Choice and motivation in individuals with mental retardation

Megan E. Barnes
Medical College of Ohio

Follow this and additional works at: http://utdr.utoledo.edu/graduate-projects
**Medical College of Ohio**

**Graduate School**

**FINAL APPROVAL OF SCHOLARLY PROJECT**  
For the Degree of  
Master of Occupational Therapy

<table>
<thead>
<tr>
<th>Title of Scholarly Project</th>
<th>“Choice and Motivation in Individuals with Mental Retardation”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Submitted by</td>
<td>Megan Barnes</td>
</tr>
<tr>
<td></td>
<td>(Name)</td>
</tr>
<tr>
<td></td>
<td>In partial fulfillment of the requirements for the degree</td>
</tr>
<tr>
<td></td>
<td>Master of Occupational Therapy</td>
</tr>
</tbody>
</table>

**APPROVED**

<table>
<thead>
<tr>
<th>Name</th>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barbara Kopp Miller, Ph.D.</td>
<td>[Signature]</td>
<td>12/16/04</td>
</tr>
<tr>
<td>Julie J. Thomas, Ph.D., OTR/L, FAOTA</td>
<td>[Signature]</td>
<td>12/16/04</td>
</tr>
<tr>
<td>Christopher E. Bork, Ph.D.</td>
<td>[Signature]</td>
<td>12/16/04</td>
</tr>
<tr>
<td>Keith K. Schlender, Ph.D.</td>
<td>[Signature]</td>
<td>12/20/04</td>
</tr>
</tbody>
</table>

Attachment: Abstract  
Final Approval of SP MOT
Choice and Motivation in Individuals
with Mental Retardation

Megan E. Barnes
Department of Occupational Therapy
The Medical College of Ohio
Abstract

**Objective.** The purpose of this study was to further enhance the idea of choice and occupational therapy by analyzing motivation in adults with mental retardation when they were provided with a choice of ceramic figures to paint. It was hypothesized that there would be a significant difference in the number of times a paintbrush was dipped in paint and the amount of time spent painting a ceramic figure between individuals in the choice and no-choice condition.

**Method.** Using a yoked counterbalance design, performance during a painting occupation was analyzed in 30 adults, ages 26 to 74-years-old ($M = 50.6$ years), with a diagnosis of mental retardation during a choice and no-choice condition. In the choice condition, the participants were to choose a preferred ceramic figure out of a selection of five ceramic figures, all of which had equal difficulty, detail, and size. In the no-choice condition, the participants were instructed to paint a ceramic object that had been selected by the other participant of the dyad. Dependent variables that were analyzed in this study were the amount of time each participant spent painting his or her ceramic object and the number of paint dips he or she performed with his or her paintbrush.

**Results.** No statistically significant differences between the choice and no-choice condition were revealed in terms of time spent painting the ceramic object and the number of paint dips a participant performed with his or her paintbrush.

**Conclusion.** Although the results of this study found no statistically significant differences between the choice and no-choice conditions, it is very important to incorporate daily choices with this population. Further research on choice and its effects on motivation and daily functioning should be explored.
Choice and Motivation in Older Individuals with Mental Retardation

Choice is an important concept that occupational therapists have utilized since the establishment of the profession. The idea of choice allows an occupational therapist to generate patient-centered treatment plans in a manner in which each treatment will motivate and interest the patient, as well as elicit intrinsic meaning and purpose. Nelson (1994) stated that meaning is, “the entire interpretive process in which an individual engages when encountering an occupational form” (p. 21). Furthermore, Nelson (1994) explained purpose as, “the experience of wanting an outcome to result from occupational performance” (p. 23). An individual achieves meaning and purpose during an occupation when the correct synthesis of the occupational form is created. Thus, because choice in occupational forms instills meaning and purpose within individuals, the motivation to continue with the occupation is more prevalent. There is limited research in the occupational therapy realm on choice and motivation within individuals with mental retardation. Therefore, this study further enhanced the idea of choice and occupational therapy by investigating the effects of choice and motivation in individuals with mental retardation. The essential theoretical background and recent research on choice and motivation will be reviewed, followed by a description of the present study.

