

Correlation between Motivation Type and Barriers to Engagement on Progress in Occupational
Therapy

By
Jordan Lauffer

In
Psychology

A Thesis
Presented to the
Honors Program of
Missouri Southern State University

Spring 2013

Correlation between Motivation Type and Barriers to Engagement on Progress in Occupational Therapy

This study was designed to determine if a relationship existed between motivation type, barriers to engagement, and progress in occupational therapy. Current research indicated that individuals with specific motivation types perform better than others and it's based more on type than amount of motivation. Also, barriers to engagement are best when minimal so that adequate patient engagement and patient-therapist collaboration can occur. My hypotheses were that those who exhibited intrinsic motivation and those with minimal barriers would show the best progress in their therapy. Progress was provided by the occupational therapist, who gave a progress rating to each participant. The study included 12 participants after two were eliminated for incomplete surveys. The results did not yield a relationship between total barriers and progress or between intrinsic motivation and progress. However, a significant relationship was found between amotivation and total barriers. There were also significant relationships between different motivation types or subtypes. This work indicated that research is needed in this area of occupational therapy, especially in regards to the role of engagement.

Keywords: occupational therapy, engagement, motivation, amotivation

Correlation between Motivation Type and Barriers to Engagement on Progress in Occupational Therapy

Occupational therapists (OT) are people who “help people across the lifespan participate in the things they want and need to do through the therapeutic use of everyday activities (occupations)” (The American Occupational Therapy Association Inc., n.d.). In other words, the job of an occupational therapist is to help all ages of individuals be active participants in their own life by having them participate in fun and enjoyable activities as well as activities of daily living. In order to get individuals involved, a therapist will work one on one with the individual to master the task to the best of the patient’s ability. Occupational therapists strive to manipulate and modify the environment so it fits the person, rather than trying to have the person adapt to an environment that may not be suitable to them (The American Occupational Therapy Association Inc., n.d.).

According to the United States Department of Labor, the demand for occupational therapists is increasing at a rate much faster than other occupations (Occupational Outlook Handbook, n.d.). In fact, it is estimated that the demand for occupational therapists will increase by 26% up until the year 2018. Part of the reason for this change in demand is the population surge of older adults. The increase in the need of OT’s reflects the extra attention older adults may need and also the fact that as we age, we lose some of our function. An OT would use therapy and sometimes adaptive equipment to help keep an older adult an active participant in their own life (Occupational Outlook Handbook, n.d.). Occupational therapists also help children with disabilities acclimate to school and other social environments and help individuals who have been injured regain necessary skills in order to live a full life (The American Occupational Therapy Association Inc., n.d.).

Another interesting perspective is that as we advance in our medical knowledge and technology, the need for therapy service like occupational therapy will grow. The advancements can sometimes prolong a person's life, but that person may then need to learn to adapt to a new lifestyle and would therefore need the services of an occupational therapist. People that may have not survived in previous times are now survivors but face lots of therapy treatments in order to live a fulfilling life (Occupational Outlook Handbook, n.d.). In order to adequately treat all patients in need of an occupational therapy programs, we should employ any knowledge we have. By doing this research I hope to add to the knowledge base by determining if a specific type of motivation or barriers to engagement are correlated with better progress.

Motivation consists of a complex set of behaviors. In 1964, Atkinson described motivation as behavior which steers ourselves away from dissatisfaction and towards satisfaction. He also stated that it has to do with "the immediate influences on the direction, vigor, and persistence of action" (p. 11). Atkinson (1964) also referenced Jones (1955) and his definition of motivation: "how behavior gets started, is energized, is sustained, is directed, is stopped, and what kind of subjective reaction is present in the organism while all of this is going on" (p. 1).

In 1985, Deci and Ryan examined factors that can influence a person's motivation. Deci and Ryan suggested that feedback given to a patient will be viewed in one of three ways. It will either be informational, controlling, or amotivating. For example, even if the person giving feedback means for it to be informational, a patient may take it as controlling due to interpersonal perspective. This difference in the way feedback is intended and the perspective of the patient can effect motivation, sometimes in positive and other times in a negative way (Deci and Ryan, 1985).

