

RESEARCH ARTICLE

Engagement in Play Activities as a Means for Youth in Detention to Acquire Life Skills

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Abstract

This study describes how occupational therapists in a community-based programme, Occupational Therapy Training Program (OTTP), use play activities to facilitate the acquisition of life skills by youth in detention. This pilot study explored the extent of engagement of male and female inmates aged 14 to 18 years old in structured play activities on topics such as interpersonal relationships, self-awareness, cultural celebrations and the transition to community. Retrospective analysis of data collected from surveys using the Engagement in OTTP Activities Questionnaire (EOAQ), completed by youth participants at the end of each group session, was used to measure the extent of occupational engagement. Worksheets and artworks produced by OTTP participants during those group sessions were also analysed.

The participants reported very high engagement in OTTP. Engagement scores for male participants were higher than those for female participants, and male and female participants had higher engagement scores for different activities. Over 90% of the worksheets and artworks were found to be complete and relevant to the topic of the session. Play activities could be an appropriate way for occupational therapists to encourage youth in detention to acquire life skills. Demographic information and the actual number of participants are unknown because of how the existing data were collected. Future studies examining the potential gender-related preferences for specific topics deserve further investigation as well as research comparing the youth's engagement in OTTP interventions using play activities to other group interventions. Copyright © 2016 John Wiley & Sons, Ltd.

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From infancy to adolescence, play is a major occupation, and “OT practitioners support, enhance, and defend” the right of young people to engage in play activities (Primeau, 2008) (p.707). Play can bolster a youth's sense of self-efficacy and reduce stress, especially at challenging moments (Miller and Reid, 2003; Potasz et al., 2013). Qualities related to playfulness,

such as flexibility, intrinsic motivation, internal control, social competence and adaptability to change, are associated with coping skills (Hess and Bundy, 2003). Play, by enhancing a youth's coping skills, reduces externalized problems and increases self-esteem, sharing of feelings with others and overall emotional well-being (Rohde et al., 2004).

The occupation of play is especially critical for youth in detention because their environment restricts their daily occupations. Incarcerated youth often have limited opportunity for playful activities or engagement in personally chosen meaningful occupations (A Day in the Life of Detention, 2008–2016; Roush, 1993). Daily life in detention is largely restricted to a jail cell, with out-of-cell activities mostly limited to self-care, formal education and court proceedings. Less structured and more passive leisure occupations like watching television, talking and listening to music provide some respite to the participants from general boredom and are more available for incarcerated youth. Structured and achievement leisure occupations like sports, games and crafts provide challenges and require active participation but are less available for detained youth (Farnworth, 2000). The lack of structured play opportunities for youth in detention deepens their isolation and impedes their healthy growth and development (Farnworth, 2000; Sturges, 2003).

Adolescents also need certain life skills to successfully navigate the transition to adulthood. Studies have found that young people value the acceptance of personal responsibilities, the forming of relationships with other adults as equals, the solidification of personal values and beliefs and the achievement of financial independence as the most important elements of successful adulthood (Arnett, 2001, 2014; Schwartz et al., 2005). Youth in detention have limited opportunities to develop healthy relationships, strong self-identities and employment potentials.

Occupational engagement

Occupational therapy (OT) supports an individual's health and life participation through engagement in occupations (AOTA, 2014). Engagement in meaningful occupations promotes health and well-being (Bazyk and Bazyk, 2009; Stav et al., 2012; Wimpenny et al., 2014). It is a fundamental OT belief that active engagement in meaningful occupations promotes well-being (AOTA, 2014). Engagement in meaningful occupations has been found to support an individual's health, well-being and life participation by promoting self-efficacy, competence, self-worth and coping skills, and can aid in the acquisition of productive occupational roles (Bazyk and Bazyk, 2009; Farnworth, 2000; Goldberg et al., 2002). Youth who are engaged in a therapeutic intervention process are more likely to experience

lasting positive changes than those who merely “navigate” the interventions (Reisinger et al., 2003), where navigation is the process of meeting the minimum necessary requirements for completion with as little commitment as possible (Reisinger et al., 2003). Engagement indicates motivation, commitment and internalization of the process of change, and can lead to deeper learning (Dawes and Larson, 2011; Reisinger et al., 2003). Youth who are authentically engaged in an intervention process are more motivated to change, such that behavioural change is more likely to occur (Clair et al., 2011; Reisinger et al., 2003).

