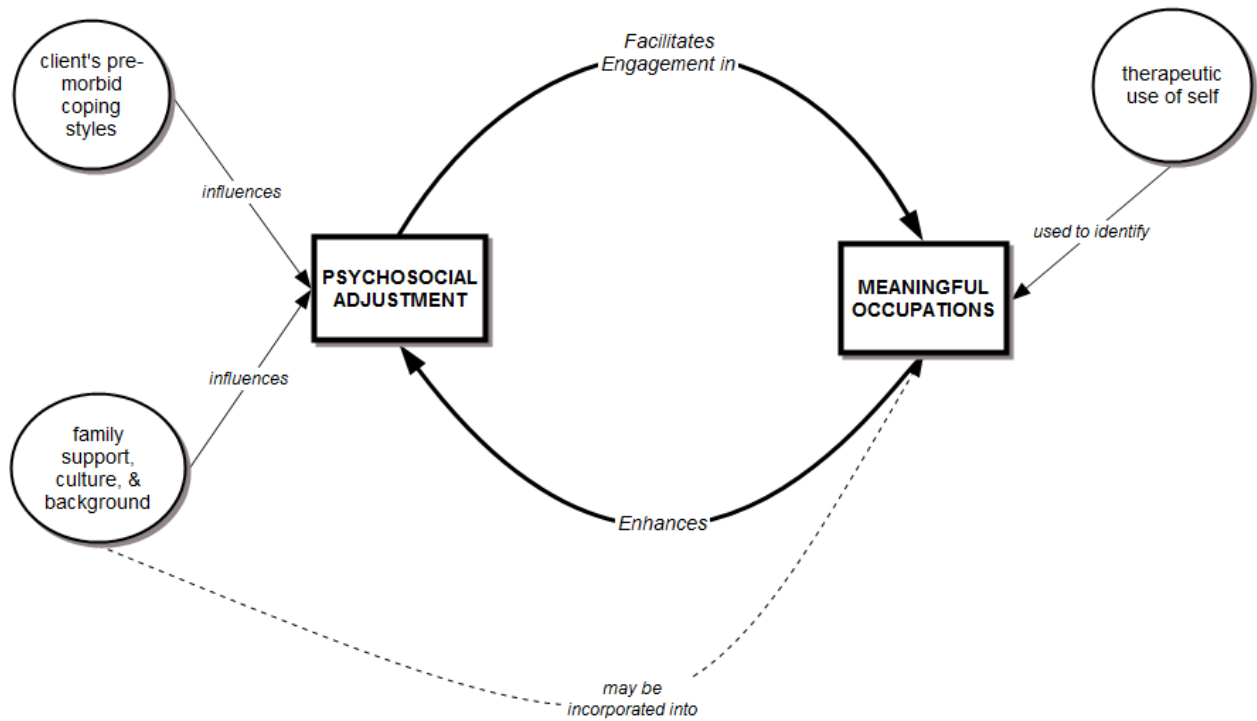


Figure 1. Model illustrating the relationship between meaningful occupations used by occupational therapists and their role in psychosocial adjustment in people with traumatic amputations.

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