Deci and Ryan (1985) also made distinctions between intrinsic motivation and extrinsic motivation. They said that intrinsic motivation is innate in humans. Also, when a person is intrinsically motivated, they enjoy the task at hand. In contrast however, external motivation can result in anxiety and may lower self-esteem and is usually associated with pressure and tension (Deci and Ryan, 1985). In another paper by Deci and Ryan published in 2008, they argued that it is the type of motivation, and not how much motivation, that determines how a situation will play out. Deci and Ryan (2008) also stated that when intrinsic motivation is met with negative feedback, the person often resorts to amotivation. Amotivation is a complete lack, or very little, intrinsic or extrinsic motivation.

Extrinsic motivation is a little more complicated than intrinsic motivation and involves four separate subtypes, these types are; regulation- integrated, identified, introjected, and external (Pelletier, Tuson, & Haddad, 1997). Each of these corresponds with the self-determination theory proposed by Deci and Ryan in 1985. External regulation is choices in which, as the name implies, the decisions are controlled by external factors. Introjected regulation is when actions are performed as the result of the external motivation causing secondary emotions such as shame. Identified regulation is regulated by internal factors but is driven by external desires, such as to meet a goal one has set for their self. Integrated regulation is the most similar to intrinsic motivation. This is when a behavior fits into the self-identity one has and the behavior has value to the individual (Pelletier, Tuson, & Haddad, 1997).

Intrinsic motivation is typically the result of something that a person finds interesting (Deci, Eghrari, Patrick, & Leone, 1994). When a person is faced with a task that is not interesting, they must use internalization to accomplish the task if it is to be carried out as a result of intrinsic motivation. According to the self-determination theory there are two paths to

internalization, introjection and integration (Deci et al, 1994). In introjection, a person never fully adopts the mechanism of internalization as their own. They view the mechanism as an intruder and do not buy into the process. This is the opposite for integration in which a person fully commits themselves to a method of internalization they employ to accomplish a given task (Deci et al, 1994). Both of these concepts are important in therapy and could affect motivation. If a person has integrated themselves into an activity, they will work hard to accomplish their goals. That is to say, they will exhibit higher motivation. However, in contrast, if a person uses introjection, they have not fully bought into the process and therefore could exhibit lower motivation.

According to Deci et al (1994) there are three factors important to achieving internalization. These are providing a rationale for a given activity, acknowledging the feelings of participants, and giving the participants choices. All three of these factors play a role in therapy sessions. OT patients must know why they are performing an activity. They must also feel like the OT is genuinely listening to them and their concerns. Finally, patients need to be given a choice on whether or not to participate and the choice to participate may stem from how motivated they are.

The American Occupational Therapy Association Inc. indicated that persons' participating in an occupational therapy program are an integral part of their own therapy and often guide the occupational therapist in devising plans to help them achieve the most independence. Client collaboration is a similar idea and is also important in therapy sessions (Bachelor, Laverdière, Gamache, Bordeleau, 2007). Bachelor et al (2007) identified different collaboration types but the underlying point was that good collaboration regardless of type leads to a better relationship between therapist and patient and a better therapy experience. They also

found that clients who are perceived as being highly motivated in their therapy will often have been collaboration with their therapist.

Katz (2002) looked at other aspects of a patient's life that may affect motivation. Katz identified a patient's awareness of their impairment as a major problem within rehabilitation circles, mainly in patients with a neurological issue. The unawareness can be due to an inability to understand or denial of the disability. Both of these issues lead to a lack of motivation and effort when it comes to therapy because patients do not want to work to get better when they do not realize or accept that anything is actually wrong. Denial and unawareness can result in the patient developing compensatory strategies and these eventually influence how much effect rehabilitation has on the patient. When dealing with a patient that has one of these issues, it is important to consider when making a treatment plan.

