8-2018

The Outcomes of OT Interventions on the Stress Level of Parents Experiencing Homelessness and Receiving Services from an Emergency Housing Shelter

Gabriella Ghattas
Grand Valley State University

Sarah Kawsky
Grand Valley State University

Jaime Miller
Grand Valley State University

Danielle Roy
Grand Valley State University

The Outcomes of OT Interventions on the Stress Level of Parents Experiencing Homelessness and Receiving Services from an Emergency Housing Shelter

Gabriella Ghattas, Sarah Kawsky, Jaime Miller, Danielle Roy

A Thesis Submitted to the Graduate Faculty of

GRAND VALLEY STATE UNIVERSITY

In Partial Fulfillment of the Requirements

For the Degree of

MSOT

Occupational therapy

November 2017

The Outcomes of OT Interventions on the Stress Level of Parents Experiencing Homelessness and Receiving Services from an Emergency Housing Shelter

Gabriella Ghattas, Sarah Kawsky, Jaime Miller, Danielle Roy, and Scott Truskowski

Address Correspondence to: 807 Douglas St. NW, Grand Rapids MI, 49504

royda@mail.gvsu.edu

ACKNOWLEDGEMENTS

We would like to thank the families with whom we worked, and the staff of the emergency shelter. This research was supported by the Master's of Occupational Therapy Program at Grand Valley State University.

November 8, 2017

Dear Dr. Dickerson,

We would like to submit an original research article entitled "The Outcomes of OT Interventions on the Stress Level of Parents Experiencing Homelessness and Receiving Services from an Emergency Housing Shelter" for consideration by Occupational Therapy in Healthcare. This is an original work and has not been published or submitted for consideration elsewhere.

Homelessness is a societal issue, and one that is being increasingly addressed by occupational therapists. Over the course of this study, the Canadian Occupational Performance Measure, Parent Stress Index Short Form, and The Canadian Model of Occupational Performance were used to guide the program design and implementation. Researchers developed client-centered interventions for three families, resulting in a clinically important increase in occupational performance and satisfaction, and a decrease in areas of perceived parenting stress. This paper provides foundational research in an emerging practice area that can be expanded upon in future studies.

This paper is significant as it addresses a current gap in the literature regarding the role of occupational therapy with people experiencing homelessness. It aligns well with the journal's aims and scope as it involves a program within the context of current, everyday, community-based practice. With the recent push towards community-based occupational therapy services, we believe that this manuscript is relevant and appropriate to be published in Occupational Therapy in Healthcare.

We have no conflicts of interest to disclose.

Thank you for your consideration of our manuscript, and we hope to hear back from you soon.

Abstract

This study measures the outcomes of occupational therapy intervention on stress and perceived occupational performance of parents receiving services from an emergency family homeless shelter. Three families each participated in three individualized intervention sessions with occupational therapy students. Researchers utilized a quasi-experimental pretest-posttest design using the Parenting Stress Index Short Form (PSI-SF) and the Canadian Occupational Performance Measure (COPM). Results were analyzed using Friedman and ANOVA tests. Though generalizability is limited, parenting stress appeared to decrease and occupational performance and satisfaction appeared to increase from pre- to post-intervention. These changes were not statistically significant, but were clinically important as defined by the PSI-SF and COPM. Further research is needed to explore potential benefits of occupational therapy with this population, and impact of family-based intervention on parenting stress.

Keywords: homelessness, parenting stress, family, community-based, transitional housing facility

Introduction

On a single night in January 2016, more than 549,928 people were experiencing homelessness in the United States, with 35% of these individuals identified as part of a homeless family (U.S. Department of Housing and Urban Development, 2016). However, since this statistic only looks at one night each year, it does not include the estimated 2.5-3.5 million Americans who have used the shelter systems at other points in the past year, or the 7.4 million American families who are doubling up in homes due to economic hardship (National Law Center on Homelessness & Poverty, 2015). In Grand Rapids, Michigan, a similar point in time count in January 2016 found a total of 800 individuals experiencing homelessness, with 273 individuals in this group identified as part of a homeless family (Grand Rapids Area Coalition to End Homelessness, 2016). The National Law Center on Homelessness and Poverty (2015) reported that in 2015, the number one cause of homelessness for both individuals and families was a lack of affordable housing. As the United States continues to experience a nationwide affordable housing crisis, individuals and families experiencing homelessness will continue to require sustainable solutions to receive and maintain housing. There is a small but emerging area of scientific literature that advocates for increased occupational therapy interventions within this population. The holistic philosophy of occupational therapy (OT) is well-suited to help clients overcome the physical, psychological, and social barriers to occupational participation associated with homelessness.