Choice in Occupational Therapy

Many of the founders of occupational therapy established the importance of choice within their patients’ occupational forms. Baldwin (1919) supported the concept of choice such that the treatment is provided in terms of the patient’s choice. Dunton (1931) also believed that a choice in occupations might be given to the patient because it is important to relate the treatment to the patient’s work interest. Furthermore, Meyer (1922) advocated for the occupational therapist to offer opportunities of therapy rather than prescribe them. Although not a founder of
occupational therapy, Johnson (1920) believed that patients should receive a choice in occupation in order to reduce the monotony of a task and to regain self-confidence and satisfaction in the accomplishment.

More currently, Shevin and Klein (1984) defined choice as “the act of an individual’s selection of a preferred alternative from among several familiar options” (p. 160). Guess, Benson, and Siegel-Causey (1985) described choice as a decision-making process and an expression of autonomy and dignity, based upon prior experience, present needs, and future goals. Furthermore, Yerxa (1967) explained that offering choices to clients is the ultimate goal of occupational therapy. Yerxa (1967) elucidated that providing choices for clients will enable them to make decisions that lead to progressing degrees of independence. Finally, Trombly (1989, 2002) stated that the client should be given several choices of occupations in which all possibilities are equally beneficial. If the client chooses the occupation, he or she will be more dedicated to complete it correctly, and have a sense of self-efficacy and greater self-esteem.

*Concept of Choice and Motivation in Occupational Therapy*

Choice in occupational therapy is of utmost importance because it provides a client with immediate motivation to complete an occupation, as well as increases one’s overall sense of self and accomplishment. King (1978) conjectured that choice making in accordance with one’s unique interests leads to enhanced motivation and superior performance. Nelson (1984) discussed the importance of choice making as a developmental skill that can be facilitated in a programmatic fashion from simple choices to increasingly complex choices. Choices enable an individual to experience overall elevated feelings of self-determination and intrinsic motivation; on the other hand, denial of choice weakens them (Deci, 1980; Deci & Ryan, 1980). White (1959) coined the term “effectance motivation,” describing the effects of an environmental
stimulation on an individual. This environmental stimulation, or particular occupation, creates a sense of self-efficacy within the individual. This satisfaction the individual perceives is a result of the environmental stimulation motivating him or her to choose additional occupations that will also bring about contentment.

Kielhofner (2002) developed the concept of volition in his Model of Human Occupation (MOHO). Volition signifies a person’s will or conscious choice, enabling him or her to be driven to anticipate, choose, and experience occupations; thus allowing him or her to interpret his or her actions. Another term Kielhofner used in his MOHO model is personal causation, which is one’s sense of competence and effectiveness. People who have personal causation will seek out opportunities, use feedback to correct performance, and persist to achieve goals. Therefore, if a person is provided with choices throughout life, he or she will have a sense of volition and personal causation. Some authors (Catania, 1980; Fisher, Thompson, Piazza, Crosland, & Gotjen, 1997) have suggested that choice making produces a reinforcer that is mostly preferred at that specific moment in time. Therefore, this intrinsic, positive reinforcer will increase motivation within the individual’s developmental structure.

Choice in Individuals with Mental Disabilities

The idea of offering choices to individuals with mental disabilities is of profound importance. For many years, individuals with mental disabilities have often been denied the opportunity to make choices, even the most basic types of choices with daily occupations of living, because of the fear that they may make poor or dangerous decisions (Kearney & McKnight, 1997). Moreover, the majority of this population has not been given the opportunity to choose how to spend their free time, which has caused difficulty with experiencing leisure occupations (Wuerch & Voeltz, 1982). Therefore, vocational and leisure choices have been
made by parents and guardians (Harchik, Sherman, Sheldon, & Bannerman, 1993). Because of this lack in free-choice, many individuals with mental retardation experience learned helplessness (Seligman, 1975). Individuals who have learned that they cannot have an effect on their occupational forms may cease any attempts to display potentially self-reinforcing behaviors; thus possibly becoming more severely retarded (Dattilo & Rusch, 1985).

Several studies have shown how the effects of choice in individuals with various diagnoses have been beneficial. Schroeder-Oxer and Kopp Miller (2001) utilized adolescents with psychiatric conditions, and examined choice versus no-choice in an art occupation. The researchers gathered their data by counting and recording the number of times each adolescent applied paint, and the amount of time he or she spent painting an object of choice and a no-choice object. It was concluded that the choice making occupational form enhanced performance to a greater degree than no-choice occupational form. Tabor, Baron, and Blackwell (1953) investigated psychiatric patients and the effect of their behaviors in free-choice versus no-choice craft-making situations. The researchers also examined the types of activities patients with specific diagnoses performed during the free-choice situations. The researchers concluded that the patients with a psychotic diagnosis approached closer to the norm and benefited more in a free-choice craft activity. In addition, the researchers stated that the patients appeared “more normal” in the directed group. A possible reason for this finding was the patients demonstrated a greater interest and absorption in a craft of his or her choice; therefore, reducing his or her interaction with others in the non-directed group.