Amabile, DeJong, and Lepper (1976) examined the effect deadlines have on people and on their performance. The deadlines they looked at were imposed by an outside event and were not set by the individual. The results of their experiment were that the highest level of interest in a given activity came from those individuals who did not have an imposed deadline (Amabile et al, 1976). These findings correlate with Deci et al and the topic of internalization. The interest people develop in a task can lead to internalization which lends itself to higher motivation. Since task interest will not be directly measured in this study there will be no way to determine its effect on the participants. However, it could be an extraneous variable that needs to be taken into account.

Imposing a deadline on a person can however, act as an external reward (Amabile et al, 1976). If the person performs a task before the set deadline, they get praise which is a reward. In 1994, Cameron and Pierce looked at the effects of reinforcement and reward on intrinsic

motivation. They were able to find that rewards do not generally exhibit a negative effect on intrinsic motivation and that praise specifically results in an increase in intrinsic motivation (Cameron & Pierce, 1994). The negative affect Cameron and Pierce noted was a decrease in motivation to continue working on a task if they receive a reward for just participating (1994).

Engagement is a crucial aspect to progress in occupational therapy. Lawlor (2012) argued that there isn't much research on engagement and hypothesized that maybe it's because it's viewed as integrated within therapy itself. She also stated that research must make strides in understanding the role of engagement in therapy. Lequerica, Donnell, and Tate (2009) did just that when they examined patient engagement as described by OTs and physical therapists (PT). The working definition they used for engagement was "a deliberate effort and commitment to working toward the goals of rehabilitation therapy, typically demonstrated through active participation and cooperation with treatment providers" (p. 753). In respect to therapy outcomes, participants with lower levels of engagement tend to exhibit less improvement and require therapy for a longer period of time (Lequerica et al, 2009). One example cited by Lequerica et al. as a reason for lower engagement was depressed mood or a negative attitude (2009). Both of these can lead to a decrease amount of motivation towards therapy (Lequerica et al, 2009).

Kielhofner, Nelson, & Rochford (1983) stated that occupational therapy depends directly on patient cooperation and consistent effort to achieve the end results. They also state that for a patient to participate, they must believe that the treatment program will work (Kielhofner et al, 1983). Kielhofner et al. (1983) made reference to the health-belief model. Simply put a patient's behavior when following a healthcare plan is dependent upon their perception of the threat of some injury or illness against the effectiveness of a treatment plan's ability to solve the problem (Kielhofner et al, 1983).

Treatment programs in occupational therapy were the focus of a study by Johnston and Case-Smith in 2009. Johnston and Case-Smith stated that there is a need for controlled trials in order to determine the best type of intervention for a given situation. Johnston and Case-Smith (2009) argue for a systematic approach to testing intervention methods. If we as treatment providers are better able to serve patients with more efficient treatments, then it would follow that patient motivation would increase and therapy outcomes would be better.

It is important to know if a specific type of motivation is correlated with quicker progression through a therapy program. Many people enter therapy programs each year and the number is on the rise. In order for us to best serve patients we must know how to achieve the best results in the fastest amount of time. This literature review indicates that motivation as well as engagement plays a crucial role in the progress of patients. This study is different from other research that is available because it has a specific focus and also because the barriers are self-reported by the patients. The hypotheses for this study are that individuals that exhibit intrinsic motivation or those with minimal amount of barriers will exhibit higher rates of progress.

METHOD

Participants

For this study there were 14 total participants, two were later eliminated for incomplete surveys. The final count included 8 males and 4 females. The average age was 40 and the range was 19-56. The participants for this study were current orthopedic patients undergoing therapy treatment from Freeman Sports and Rehabilitation Center in Joplin, Missouri. This particular facility only performs outpatient therapy so all participants were in an outpatient, as opposed to inpatient, program. The cooperating occupational therapist was Larry Johnson and occupational therapy assistant Jennifer Leach assisted as well. Michelle Legget, another occupational therapist

who had some orthopedic patients on her case load, also provided some patients. Each participant was also in at least their second week of therapy. This stipulation was in place to help account for the nerves associated with the first therapy session.