Occupational Therapy with the Homeless Population

Occupational therapy is a discipline that helps individuals overcome obstacles in order to participate in activities that they need to do, want to do, and are expected to do as part of daily

life. Individuals experiencing homelessness often face specific problems such as disenfranchisement, diminished social support, decreased financial autonomy, limited control of the environment, limited work experiences and comorbidity of mental health diagnoses. These problems negatively impact an individual's ability to engage in productive activities (Schultz-Krohn, 2009). An individual who is homeless will not only experience barriers related to the logistical process of rehousing, but will need to balance new occupations such as financial management, home maintenance, employment or education, health management, and community navigation. Extended periods of time in a homeless state can result in the loss or decreased performance of these crucial skills, since individuals are no longer in a context where they are able to practice.

Occupation-based intervention can be beneficial to help mitigate some of the negative effects of homelessness. Marshall and Rosenberg advocate for increased occupational therapy intervention research, asserting that "enhancing a person's opportunity to engage in occupations associated with those performed during a housed state may be a way of fortifying a positive sense of self and may contribute to the development of a new identity as a 'housed person'" before transitioning into permanent housing" (2014). Occupational therapists can ease the transition into housing by using therapeutic activities to relearn necessary skills, increase confidence, and locate resources.

Individuals who are part of a homeless family experience unique stressors within the family unit that can limit their success in important occupations. Families who are homeless have very little agency in their living arrangements, routine, activities, and food. Parents often spend a large amount of energy seeking to maintain or create routines while residing in a shelter

(Schultz-Krohn, 2004). Occupational therapy services may help families maintain roles and routines while residing in an emergency shelter and transitioning into permanent housing. Schultz-Krohn (2004) found that family routines focused on promoting intimacy, maintaining or developing a legacy, and connecting with the community seemed to preserve family structure and provide hope while residing in transitional housing. Occupational therapists can create family interventions that promote these qualities in order to decrease stress and facilitate a successful housing transition. The process of transition to housing is a powerful window that can be utilized to facilitate empowerment and autonomy (Rowles, 2008).

Play occupations between parents and children are essential facilitators of child development. Opportunities for play can be severely disrupted in transitional housing, where a lack of resources and increased family stress can directly impede a child's ability to develop through play and socialization. This deficit is exemplified in a study by Ray (2006). The study, which took place in a homeless shelter, observed mothers and toddlers during free play and block play.

> One of the mothers stopped during the videotaping and said: "I don't know what to do." During the free play and block play videotaped segments, the [mothers] tended to approach each of these conditions as novel and thus did not appear to have established routines for play (Ray, p. 91, 2006).

All four mothers in this study were still adjusting to life in transitional housing. "Four of the dyads did not have a consistent place for either play or feeding interactions and were still developing play and self-care routines during the time of the taping" (Ray, p. 91, 2007). This study suggests that "the use of familiar routines and materials, as well as building on the

socio-emotional interactions of families, may be useful strategies for supporting mother-child engagement in families living in transitional housing" (Ray, p. 95, 2006).

Occupational therapists working with the homeless population can help identify client-centered goals, analyze the skills needed to achieve this goal, and systematically work on manageable tasks to achieve these goals (Schultz-Krohn, p. 20, 2009). Researchers analyzed this approach using occupational therapy students at a Family Supportive Housing Program (Schultz-Krohn, 2009). Clients treated with this sequenced approach have demonstrated improved performance related to the goals in the desired occupational area.