Furthermore, many studies have demonstrated that participants who were given a choice had a decrease in problematic behaviors (Dyer, Dunlap, & Winterling, 1990; Dunlap, dePerczel, Clarke, Wilson, Wright, White, & Gomez, 1994; Bambura, Koger, Katzer, & Davenport, 1995).
Dattilo and Rusch (1985) analyzed the effect of choice on the behaviors of four students with severe mental retardation; three of the students had secondary diagnoses involving physical handicaps. More specifically, the researchers observed the students’ behaviors during a chosen leisure occupation and participation in the same occupation without a choice. Choice was demonstrated by each child manipulating an electronic switch that activated a video player, which, in turn, played segments of age-appropriate television programs. The researcher, who was unobtrusive, controlled the independent variable either by allowing the video to be activated for the choice condition, or disconnecting the device; thereby not allowing the child to control the television program for the no-choice condition. The results showed that when the children were provided with an opportunity which they could control, they participated more often in the occupation. Therefore, it is important to provide children with mental and physical disabilities a choice in leisure occupations to suppress behavioral problems, and to allow them to explore additional possibilities that may have been previously chosen for them.

More specifically, studies involving choice in individuals with mental retardation have proven to be advantageous to the field of occupational therapy. Rice and Nelson (1988) studied the effects of choice and motivation in an ironing occupation with adolescent and adult males with mental retardation. The researchers used a yoked counterbalance design by providing participants with the choice to iron five similar wrinkled T-shirts adorned with popular sports logos. At a different time, each of the participants was not given a choice, and was to iron a wrinkled T-shirt with a different sports logo. The researchers tested the amount of water evaporation in each condition. The researchers reported that when the participants were provided a choice in ironing T-shirts, they were more motivated because a significant amount of water evaporation from the iron occurred. This outcome demonstrated that individuals with
mental retardation are able to excel in their performance with occupations of daily living, as well as with possible leisure or work occupations.

LaMore and Nelson (1993) expanded upon the Rice and Nelson study, and examined the effects of choice and if enhanced motivation and sustained involvement were prevalent with performance of an art project in adults with mental disabilities. The researchers yoked the participants into matched pairs, and in the choice condition, provided them with the opportunity to paint one of five ceramic objects; in the no-choice condition, the individuals were assigned to paint a specific object. The participants were timed with a stopwatch from the initial paint application onto the object to the time the participant reported being finished, or refused to continue to paint. The researchers reported that the participants who were provided a choice painted significantly longer than the participants who were not provided with options.

Roth (2003) examined the variables of choice and quality of movement with adults with mental disabilities. Roth assessed the participant’s quality of upper extremity movement during a choice condition and a no-choice condition, using a Motion Analysis® system. This device measured each participant’s movement time, movement units, displacement, peak velocity, and percentage of time to peak velocity during the occupation. The participants were instructed to reach and grasp a soda of their choice in one condition, and in another condition, they were told to reach and grasp a particular soda, which may have not been their choice. Roth reported no significant differences in upper extremity movement between the choice and no-choice condition.

The concept of choice with individuals with developmental disabilities has been researched in many academic arenas. However, there is limited research involving choice and motivation with this population in the field of occupational therapy, and the need for further
research with this specific population is of great importance. Many individuals with mental
retardation are living longer due to today’s advanced medical technologies. These individuals
should be provided with ultimate occupational forms and choices to enable them to live
meaningful lives in their community, and to be as independent as possible. Through choice
opportunities, occupational therapists are able to assist with the challenges this population
encounters, and help them succeed in their daily lives. In addition, the Americans with
Disabilities Act of 1990, and the Developmental Disabilities Assistance and Bill of Rights Act
have been established to assist those with mental retardation with more daily and life choices, as
well as personal control (Harchik et al., 1993).