The process of engaging youth has been well-documented (Dawes and Larson, 2011; Foran, 2011; Kim et al., 2012; Morgan, 2010; Reid, 2010; Reisinger et al., 2003). To be engaged in an activity is to pay full attention, to be immersed in it without hesitation (Reid, 2010). Optimal occupational engagement requires a balance between the challenge of the activity and the skills of the participant. Dawes and Larson (2011) have found engagement to increase when participants feel a personal connection to an activity and pursue a specific purpose in it.

Occupational therapy for incarcerated youth

The Occupational Therapy Training Program (OTTP), a community-based organization, provides a weekly life skills group for inmates at the Juvenile Justice Center (JJC) in San Francisco. Incarcerated youth participating in OTTP engage in developmentally appropriate play occupations that include crafts, games with rules and interactive activities. These play activities address specific life skills that are known to foster self-reliance in youth, such as pre-vocational exploration, assertive communication, self-management and how to access community resources (Helfrich et al., 2006). Incarcerated youth have few opportunities to engage in activities that promote development of the life skills they need to make changes in their lives (Farnworth, 2000). OTTP life skills interventions allow youth to experience other modes of being within the context of meaningful and enjoyable occupations (Snyder et al., 1998). Through such interventions, participants can learn and use the information they need to be productive, and experience changes in their self-images, goals, capacities and roles in society (Snyder et al., 1998). Therefore through engaging detained youth in play

activities OTTP can serve two major goals for the participants: (1) participation in developmentally appropriate, meaningful play occupations; and (2) the acquisition of healthful life skills in preparation for the transition from detention to community.

While OT practitioners have long worked with adolescents in the justice system, recent documentation and assessment of these interventions have been limited (DeForest et al., 1991; Faigel, 1975; Fanchiang et al., 1990; Farnworth, 2000; Gourley, 2000; Hardison and Llorens, 1988; C. V. Martin and Rash, 1978; Pinto and Hahn, 1978; Piper and Le Grow, 1956). The dearth of current peer-reviewed and evidence-based literature describing and supporting OT services in the juvenile justice system also created a void for samples of robust research designs (O'Connell and Farnworth, 2007). This is especially a barrier for OT practitioners who desire to study intervention outcome but are not well-versed in conducting research. Although the OTTP therapists have intended to study the effectiveness of their interventions with youth at the JJC for some time, the lack of current literature to provide guidance as well as the environmental restrictions pose challenges to conducting such a study. The OT group for each unit is restricted to one hour per week, on a designated day and time, with no flexibility. Because attendance is encouraged but voluntary, attendees can vary from week to week, making it difficult to track an individual youth's progress. The available space, and inmates' eligibility to participate, as determined by the wardens and usually based on behaviour that day, can also limit the number of participants. Only paper and soft colouring instruments such as markers can be used at each session, limiting the kinds of activities that can be conducted with the youth inmate.

OTTP practitioners have found it difficult to identify and determine specific measurable outcome indicators for the interventions at the JJC because of the restricted environments and the lack of adequate research models available in the literature (O'Connell and Farnworth, 2007). Among the few assessments cited in the literature, Occupational Performance History Interview (OPHI) is an assessment tool often used with clients who are incarcerated and could be considered by the OTTP practitioners to use as a data collection tool at JJC (O'Connell and Farnworth, 2007; O'Connell et al., 2010). OPHI is a semi-structure interview tool used to collect information on a client's past and current occupational performance (Mallinson et al.,