> Children display better frustration tolerance and have increased opportunity in play with peers during group occupational therapy sessions, teens have increased opportunity for inexpensive leisure pursuits to mitigate the deleterious effects of being homeless, and parents learn positive parenting techniques and engage in leisure activities with their families (Schultz-Krohn, p. 20, 2009).

These intervention strategies are consistent with the occupational therapy scope of practice, and break down the process of rehousing into tasks that maintain confidence and reduce stress.

Although there is a need for skilled occupational therapy services with individuals and families experiencing homelessness, funding and scheduling issues can be significant barriers to occupational therapists working in these settings. Another barrier that occupational therapists face when working with families who are residing in a shelter is that clients frequently leave the shelter before completing a treatment plan. When a family is in a shelter, their main goal is to secure housing and employment, which can take priority over going to OT appointments (Schultz-Krohn, 2009). Even though people miss therapy, going to treatment sessions can be

helpful when trying to find housing and employment because occupational therapists have the skills to break down these tasks into easier manageable tasks.

Overall, there is limited literature on interventions used with families experiencing homelessness. Pauly, Robinson, and Ward (2016) performed a pilot study with a family receiving services from the transitional housing facility in West Michigan. Interventions aimed to meet occupational needs identified by the mother. The occupational therapy treatments done in the pilot study included community navigation and adaptability of parks, low-cost sensory activities, and calming family yoga.

Occupational Therapy Models and Assessments

The use of a client-centered and holistic approach is emphasized in occupational therapy. Using the Canadian Model of Occupational Performance (CMOP), goals and interventions that are practical and meaningful can be addressed. The theoretical model frames occupational performance as the outcome of the person, environment, and occupation, and has been used by occupational therapists assessing and treating individuals experiencing homelessness (Herzberg & Finlayson, 2001). The CMOP is supported by the Canadian Occupational Performance Measure (COPM), and occupation-based assessment. The COPM has been found to facilitate a client-centered and culturally responsive assessment process when administered to individuals transitioning out of homelessness (Munoz et al., 2009).

Parents experiencing homelessness may have stress that impacts their ability to fulfill important roles. When Gorzka (1999) evaluated mothers experiencing homelessness using the Parenting Stress Index (PSI), scores showed a perceived lack of social support, lack of closeness with their children, and a state of compromised health. The mothers perceived their children as

overactive, moody, unwilling to adapt to change, lacking family supportiveness and parental expectations of intellectual and emotional characteristics. Both mothers and fathers identified the child domain as the most frequent source of stress (Gorzka, 1999). Stressful relationships within family units can result in physical illness, social isolation, and, most relevant to occupational therapy, a decreased ability to perform daily occupations.

The pilot study stated that "the mother reacted strongly to the results [of the PSI and COPM], wholeheartedly agreeing that they described her family accurately" (Pauly, Robinson, and Ward, 2016). Aside from the work by Pauly, Robinson, & Ward (2016), the PSI and COPM have not been used together with this target demographic.

Methodology

Study Design

This study was a continuation of a 2016 pilot study completed by occupational therapy students at the same organization (Pauly, Robinson, & Ward, 2016). While the pilot study focused on one family and used a phenomenological study design, the current study worked with three different families utilizing a quasi-experimental pretest-posttest design.

Data collection was conducted in three parts: an initial assessment, a series of intervention sessions, and a follow-up assessment. The Parenting Stress Index-Short Form (PSI-SF) and the Canadian Occupational Performance Measure (COPM) were used to assess families during the pretest and posttest. Information gathered from these assessments during the pretest informed client-centered intervention planning for each family. This process has been exemplified in an intervention planned by researchers in the pilot study (Pauly, et. al., 2016). Previous researchers utilized the COPM with the mother who participated to identify areas of

occupational need. The mother identified community navigation as a skill that was very important to her family's functioning, but the assessment reflected that she had poor satisfaction with her performance of this skill (Pauly, et. al., 2016). Based on this identified need, one intervention session focused on finding and walking to a local park to facilitate independence in play, leisure, and community navigation occupations (Pauly, et. al., 2016).