This study was a modification of the Schroeder-Oxer and Kopp Miller (2001) study. It is
important to the occupational therapy field to modify the Schroeder-Oxer and Kopp Miller study
in order to examine a sample of individuals with mental retardation. The current study involved
analyzing the amount of motivation adults with mental retardation elicit when they were
provided with a choice of five various ceramic figures to paint. Both Rice and Nelson (1988)
and Schroeder-Oxer and Kopp Miller (2001) provided directional hypotheses within their
research pertaining to choice. The data results of both studies demonstrated positive significant
differences with the individuals who were given a choice during an occupation. Because of the
previous results from these studies with directional hypotheses, the following hypothesis was
tested in this study:

- There will be a significant difference in the number of times a paintbrush is
dipped in paint and the amount of time spent painting a ceramic figure between
the choice and no-choice condition, with the individuals in the choice condition
performing a greater number of paint dips and spending more time painting the figure than the individuals in the no-choice condition.

Method

Participants

Eleven male and nine female adults (N = 20) with mental retardation were recruited from Josina Lott Residential and Community Services in Toledo, Ohio to participate in this research study. In addition, three male and seven female adults (N = 10) with a diagnosis of mental retardation were recruited from the Luther Home of Mercy located in Williston, Ohio. In order for the participants to be part of this study, they were required to have enough cognition to completely comprehend the directions provided by the researcher, and to be independent with upper extremity fine and gross motor skills in order to hold the paintbrush and to paint the ceramic figure. The staff at the participants’ living facility informed the researcher as to whether or not each of the potential participant’s fine and gross motor skills and level of cognition were appropriate for this study. A participant was not able to partake in the occupation if he or she verbally or physically misbehaved at the time of data collection. All participation was voluntary.

Materials

The ceramic figures used for this study consisted of five different winter-themed ceramic objects. These figures were chosen because they all related to the general theme of winter, they were approximately the same weight and size, and had about the same amount of detail and complexity. Six different colors of non-toxic poster paint (red, yellow, blue, black, green, and white) were used with six spill-proof containers, which held approximately two ounces of each color. There was one paintbrush for each of the six paint containers (see Figure 1). One cup of water was available to clean the brushes, and paper towels were available to clean hands and
brushes. A stopwatch was used to time the project and a pad of paper and pen were used to record the number of paint applications.

**Procedure**

The researcher received approval from the executive director of one of the subject recruitment facilities to attend a resident council meeting in order to inform and discuss the research topic with the potential subjects, as well as to answer any questions regarding the study. The recreation therapy staff members of the first facility were aware of this study prior to the resident council meetings in order to begin recruiting potential participants. Following the meeting, a staff member provided the researcher with a list of names and ages of potential participants. At this time, the researcher reviewed the names of the participants who were interested in being a part of the study. The executive director of the second recruitment facility also approved the researcher to recruit participants for the study, with the assistance of the occupational therapist. The staff members of both recruitment facilities were the first persons to speak to the potential participants about the research study in order to maintain the potential participants’ rights to privacy.

Following the resident council meeting at the first recruitment facility and the meeting of each participant at the second recruitment facility, informed consent forms were thoroughly explained to those participants, who were his or her own legal guardian, before any signatures were provided. For the participants who were not guardians of themselves, an informational package, including a copy of the informed consent, a brief description of the study and introduction of the researcher, was sent to the guardians for review. A letter from the executive director of the first recruitment facility asking if the potential participants would like to be a part of the study was included for the participants of the first recruitment site who were taking part in
the research. After the package was sent, the researcher telephoned the potential participant’s legally authorized representative and asked him or her to visit the recruitment facility for a full explanation of the informed consent and a signature for the potential participant to be a part of the study. At the time of explanation and signing of all informed consents, a witness, most often a staff member from the recruitment facility, was present in order to document the entire informed consent process. Once at least four of the informed consent forms were returned to the researcher, the data collection began.

The researcher utilized a yoked counterbalance design for this study; therefore, following the return of the informed consent forms, the participants were randomly paired prior to the session. This list was destroyed following the completion of the study. There were two conditions for this study: choice and no-choice. Each of the subjects participated in both groups at one point in the study. Because the study was a yoked counterbalance design, half of the subjects performed the painting occupation in the choice group first, and their matched subject completed the no-choice occupation initially. The conditions in which the subjects previously completed were then switched for the second half of the study, approximately one day to one week later. The subjects who received a choice were given the option to choose one of the five ceramic figures to paint. Their pair then painted the same figure. In order to keep the participants blind to the conditions, each participant painted the objects at a separate time interval.