1998). However the lengthy nature of conducting interviews with incarcerated youth under the restricted environment is considered unrealistic to the occupational therapists at JJC. Through continuous reflection and discussion, the occupational therapists agreed that their primary purpose is to provide inmates an hour-long opportunity to engage in play, and their secondary purpose is to foster the acquisition of basic life skills. The extent of each youth's engagement in the play activity was therefore identified as an outcome indicator. The occupational therapists through literature reviews identified a self-report instrument, Engagement in Meaningful Activity Survey (EMAS) (Goldberg et al., 2002), as a useful tool monitoring the youth's engagement during each OTTP group session. EMAS was subsequently modified by the occupational therapists, titling the measuring tool Engagement in OTTP Activities Questionnaire (EOAQ), to be completed by the JJC youth participants at the end of each OT group in order to monitor the youth participants' engagement in the OT play activities.

Method

This exploratory retrospective study analysed the existing EOAQ data and worksheet/craft products collected by OTTP occupational therapists during OTTP groups by focusing on observing, recognizing and measuring youth engagement in play activities (Clair et al., 2011; Reisinger et al., 2003).

Participants and setting

OTTP interventions were provided to three units at the JJC. Table I briefly describes the units and the OTTP group structure for each. The participants were detained youth housed in Units 2, 6 and 7 at the JJC in San Francisco, and the OTTP groups were weekly one-hour sessions with between 4 and 10 youth participants. The identity and background information of youth participants who completed the survey were confidential and cannot be stated in detail beyond what is reported here. Generally the participants were males and female aged between the ages of 14 and 18. They were housed in three units. Unit 6 held males arrested for less serious offences, such as theft, fighting, unarmed robbery and drug possession and Unit 7 of males arrested for more serious offences, including gang-related crimes, armed robbery or attempted

Table 1. Description of participating JJC units

Unit	Gender	Types of offenses	Time of day	Environment	Participants
2	Female	Minor to severe, e.g. minor theft, drug use/trafficking, “prostitution”, aggravated assault and/or murder	In-cell quiet time: inmates not participating confined to their cells	Open area with four tables; directly supervised by wardens; participants seated at tables	8–10
6	Male	Minor, e.g. theft, fighting, unarmed robbery and drug possession	Out-of-cell free time: inmates not participating watch TV, meet with visitors, and/or exercise	Small classroom with two tables; occasionally supervised by wardens; participants free to move about but limited by small space	4–6
7	Male	Severe, e.g. gang-related crimes, armed robbery or attempted murder	Out-of-cell free time: inmates not participating watch TV, meet with visitors, and/or exercise	Large classroom with desks and chairs; occasionally supervised by wardens; participants free to move about	8–10

murder. Unit 2 held female arrested for a wide range of offenses that included minor theft, drug use/trafficking, “prostitution”, aggravated assault and/or occasionally murder. Females tended to have shorter length of stay (on average from a few days to a few months) than male (mostly 6 to 9 months). Educationally, the youth were enrolled in high school but they were often behind in school credits for their age-appropriate grade level.

Data collection instruments

Two data sources were analysed to measure participants’ occupational engagement.

Engagement in OTTP Activities Questionnaire (EOAQ). This self-report instrument is modified from the EMAS. EMAS was developed to measure the extent of engagement in meaningful activities (Goldberg et al., 2002). It consists of 12 statements that reflect the characteristics of engagement as described in the literature (Ainley and Ainley, 2011; Bazyk and Bazyk, 2009; Fave and Massimini, 2005; French et al., 2003; Hafen et al., 2012; Ketteridge and Boshoff, 2008; Miller and Reid, 2003; Reid, 2010). The psychometric properties of the EMAS have been found to be moderately strong (Eakman et al., 2010; Goldberg et al., 2002).

In reviewing the EMAS, a panel of OTTP occupational therapists recommended deleting from the original questionnaire two items that did not address the personal experience of the OTTP participants in reference to the OT group activities: “valued by other people” and “helping other people”, especially in the

context of detention. After removing these two items, the questionnaire contains ten items that ask participants to use a 5-point Likert scale to rate the meaningfulness of the activities conducted during a particular OTTP session. An open-ended question (“What part of today’s session is most meaningful to you and why?”) was added to the end of the questionnaire to further solicit participants’ perception on their experiences. The final questionnaire was titled Engagement in OTTP Activities Questionnaire (EOAQ) and was distributed to the youth participants to complete at the end of each OTTP group session.