Study Site and Population

Participants were recruited from an emergency homeless shelter serving families experiencing homelessness in West Michigan. Participation took place at the facility, the homes of participants after they had moved into permanent housing, and public locations such as parks and community buildings. Three families were selected using purposive sampling through recommendations by case managers. For the purpose of this study, all participant families had a direct familial relationship and included at least one adult caregiver and at least one child under 18 years of age. Participants all received services from the emergency homeless shelter and all were fluent in conversational English.

Equipment/Instruments

At the initial meeting, the COPM was used to gather information about performance and satisfaction with common occupations for each family. The PSI-SF was administered with the caregiver to evaluate the level of stress related to parenting and the parent-child relationship.

Parenting Stress Index Short Form. The short form (PSI-SF) consists of 36 questions selected from the original long form. The PSI-SF identifies parenting stress in areas of parental distress, parent-child dysfunctional interaction, difficult child, and total stress. Parents who participate in the assessment receive a sheet of paper with questions and spaces to circle

responses. Parent responses are organized through an ordinal scale. Parents can choose to answer test items with 'strongly agree,' 'agree,' 'not sure,' 'disagree,' or 'strongly disagree.' An example test item is: "I feel my child is more difficult to handle than most." (Abidin, 2012). In general and unless otherwise noted, the normal range for scores is within the 16th to 84th percentiles. Scores in the 85th percentile are considered high for parent stress, and scores in the 90th percentile or higher are considered clinically significant (Abidin, 2012).

A study by Haskett, Scott, Willoughby and Nears (2006) supports the Parent Stress Index having strong psychometric properties with an internal consistency reliability coefficient of .91 and 6-month test-retest reliability coefficient of .84. Research by Abidin (2012) supports the reliability and validity of the PSI-SF in regards to using the self-report questionnaire with poor rural and inner-city individuals.

Canadian Occupational Performance Measure. The Canadian Occupational Performance Measure is a semi-structured interview used to identify the five most important areas of occupational performance on which an individual (or family) desires to improve. The three categories include: self-care, productivity, and leisure. Each of these are broken down further; self-care subscales include personal care, functional mobility, and community management. The productivity subscales are paid/unpaid work, household management, and play/school. The leisure subscales include quiet recreation, active recreation, and socialization. The client is asked to rank importance, performance, and satisfaction of each category on an ordinal Likert scale from 1 - 10.

Sixteen articles were located that examined the validity of the COPM. As of December 2013, there were 7 reliability studies published on the COPM. Internal consistency reliability

has been shown to be within a reasonable range (The Canadian Occupational Performance Measure, 2013). According to Law et al. (2005), research has indicated that changes of two or more points on the COPM are clinically important. The theoretical basis upon which the measure was developed describes occupational performance as an individual's subjective experience. The COPM appears to be a valuable and appropriate assessment tool for use with people who are homeless.

Procedure

Three families were selected for this study through recommendations of the transitional housing case managers. Potential families were provided with an information sheet describing the nature of the study, time commitment, and benefits of participating. The four occupational therapy students conducting research were paired randomly into two intervention teams (two students each), and each team was assigned to work with one to two families, based on availability.

At the initial meeting, student researchers explained the study procedure and informed consent document with the parent(s), and child assent form with the child(ren). Next, an informal interview was conducted to gather demographics and build rapport. Then, a student researcher administered the COPM and the PSI-SF. After initial assessment, student researchers collaborated with the principal investigator to develop occupation-based intervention sessions for each family.

Three family-centered intervention sessions were implemented with each family based on the results of the COPM and PSI-SF. The COPM and PSI-SF were readministered at a final meeting with each family.

Program Implementation

The research team implemented OT interventions with the three families that were involved in the study. After the initial meeting with the families, the data gathered from the COPM was utilized to create 3 individualized interventions based on the performance issues the families reported. Each family had unique occupational performance deficits. For one family, the three main areas of focus were community management, leisure, and school for the children. The interventions for leisure and school for this family included doing activities such as making homemade flashcards, practicing yoga to calm their minds and bodies, and working on fine motor crafts. These interventions were completed with the two young children and their mom, and were geared for the purpose of mimicking what the children would do while in school. Researchers working with the other families followed a similar pattern of identifying needs based on the COPM, and developing relevant community-based interventions.