Testing instruments

The testing instruments for this study include one survey, one questionnaire, and a progress rating sheet. The first survey was the Client Motivation in Therapy Scale, also known as CMOTS. The second survey contained questions about barriers to engagement, it has no specific title. The CMOTS contains 24 questions that had corresponding answers on a Likert scale. The questionnaire about barriers to engagement contains 27 questions. Participants circle the response that indicates how often they experience or how much a certain behavior fits their therapy experience and their life.

In the other half of the study, the occupational therapist was asked how they feel each patient is progressing in relation to the average patient with a similar injury. Their answers can be considered valid because the occupational therapist is a professional in their field. They have experience with many patients and have the knowledge base to compare a particular patient to an average patient in terms of progression. The occupational therapists' ratings are valid too because they are trusted to perform the same therapy as the occupational therapist.

The occupational therapist and therapy assistant needed the name of the participant in order to provide a progress rating. Each participant had a sheet of paper that instructed them to write down their name and then place it in a manila envelope.

Procedure

Participants were gathered as they arrived for their therapy session. If a therapy patient used heat prior to therapy, they were asked if they would like to participate. Once a patient agreed to participate, they were given an informed consent to read, sign, and date. If they declined, they were thanked and allowed to continue on with their therapy session. For those who agreed to participate, once a signed consent form was obtained, the researcher highlighted the main points on the consent form and also told participants they had the right to withdraw at any point until the completion of study materials. Participants were then provided with a copy of the CMOTS, barriers to engagement questionnaire, the name sheet and the manila envelope with the progress rating sheet inside. Participants then filled out all of the analysis materials while seated at the desk on heat.

Once they finished the survey and the questionnaire, participants handed them over to the researcher. The name sheet was placed in the manila envelope provided and then placed on the therapist's desk for completion of the study. Participants then were given a debriefing form and were asked if they had any questions for the researcher. If there were any questions they were answered. Participants were told that all information collected would be held in strict confidentiality and would remain anonymous. The name sheet that participants used was put through the shredder by the therapist and never provided to the researcher so that anonymity was maintained. Participants were told that individual results would not be given but that overall results would be posted outside the psychology office and also provided to the therapist for the participants to view.

If participants did not heat before therapy, but iced afterwards, the same procedure was used only this time at the end of the therapy session instead of the beginning. For individuals

who did not use heat or ice, they were asked by the researcher if they would be willing to participate after the therapy session. Those who agreed used a desk off to the side of the therapy area and underwent the same procedure as previously stated. After all the data was collected and entered into the computer a Pearson correlation coefficient was calculated.

Results

Initially, a Cronbach's alpha analysis was run to determine if all of the questions used fit together or if any needed to not be used. The Cronbach's alpha for the motivation scales are as follows: intrinsic 0.724, integrated regulation 0.880, identified regulation -0.212, introjected regulation 0.478, external regulation 0.709, and amotivation 0.834. A Pearson correlation coefficient was performed between total barriers reported and progress rating provided by the therapist and it was not significant at the 0.05 level, $r(12) = -0.25, p = 0.43$. Another Pearson correlation coefficient analysis was used to determine if a correlation existed between the progress rating, total amount of barriers, and all of the types of motivation (intrinsic, amotivation, integrated regulation, identified regulation, introjected regulation, and external regulation). The following relationships were found: total barriers and amotivation was significant at the 0.01 level, $r(11) = 0.74, p = 0.01$; intrinsic motivation and integrated regulation was significant at the 0.01 level, $r(11) = 0.77, p = 0.01$; intrinsic motivation and external regulation was significant at the 0.05 level, $r(11) = 0.95, p = 0.03$; integrated regulation and identified regulation was significant at the 0.05 level, $r(11) = 0.70, p = 0.01$. There were no other significant relationships found.