The protocol for the participants during the choice condition involved greeting the participant and displaying all five ceramic figures in front of him or her. The researcher pointed to each object, stated the name of each figure, and asked him or her to choose one object to paint. After the choice was made, the researcher removed the remaining four figures, and instructed the
participant to sit at the table with the painting supplies. Each individual was then told the following instructions:

Here are five ceramic objects to choose from (names the specific figurines). You can choose one to paint and bring it to the painting area. Here are the six colors you may paint with. You can use them all, or use just a few colors. It is up to you. The water and towels are there for you to clean your brushes and hands if you would like. If you need help or would like me to show you how to use the brush, let me know. You will have at least 30 minutes to paint. Once you are finished, you may keep the ceramic object for yourself or give it to someone, if you would like. Let me know when you feel that you are done painting.

During the no-choice condition, the participant was greeted and shown the five objects displayed on the table. The researcher pointed to each object and stated the name of each one. The object that each participant’s pair had chosen was then given to the participant, who was told that that specific object was to be painted. The participant was then instructed to sit at the table with all of the painting supplies. If the subject requested another figure to paint, the researcher responded that the object in front of them was the one to be painted. If the participant refused to paint that particular object selected for him or her, the researcher recorded a time of 0 minutes and a 0 for the number of dips the participant performed. For this condition, the participants were told the following:

Here is your ceramic object to paint (names the figurine). You may bring this to your painting area. Here are the six colors you may paint with. You can use them all, or just a few colors. It is up to you. The water and towels are there for you to clean your brushes or hands if you would like. If you need help or would like me to show you how to use the brush, let me know. You will have at least 30 minutes to paint. Once you are finished, you may keep the ceramic object for yourself or give it to someone, if you would like. Let me know when you feel that you are done painting.
Most of the sessions were performed in the same room at the participant’s living facility; however, due to prior scheduled events, the researcher had to relocate the data collection room on two occasions. The occupational form of the new data collection room was re-created to be as similar as possible to the original data collection room. The researcher and another recorder sat on either side of a partition in order to prevent recording bias, and both of them were across from the participant during the occupation. Once each participant was instructed to begin, both the researcher and the recorder began to count the number of times the subject dipped his or her paintbrush and recorded this information on a piece of paper. They also started their stopwatches to time the length of initiation to the termination of the occupation. The figurine may have been completely painted or the subject may have refused to continue painting. If the ceramic object was not completely painted, the researcher asked if the participant was sure he or she was finished, and asked if the participant would like to paint any of the unpainted areas. This statement was repeated twice to ensure that the participants were, indeed, finished with the occupation. At this time, the researcher and recorder stopped their stopwatches and independently recorded their times of the subject’s overall participation in the painting occupation. This protocol was replicated from both the Schroeder-Oxer and Kopp Miller (2001) and the LaMore and Nelson (1993) studies.

Results

Participant Demographics

Thirty males and females participated in this research study. More specifically, eleven male with ages ranging from 35 to 69 years old ($M = 47.27, SD = 11.16$), and nine females with ages ranging from 33 to 60 years old ($M = 47.11, SD = 9.51$) were recruited from Josina Lott Residential and Community Services to participate in this study. In addition, three male
participants with ages ranging from 55 to 72 years old ($M = 62.33, SD = 8.74$), and seven female participants with ages ranging from 26 to 75 years old ($M = 55.43, SD = 17.83$) were recruited from the Luther Home of Mercy to take part in this study.

*Descriptive Data*

The mean amount of paint dips in the choice condition was 18.07 ($SD = 19.07$), and 16.90 ($SD = 16.05$) in the no-choice condition. The mean time spent painting in the choice condition was 10.62 minutes, ($SD = 7.64$ minutes) and 9.75 minutes ($SD = 7.34$ minutes) in the no-choice condition. High inter-rater reliability was reported at .99 for both the amount of paint dips and time.