A principal component analysis of the ten items was conducted on the data collected from the completed surveys (N = 295). The results revealed a unidimensional scale explaining 68.9% of total variance, with high factor loadings of the items ranging from 0.75 to 0.89. The internal consistency of the scale was 0.95. These results showed that the EOAQ has good structural validity and excellent reliability for measuring occupational engagement.

Analysis of Group Activity Scale (AGAS): The youth inmates at JJC are not allowed to keep or post paper/artwork in their personal and communal spaces. Worksheets and/or paper artworks completed by the youth participants during OTTP group sessions were collected by the occupational therapists at the end of every group session. Analysis of Group Activity Scale (AGAS) was used to analyse the content of these worksheets and artworks. AGAS was developed by the research team to capture information about youth participants’

engagement. The AGAS rated the presence of two variables, extent of completion and relevance of the content, on the OTTP worksheets that may be indicators of engagement. Using an ordinal of four categories: 0–25%; 26%–50%; 51%–75%; and 76%–100%, AGAS was used to measure how much of the worksheet was filled out by the participant and how much the content is relevant to the topic of the group session. Eight research assistants and the principal investigator (PI) independently rated ten identical samples of collected worksheet/artwork using AGAS, and their scores were compared to assure consistency. Inter-rater reliability for scoring the worksheets and artworks using the AGAS was 98.1%.

Procedures

The OTTP groups in the JJC are led by occupational therapists who serve as group leaders and facilitators. Participants volunteer to attend a one-hour session, which typically in the sequence of: (1) ice-breaker activity or social warm-up game; (2) brief introduction of the session's topic by the OT practitioner; (3) a question and answer session on the topic, led by the OT practitioner; (4) a worksheet (participants are asked to respond to topic related questions or statements), game with rules (e.g. Jeopardy), art and craft project (e.g. collage); or group sharing (OT facilitated discussion) related to the topic and (5) final summation, in which the occupational therapist reviews the topic and participants' learned knowledge about it. Topics of group interventions included but were not limited to various life skills such as self-management, vocational exploration, social and communication. Average number of participants for each group per each session ranged from 4 to 10. The occupational therapist routinely distributed EOAQ to participants after the group activities and collected the completed surveys from participants as they exited the group session. All participants completed EOAQ anonymously. OTTP occupational therapists reviewed outcome of the surveys immediately after each group session to monitor the participants' engagement in OT group activities and as a feedback loop to improve group process and content. Data analysed were collected from 48 OTTP group sessions during a six-month period. Because youth detainees at the JJC cannot possess any documents or artworks in their cells, the OTTP therapists

collected all intervention-related materials at the end of each group session. The occupational therapists removed all identifiable information from the worksheets and artworks collected from the participants before submitting to the PI for data analysis. The PI and the research assistants did not provide any services to nor had any contact with the youth participants at JJC. The study was approved by the Institutional Review Board of the academic institution affiliated with the PI. The IRB agreed that it was not necessary to obtain participants' consents for use in this study, because the study was retrospective analysis of existing data routinely collected by occupational therapists during OTTP groups.

Data analysis

The analysed EOAQs, worksheets and artworks were collected during a six-month period. The PI and research assistants analysed the worksheets and artworks using the AGAS forms. The data from the EOAQ and AGAS were analysed using the Statistical Package for Social Science (SPSS) focusing on summary statistics and utilizing general linear model to examine group differences. The PI and a trained research assistant qualitatively analysed the written responses to the open-ended question at the end of the EOAQ. Standard content analysis was used to code and identify themes and topics.

Results

Engagement

During 48 weekly OTTP sessions, 295 completed EOAQs were collected from participants. The data for analysis were completed EOAQ as well as group worksheets and craft artifacts that the occupational therapists collected from the participants over a period of 6 consecutive months. Many participants, especially those detained at the JJC for an extended period of time, attended multiple sessions over the data analysis period. The survey was given to participants at each OTTP group, and the youth who attended more than one OTTP session may have completed multiple surveys.