Discussion

In this study, it was predicated that patients who exhibited intrinsic motivation would exhibit higher rates of progress. The prediction for better progress when a patient exhibits

intrinsic motivation came from research by Deci and Ryan (1985). Their studies indicated that external motivation can be anxiety provoking and that performance under external motivation would have been pressure filled and have tension. For this reason, it was hypothesized that those who had internal motivation would perform better in therapy.

My second hypothesis was that those who had a more minimal amount of barriers to engagement would have higher progress ratings. According to Lequerica et al (2009) patients with less engagement will show less improvement over time and will ultimately require more therapy sessions to achieve the desired results. Therefore, one could assume that those with fewer barriers would achieve and progress at a higher rate.

The results did not support either of these predictions. I think there are a few factors that could contribute to the results not falling in line with previous research. First, the sample size for this study was small. A larger sample size could have yielded results closer to what was hypothesized. Also, this study included participants who are younger to middle age. There weren't many participants who were older; the average age was 40 years old. This could have an effect on the data because younger individuals may be motivated by different factors and they also could have less holding them back or be less affected by barriers.

In regards to motivation, I think the scale was not the best fit for exactly what the study was aiming to measure. Even though it did measure motivation, some of the questions did not fit the therapy situation. This could have caused participants to not understand the relationship the question had to therapy and resulted in an inaccurate answer.

I feel there were a few setbacks with the barriers questionnaire too. First, the answers were self-reported by the participants. This could have been an issue for some participants who may not have felt comfortable reporting their issues and then turning it over for someone else to

see. Even though there was no identifying information, it could easily make someone uncomfortable. Also, not everyone is honest about what issues they face and they may not view them as “issues”. If this is the case, they may report only what they wanted to or only what they felt was truly a barrier to them.

In terms of significant results, the relationship between total barriers and amotivation seems to follow the literature and expected results the closest. The relationship was 0.74 which indicates as one variable goes up, the other goes up too. This seems to be intuitive and would make sense in a therapy setting. As the amount of barriers a patient faces goes up, their amotivation goes up. It is important to remember that amotivation is the lack of motivation. This result seems to indicate that motivation is lost from both internal and external sources the more barriers one has present in their life.

The relationship between intrinsic motivation and integrated regulation was also significant. This relationship could be explained because integrated regulation, although it is a type of external motivation, is the most similar to intrinsic motivation. It could be that individuals who exhibited integrated regulation were also intrinsically motivated to some degree. Also, it is possible that the participants misattribute their source of motivation from something internal to something that is more external. There were other significant relationships found between the different types of motivation, this is to be expected because they are all measuring motivation just different types of it.

Katz (2002) mentioned unawareness of disability, most commonly found when dealing with patients with neurological issues. This unawareness could also be found in the orthopedic area of occupational therapy as well. Often times, individuals will come into therapy not able to move at all and once they gain some range of motion they are generally satisfied. Even if they

are told by the therapist that they must continue to work because their range of motion isn't as it should be, they often don't push themselves outside of therapy. Sometimes this is due to not wanting to cause pain to themselves but it also could be due to the fact that they are unaware they aren't stretching and exercising to their full ability. Even though they are aware that they have a disability or an injury, they are sometimes unaware of their ability and don't work towards their full potential.

Deadlines and rewards also played a role in the therapy sessions of the participants. They both often came in the form of gaining motion (reward), verbal praise (reward), having to go back to work (deadline), or running out of visits allowed by insurance (deadline). Each of these scenarios played a different role in the therapy session but as predicted by Lequerica et al (2009) and Kielhofner et al (1983) they all played a role in motivation. Especially for those who had to reach their goal because they were out of visits or it was time to go back to work, their motivation seemed to increase because they had something to work for in the time allotted to them.

In the future, there would be a few things I would change about the current study that I believe acted as limitations. First, there was a very small sample size for this study. If the sample size was increased, more relationships may have shown up. You could also balance out the amount of males to females by increasing the sample size. One way to increase the sample size would be to include more areas of occupational therapy, such as inpatient therapy. By using other areas of occupational therapy, you would also increase the ability to generalize the results. In the future I would also try to include a larger number of older participants in the study. I think they are in a different stage in their life and so they could potentially exhibit a totally different

pattern in terms of motivation. Finally, I would modify the motivation scale so that it fits more for occupational therapy patients specifically rather than therapy in a general sense.