*Hypothesis Testing*

All statistical tests utilized an alpha level of .05. In order to test the distribution of the data for time spent painting and the number of paint dips, a test of skewness was performed. The distribution was skewed for both variables; therefore, a Spearman non-parametric test ($\rho$) was performed to obtain any correlation between the overall time each participant spent on the art occupation and the number of times the paintbrush was dipped in the paint. There was a significant correlation between both the overall time each participant spent on the art occupation and the number of times the paintbrush was dipped in the paint in the choice and no-choice conditions. The $\rho$ for the correlation between paint dips and overall time spent painting in the choice condition was .99, $p < .01$. Furthermore, the $\rho$ for the correlation between paint dips and overall time spent painting in the no-choice condition was also .99, $p < .01$. These $\rho$ values indicate that, in both the choice and no-choice conditions, the more paint dips the participants performed, the greater amount of time was spent in painting their ceramic figurine.
The study utilized a counterbalance design; therefore order effects were tested to compare the two order groups in terms of the dependent variables of each condition. No order effects were found. A nonparametric Wilcoxon matched-pairs signed ranks test ($Z$) was used to determine any significant differences in the overall time spent on the occupation and the number of paint dips, respectively, between the choice and no-choice condition. A one-tailed test of the directional hypothesis revealed no significant differences between the choice and no-choice conditions for both the amount of paint dips and length of time it took to complete the painting occupation. The $Z$ for the amount of dips in the choice versus no-choice condition was $.19, p > .05$; and the $Z$ for the length of time in the choice versus no-choice condition was $.14, p > .05$.

These results did not support the hypothesis, such that the individuals did not spend more or less time painting or dipping their paintbrushes when they were or were not given a choice regarding which ceramic object to paint.

Discussion

The purpose of this study was to determine if, when provided with a choice of ceramic objects to paint, an individual with mental retardation will spend more time painting the object and perform more dips of his or her paintbrush into the paint, than he or she would when not given a choice. The results of this study did not support the hypothesis.

Previous research studies have elicited results that choice improves performance or extend upon the idea of motivational aspects of choice (Rice & Nelson, 1988; LaMore & Nelson, 1993; Schroeder-Oxer & Kopp Miller, 2001). However, the results of this study did not support the notion that offering a choice to individuals with mental retardation will improve performance and increase motivational levels. The outcome of the present study was similar to the Roth (2003) study, which examined individuals with mental retardation and the differences in their
quality of movement when reaching for a soda can during choice and no-choice conditions. No statistically significant differences were found in regard to the dependent variables of movement time, movement units, displacement, peak velocity, and percentage of time to peak velocity during the occupation. The present research study is also analogous with a study conducted by Parsons, Reid, Reynolds, and Bumgarner (1990), which examined the preferences of adults with developmental disabilities with various vocational tasks. No difference was found in performance of these individuals when they were given a choice of a task that they prefer or were assigned to a task that they did not prefer. Furthermore, Dyer et al. (1990) and Mason, McGee, Farmer-Dougan, and Risley (1989) performed studies that examined task performance of children with autism and the effects of having an option to choose academic tasks, materials, and/or reinforcers, as compared to choices made for them by a teacher. Although these children demonstrated a decrease in problem behaviors during the choice condition, there was no difference in their overall task performances with either of the conditions.

A meta-analysis conducted by Harchick et al. (1993) had results similar to the findings of this particular research study. Harchick et al. (1993) found that providing choices to individuals with mental retardation and developmental disabilities might result in small improvements and beneficial effects upon performance. However, when provided an opportunity involving a choice, individuals of this population may demonstrate “small, if any, beneficial effects on performance” (p. 155).

Frequently, individuals with mental retardation have many of their daily and future choices decided for them by their caregivers. Therefore, when this population is provided with an opportunity to choose between occupations, they often have difficulty determining which task to perform without additional assistance. However, if they discover that they enjoy the
occupation, whether they were or were not given a choice, more time and effort may be put forth by them in order to produce their best outcome.

There are several possible explanations for the lack of statistically significant differences in this study. First, the participants during the no-choice condition may have been given a ceramic object that he or she would have chosen or previously painted during the choice condition. Therefore, if a participant receives the same object in the no-choice condition, the amount of time and number of paint dips may not differ. Secondly, the participants had briefly met the researcher and recorder and may have felt intimidated or anxious during their painting occupation because both the researcher and recorder were watching and timing them throughout the entire session. Therefore, participants in both the choice and no-choice conditions may have painted their ceramic objects in a similar duration, as well as dipped their paintbrushes an equal amount of times, due to the uniqueness of the occupational form (Nelson, 1994).