Data Analysis

Pretest and posttest scores for the PSI-SF were statistically compared using a repeated-measures ANOVA test with several independent variables. To analyze the data gathered from the PSI-SF, an ANOVA on SPSS compared the three domains of stress individually. A Friedman test was conducted to compare pre- and post-test performance and satisfaction ratings on the COPM. Only one family identified a fifth area to address, so for consistency in analysis, the top four areas were used for each family. Post Hoc analysis was done with a Wilcoxon Signed Rank test. Following this data analysis, a GPower test was conducted using the results to evaluate the sample size that would have been necessary for statistical significance with a power of .8.

Results

Demographics. Three families in total participated in this study. Family 1 consisted of a mother with a teenager and two young children. This family was residing in the transitional shelter at the start of data collection, but transitioned to an apartment while participating in the research. Family 2 consisted of a single mother with two children, although the researchers only worked with the mother and her child in elementary school. This family also resided in the transitional housing facility, but had transitioned into a rapid rehousing program prior to the final meeting. Family three consisted of a married female who had three children. Researchers worked with the mother and her preschool-aged child. This family had recently moved into a new home after going through a rehousing program at the transitional living facility. All three mothers were between 30 and 49 years old.

Parenting stress. The head parent of each family completed the Parenting Stress Index both before and after the occupational therapy intervention sessions. Stress percentiles for each family's subscores and total stress score are shown in the table below (table 1).

Table 1

PSI Pre and Post percentile scores for families 1 - 3

	Pre (Percentiles)				Post (Percentiles)			
Category (raw score/percentile)	Family 1	Family 2	Family 3	Mean	Family 1	Family 2	Family 3	Mean
Parental distress	5	65	75	48	1	70	40	37
Parent-child dysfunctional interaction	10	60	95	55	10	75	95-99	60
Difficult child	90	80-85	95-99	90	20	65	99	61
Total stress	**30**	**95-99**	**99**	**75.5**	**>5**	**95**	**99**	**66.3**

Across the three families who participated, mean parental distress decreased, as well as mean difficult child scored decreased. Parent-child dysfunctional interaction scores increased. Of these three score subcategories, no mean changes in stress were statistically significant.

	Significance (p-value)	Partial Eta Squared	Noncent. Parameter
Sphericity Assumed	.259	.549	2.435
Greenhouse-Geisser	.259	.549	2.435
Huynh-Feldt	.259	.549	2.435

Occupational performance. Participants were asked in a structured interview about what occupations were of the highest importance to address in interventions. For each of these occupations, participants were asked to rank their ability to perform the occupation on a scale of 1-10. Self-reported scores for each family's top four occupations are in table 2.

Table 2

COPM Family-rated Performance for most Prioritized Occupations

	Pre			Post		
Most Prioritized Occupations	Performance Family 1	Performance Family 2	Performance Family 3	Performance Family 1	Performance Family 2	Performance Family 3
Priority 1	5	1	0	10	6	8
Priority 2	3	3	0	10	5	8
Priority 3	1	1	0	10	3.5	8
Priority 4	8	3	0	8	6	7

For Families 2 and 3, performance in all four prioritized occupations increased from pretest to posttest. Family 1 experienced self-reported performance increase in top three prioritized occupations. Analysis of mean performance changes within Priority 1, Priority 2,

Priority 3, and Priority 4 yielded no statistical significance. According to the COPM Manual, all increases in satisfaction of two points or greater represent clinically significant improvement in satisfaction.

Table 3

Statistical Analysis of COPM Family-rated Performance for most Prioritized Occupations

	Post-Priority 1 - Pre-Priority 1	Post-Priority 2 - Pre-Priority 2	Post-Priority 3 - Pre-Priority 3	Post-Priority 4 - Pre-Priority 4
Exact Significance (2-tailed)	.250	.250	.250	.500
Asymp. Significance (2-tailed)	.102	.109	.109	.180

Satisfaction with occupational performance. Participants were also asked to rate their satisfaction with their current ability to perform their top four occupations on a scale of 1-10. The scores for pre and post tests are displayed in table 3.