This research could be used and expanded on in a few different ways. First, one could look at how motivation is impacted when the source of payment changes. For example how motivated is someone who is paying for their own therapy versus someone whose insurance is covering it. Another area of research could be comparing the motivation and barriers to engagement that are present in younger adults to the motivation and barriers present in the lives of older adults. As aforementioned, these groups of people are in different stages in life and often are driven by different things and this could come across in the data.

This area of research is important for the advancement of therapy and therapy practices. As Lawlor (2012) pointed out, something like engagement, which has been viewed as an integral part of therapy, doesn't have much research base and a study like this only adds to the knowledge. Also, it is important to know what barriers our patients are facing so we can better serve their needs and have productive therapy sessions. Overall, I believe with a few tweaks to the data collection tools, very useful information for the field of occupational therapy could be gathered from a similar study.

References

- Amabile, T. M., DeJong, W., & Lepper, M. R. (1976). Effects of externally imposed deadlines on subsequent intrinsic motivation. *Journal of Personality and Social Psychology*, 34(1), 92-98.
- American Occupational Therapy Association Inc., *About Occupational Therapy*, What is Occupational Therapy?, <http://www.aota.org/consumers.aspx>
- Atkinson, J.W. (1964). *An introduction to motivation*. Princeton, New Jersey: D. Van Nostrand Company, Inc.
- Bachelor, A., Laverdière, O., Gamache, D., & Bordeleau, V. (2007). Clients' collaboration in therapy: Self-perceptions and relationships with client psychological functioning, interpersonal relations, and motivation. *Psychotherapy: Theory, Research, Practice, Training*, 44(2), 175-192.
- Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2010-11 Edition*, Occupational Therapists, <http://www.bls.gov/oco/ocos078.htm>
- Cameron, J., Pierce, W. D., Banko, K. M., & Gear, A. (2005). Achievement-based rewards and intrinsic motivation: A test of cognitive mediators. *Journal of Educational Psychology*, 97(4), 641-655.
- Deci, E. L., Eghrari, H., Patrick, B. C., & Leone, D. R. (1994). Facilitating internalization: The self-determination theory perspective. *Journal of Personality*, 62(1), 119-142.
- Deci, E. L., & Ryan, R. M. (2008). Facilitating optimal motivation and psychological well-being across life's domains. *Canadian Psychology/Psychologie Canadienne*, 49(1), 14-23.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.

- Johnston, M. V., & Case-Smith, J. (2009). Development and testing of interventions in occupational therapy: Toward a new generation of research in occupational therapy. *Otjr*, 29(1), 4-13.
- Katz, N., Fleming, J., Lightbody, S., & Hartman-Maeir, A. (2002). Unawareness and/or denial of disability: Implications for occupational therapy intervention. *The Canadian Journal of Occupational Therapy*, 69(5), 281-92.
- Kielhofner, G., Nelson, C., & Rochford, E. B., Jr. (1983). A study of patient motivation and Cooperation/Participation in occupational Therapy/COMMENTARY. *Otjr*, 3(1), 35-49.
- Lawlor, M. C. (2012). The particularities of engagement: Intersubjectivity in occupational therapy practice. *Otjr*, 32(4), 151-159.
- Lequerica, A. H., Donnell, C. S., & Tate, D. G. (2009). Patient engagement in rehabilitation therapy: Physical and occupational therapist impressions. *Disability & Rehabilitation*, 31(9), 753-760.
- Pelletier, L. G., Tuson, K. M., & Haddad, N. K. (1997). Client motivation for therapy scale: A measure of intrinsic motivation, extrinsic motivation, and amotivation for therapy. *Journal of Personality Assessment*, 68(2), 414-435.