Another possible explanation for the results of this study may have been that some of the participants thoroughly enjoyed painting and others did not. If a participant was fond of painting occupations prior to participating in this study, he or she may have put forth the same amount of effort, and may have exhibited approximately the same amount of paint dips and time painting each ceramic object, regardless of the condition in which he or she was partaking. Therefore, the choice and no-choice conditions may not have had any positive or negative effect on the participant’s motivational level.

Limitations

Several possible limitations have been acknowledged upon completion of the current study. First, recruiting a larger number of participants may elicit more statistical power to attest significant differences between choice conditions. Furthermore, due to the participants’
schedules, the time and day of the week of data collection was not always the same. Therefore, the participants’ performance may have been affected, depending on the time of day and their schedule for that particular day.

The researcher was unable to recruit 30 participants from Josina Lott Residential and Community Services; therefore, ten additional participants from Luther Home of Mercy were recruited to participate in the study. Because the participants were from two separate facilities, the participants may have had more or less experience and skills with painting.

Lastly, during two of the days of data collection at Josina Lott Residential and Community Services, a separate room was utilized for the painting occupation. The occupational form of the “new” data collection room was re-created to be as similar as possible to the original data collection room; however each participant who completed their occupation in the “new” data collection room may have spent more or less time spent painting and completed more or less paint dips than the participants did in the original data collection room.

Future Research

Future research may require researchers to perform additional screening assessments in order to involve participants of cognitive levels that will enable the researcher to receive appropriate information regarding participants’ favorite leisure occupations. When designing future studies, additional time should be put forth in determining an appropriate occupation to complete, for example, painting. A survey for, or a conversation with participants, rather than a discussion with recreational staff members of the group homes and supported living facilities regarding the participants’ preferences of leisure occupations may have provided more insight and possible explanations for the results of this study.
Future studies should attempt to perform data collection with each participant at the same
time and day of the week in order to receive more accurate results. Creating an occupational
form that is least restrictive is another suggestion for future research. For example, rather than
placing the data collectors within the participants’ field of vision, they may record data behind a
two-way mirror in order to reduce any possible anxiety for the participants. This occupational
form may be more beneficial and less intruding for each participant, which may produce more
accurate results.

A final suggestion for future research is to have the researcher plot the number of paint
dips each participant completes in five-minute increments in order to discern possible fatigue. A
person with mental retardation has portions of their brain that have been abnormally developed,
which may cause inhibition of motor planning (Glover, Rosenbaum, Graham, & Dixon, 2004).
Because of this phenomenon, individuals with mental retardation may begin to experience
mental fatigue within the first five minutes of a task. Therefore, by analyzing the number of
paint dips within this specific time interval, a new realm of occupational therapy research could
possibly be studied with this population.

Conclusion

This study examined the effects of choice and motivation during a painting occupation in
adults with mental retardation. Although the results of this study found no statistically
significant differences between the choice and no-choice conditions, it is very important to
incorporate choices with this population on a daily basis. Many individuals with mental
retardation and developmental disabilities may have difficulty in making their own choices due
to the fact that their present and future decisions have been made for them. The results of this
study have attempted to show that occupational therapists can collaborate with these individuals
to teach and assist them in making choices with various occupations. Although the results of this study did not reveal statistically significant differences in the overall time spent on the occupation and the number of paint dips respectively, between the choice and no-choice condition, the data did show a positive correlation in both the choice and no-choice conditions. The more paint dips the participants performed, the greater amount of time was spent in painting their ceramic figurine. This result may indicate that when individuals with mental retardation are involved in a task that they may enjoy, such as painting, more time and effort may be put forth to complete an occupation, thus eliciting a higher level of motivation.

Many of individuals with mental retardation have acquired learned helplessness early in their lives; therefore, having the opportunity to make choices may alleviate learned helplessness and create a sense of intrinsic meaning and purpose. This gained positive and internal sense of satisfaction may enable the individual to develop personal control and motivation; thus becoming more independent with choice-making. Further research on choice and its effects on motivation and daily functioning should be explored.

Acknowledgements

I thank Dr. Kopp Miller, for her support, encouragement, and confidence in me throughout this research project. I also thank the staff at Josina Lott Residential and Community Services, especially Jodi Kimball for her assistance with recruiting participants and data collection. In addition, I thank Janet Pointer from the Luther Home of Mercy for her assistance with participant recruitment and data collection.
References


Choice and Motivation


with adolescents living in residential treatment facilities. *Occupational Therapy in Mental Health, 17*, 39-49.


Figure 1