Table 4

COPM Family-rated Satisfaction for most Prioritized Occupations

	Pre			Post		
Most Prioritized Occupations	Satisfaction Family 1	Satisfaction Family 2	Satisfaction Family 3	Satisfaction Family 1	Satisfaction Family 2	Satisfaction Family 3
Priority 1	3	2	1	10	9	10
Priority 2	2	4	5	10	6	10
Priority 3	1	1	5	10	3.5	10
Priority 4	8	3	0	8	8	8

For Families 2 and 3, satisfaction in all four prioritized occupations increased from pretest to posttest. Family 1 experienced self-reported satisfaction increase in top three prioritized occupations. Analysis of mean satisfaction changes within Priority 1, Priority 2, Priority 3, and Priority 4 yielded no statistical significance. However, according to the COPM Manual, all increases in satisfaction of two points or greater represent clinically significant improvement in satisfaction.

Table 5

Statistical Analysis of COPM Family-rated Satisfaction for most Prioritized Occupations

	Post-Priority 1 - Pre-Priority 1	Post-Priority 2 - Pre-Priority 2	Post-Priority 3 - Pre-Priority 3	Post-Priority 4 - Pre-Priority 4
Exact Significance (2-tailed)	.250	.250	.250	.500
Asymp. Significance (2-tailed)	.102	.109	.109	.180

Discussion

Parenting Stress Index

Parental distress. Changes in mean parental distress scores from pretest to posttest were not statistically significant, but each parent experienced individual changes that can be explored further. Based on PSI results, family 1 displayed characteristics of defensive responding, which is a possible explanation for extremely low stress scores in this subcategory. Questions in this section were related to symptoms of depression, as well as personal information about familial and social supports, which may have triggered defensive responding. Family 2 experienced

increased parental distress, but this can potentially be attributed to a flare-up of a chronic health condition that occurred immediately prior to posttest. Family 3 experienced a decrease in parental distress from 75th percentile at pretest to 40th percentile at posttest. Rowles (2008) asserts that occupational therapists can use therapeutic activities to increase feelings of empowerment and autonomy for parents who are homeless, so they are better equipped to participate in their parental role.

Parent-child dysfunction. Average level of stress in the parent-child dysfunction domain between the three families increased slightly. This change is not statistically significant. It is possible that the increase in stress may be due to the families moving into new homes during the study period. Moving into permanent housing caused an abrupt cut-off of the daily structure and guidance found while living in the emergency shelter. While ultimately having a permanent home will likely be positively related with a stronger parent-child relationship, increased parent-child dysfunction may be related to a stressful transition away from the structure of the shelter.

Difficult child. Difficult child percentiles for Family 1 and Family 2 decreased after occupational therapy interventions. Family 1's score was above the 90th percentile before the intervention, indicating a difficult child, but decreased to the 20th percentile after interventions. The third family stayed at a 99th percentile pre and post intervention, indicating a difficult child. As evidenced by Ray (2006), some mothers residing in a transitional shelter did not know how to free play with their children during a free play activity, and found it difficult to interact with their child positively. On the other hand, the mothers knew how to lead a snack activity. The difference between play and a snack was routine; the mothers were responsible for feeding their

children, but they usually did not have a routine for play. This lack of routine for play exacerbated stress for the mothers, leading to a more difficult child. The lack of routine could be a potential reason for parents perceiving a child as difficult while homeless. An occupational therapist has the potential to help develop routines that allow for parents and children to play together.

Canadian Occupational Performance Measure

Performance. Change in performance was not statistically significant, however, all three families had a clinically important (>2 point) increase in performance for their identified top three areas of occupation. One family showed no change in their fourth ranked area. Individuals experiencing homelessness can face specific barriers to optimal performance of important occupations, such as disenfranchisement, diminished social support, decreased financial autonomy, limited control of the environment, limited work experiences and comorbidity of mental health diagnoses (Schultz-Krohn, 2009). The overall increase in performance seen in this study shows that client-centered OT interventions with families experiencing homelessness can help parents gain skills in the areas they identify as most important to overcome some of the unique barriers they may face while transitioning out of homelessness.

Satisfaction. Change in satisfaction was not statistically significant, however, all three families had a clinically important (>2 point) increase in satisfaction for their identified top four areas of occupation. Satisfaction increased even when there was not an increase in performance. This suggests the role of OT with families experiencing homelessness is not limited to just increasing performance of occupations. Increasing engagement in occupations that are typically performed in a home can foster a positive sense of self in parents experiencing homelessness

(Marshall & Rosenberg, 2014). The act of engaging in different occupations, combined with the OT's therapeutic use of self, can increase parents' self-efficacy. An increase in confidence and empowerment could lead to an increase in satisfaction with performance, even with no change in performance.

Strengths. The length of time needed to complete both assessments and interventions contributed positively to building rapport with the families. Families experiencing homelessness frequently experience negative life circumstances that can result in difficulty building trust, so professionals who work with this population often need extra time to establish safety and comfort during activities. Researchers built rapport with families while providing occupational therapy interventions. The entire process took 5 weeks in total to gather initial data, complete interventions, and readminister assessments. A longer assessment period also contributed to creating interventions that were very client-centered. Each family's needs were carefully considered and the interventions were based on that individual family's relevant needs. It was helpful that the same researchers consistently worked with the same families, so that therapeutic relationships were maintained and information from each treatment session was retained.

One strength of the current study is that the researchers and participants worked one on one. The families that participated in this study were largely unpredictable and each family wanted something different out of the OT interventions. Having these particular families in a group setting would have been difficult to meet each family's need. The researchers were able to be flexible and plan the interventions based around the schedules of the families.

Even though the COPM results were not statistically significant, the results were clinically significant. The results of the COPM showed significant increases in both performance and satisfaction, which is important in occupational therapy practice.

Limitations. This study is based on a small sample from one emergency shelter in West Michigan, so generalizability of results is limited. The COPM and PSI-SF were administered on the first visit with the family without building much rapport with the family. The mothers may have been defensive while answering questions for the COPM and the PSI-SF because they did not know the researchers yet. Post-tests were completed 1-2 weeks after the last intervention session, which does not allow for analysis of possible long-term changes in parenting stress. Researchers encountered several barriers in scheduling assessment and intervention sessions with families, resulting in time between sessions ranging from 5-14 days. Barriers included researchers schedules differing from client schedules and families moving into permanent housing during the study period. Additionally, unexpected events such as medical issues, family emergencies, and loss of communication due to a family's phone being disconnected led to rescheduling several sessions.

Suggestions for future research. This study provides a foundation on which other studies can expand upon the body of literature regarding occupational therapy and homelessness. Future researchers would procure better results by modifying the methods to support a larger sample size. Using the GPower test, it was determined that with the results of the current study, a sample size of 9 would be required for statistical significance with a power of .8. Based on the data and results from the current study, 9 families participating would be a good starting point for future research. However, this large of a sample size may be difficult to attain and sustain

based on the limitations found in the current study. One way to increase the sample size is by doing group interventions with multiple families in the homeless shelter. Group interventions can increase consistency and allow more families to participate at one time, though it could impact the individualization and flexibility of interventions. Another helpful suggestion is to do a follow-up with each family either after 6 months or a year to see how they are doing and if any changes in performance, satisfaction, or parenting stress remained constant after the study period.

Impact on OT practice. Occupational therapy services for families experiencing homelessness is an emerging practice area. This study provides an example of how practitioners can use the COPM to develop client-centered interventions to address areas of need for this population. Low self-ratings of occupational performance and satisfaction with performance identified during the pre-test shows that families experiencing homelessness may benefit from occupational therapy intervention. Providing services in each family's natural environment and addressing specific barriers to performance allows occupational therapists to build rapport and ensure optimal participation of both the child(ren) and parent(s) receiving services. The program implementation outlined in this study may provide occupational therapists with a basis for introducing occupational therapy services to families receiving services from a similar emergency homeless shelter.

Conclusion

Of people experiencing homelessness in the United States, 35% of these individuals are part of a homeless family (U.S. Department of Housing and Urban Development, 2016). This population will inevitably grow as the nationwide affordable housing crisis continues, and

sustainable solutions are necessary. Changes in parenting stress, occupational performance, and satisfaction with performance as identified by the PSI-SF and COPM were not statistically significant, but changes in individual families' scores were clinically significant. Occupational therapists have the skills required to meet the physical, psychological, and social needs of families experiencing homelessness; however, additional research is needed to identify the role of OT with this population, and to determine whether OT services can have an impact on parenting stress for parents experiencing homelessness.

Declaration of interest

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

References

The 2016 Annual Homeless Assessment Report (AHAR) to Congress. (2016). *The US Department of Housing and Urban Development.* Retrieved from https://www.hudexchange.info/resources/documents/2016-AHAR-Part-1.pdf

Abidin, R. R. (2012). *Parenting stress index* (4th ed.). Lutz, FL: PAR.

The Canadian Occupational Performance Measure. (2013). Psychometric Properties of the COPM. Retrieved from http://www.thecopm.ca/casestudy/psychometric-properties-of-the-copm/

Gorzka, P. (1999). Homeless parents' perceptions of parenting stress. *Journal of Child and Adolescent Psychiatric Nursing, 12*, 7-16.

Haskett M. E., Scott S. S., Willoughby M., & Nears, K. (2006). The parent opinion questionnaire and child vignettes for use with abusive parents: Assessments of psychometric properties. *Journal of Family Violence,* 21, 137-151. Doi: 10.1007/s10896-005-9010-2

Herzberg, G. & Finlayson, M. (2001). Development of occupational therapy in a homeless shelter. *Occupational Therapy In Health Care*, *13*, 131-144, doi: 10.1080/J003v13n03_11

Homelessness in America: Overview of data and causes. (2015). *National Law Center on Homelessness and Poverty.* Retrieved from https://www.nlchp.org/documents/Homeless_Stats_Fact_Sheet

Kent County Point in Time Count. (2016) *Grand Rapids Area Coalition to End Homelessness.* Retrieved from

http://endhomelessnesskent.org/wp-content/uploads/2016/05/2016PITDataRelease-Final.pdf

Law, M., Baptiste, S., Carswell, A., McColl, M. A., Polatajko, H. J., & Pollock, N. (2005). Canadian Occupational Performance Measure (4th ed.). Ottawa, ON: CAOT Publications ACE.

Marshall, C., & Rosenberg, M. (2014). Occupation and the process of transition from homelessness. *Canadian Journal of Occupational Therapy,* 81, 330-338. doi:10.1177/0008417414548573

Muñoz, J., Garcia, T., Lisak, J., & Reichenbach, D. (2006). Assessing the occupational performance priorities of people who are homeless. *Occupational Therapy In Health Care, 20*, 135-148. doi: 10.1080/J003v20n03_09

Pauly, E., Robinson M., & Ward, J. (2016). *A pilot study on the perceived outcomes of client-selected activities in a family transitioning out of homelessness*. Unpublished manuscript, Grand Valley State University, Grand Rapids, MI.

Ray, S. A. (2006). Mother-Toddler Interactions During Child-Focused Activity in Transitional Housing, O*ccupational Therapy In Health Car*e, 20:3-4, 81-97, DOI: 10.1080J003v20n03_06

Rowles, G. D. (2008). Place in occupational science: A life course perspective on the role of environmental context in the quest for meaning. *Journal of Occupational Science,* 15, 127-135. doi: 10.1080/14427591.2008.9686622

Schultz-Krohn, W. (2004). The meaning of family routines in a homeless shelter. *American Journal of Occupational Therapy*, *58*, 531-542.

Schultz-Krohn, W. (2009). Occupation in action: Working with homeless families. *OT Practice,* 14, 19-20. Retrieved from www.aota.org