Approximately one-half (48.8%) of the questionnaires were completed by female youth participants and one-half (51.2%) by male youth participants. Table II shows the EOAQ scores for each unit. The

Table 2. Participants' engagement scores as indicated by EOAQ by Unit ($N = 295$)

Unit	N	M	SD	Range	Percentage score of mean with the range
2	144	38.60	9.25	14–50	68.3%
6	59	42.00	10.77	10–50	80%
7	92	40.59	9.45	10–50	76.5%
Total	295	39.90	9.69		

mean total EOAQ score from Unit 6 was the highest out of the possible score of 50 ($M = 42$), followed by Unit 7 ($M = 40.59$), and then Unit 2 ($M = 38.6$).

Table III shows the scores for each item on the EOAQ. The distribution of items and mean score for all items are skewed to the high end. In particular, the median for items 2 (express my creativity), 7 (help me express my personal values) and 10 (reflect the kind of person I am) are 5, the highest possible score. In 73 of the 295 completed EOAQ (24.7%), the respondents gave a maximum score of 50 (or mean of 5) for all 10 items. When the EOAQ data for Units 6 and 7 (all male) were combined and compared to Unit 2 (all female), gender differences became evident. Male participants ($M = 41.2$, $SD = .99$) had significantly higher average total engagement scores than females ($M = 38.6$, $SD = .90$) ($t = 2.12$, $p = .04$). There were no significant differences in EOAQ scores for the four different group topics ($F = 1.36$, $p = .25$). Using the General Linear Model (GLM), engagement scores were

Table 3. Summary statistics of EOAQ item scores

Items	M	Median	SD
10. Reflect the kind of person I am	4.11	5.00	1.16
2. Express my creativity	4.10	5.00	1.08
7. Help me express my personal values	4.08	5.00	1.16
3. Help me achieve a sense of accomplishment	4.05	4.00	1.09
5. Give me a sense of satisfaction	4.05	4.00	1.15
4. Contribute to feeling competent	4.02	4.00	1.12
9. Have just the right amount of challenge	4.00	4.00	1.13
6. Give me a feeling of control	3.94	4.00	1.22
1. Help me take care of myself	3.89	4.00	1.27
5. Give me pleasure	3.88	4.00	1.23
EOAQ mean	4.01	4.20	.95

predicted based on both gender and topic. There were no significant main effects for gender ($F = 2.22$, $p = .14$) or topic ($F = 1.73$, $p = .16$), but, as Figure 1 shows, there were significant interaction effects between gender and topic ($F = 4.77$, $p = .003$). Female participants had their highest engagement scores for the topic of the transition to community, followed by cultural celebrations, while male participants had their highest engagement scores for the topic of interpersonal relationships, followed by cultural celebrations (Table IV). It therefore appeared that topics may be linked to different levels of engagement for each gender. Additionally 73 of the 295 completed surveys (24%) have the maximum possible total score of 50. Among the 73 EOAQ with a perfect score, 49(67%) were by male participants, and 24(33%) were female participants, further indicating a gender effect in the EOAQ scores.

One hundred and ninety-three total worksheets and artworks were collected and analysed using the AGAS. Table V displays the frequency distribution of these items by gender and according to completeness and relevance. Sixty-eight total items were collected from OTTP groups in the female units, and 125 in the male units. The majority of items collected from both groups (92% for females and 83% for males) were categorized as 76–100% complete. An even greater majority (97% for females and 95% for males) were categorized as having content that was 76–100% relevant to the topic of the group session. These results indicate a high level of engagement.

Meaningfulness of activities

The majority of participants, or 203 out of 295 (68.8%), answered the open-ended question “What part of today’s session is most meaningful to you and why?” Qualitative analysis revealed that these responses fell into five categories based on the content of the response: (1) naming an activity without anything further; (2) a comment on an activity that contained a personal reference and/or self-reflection; (3) a positive comment; (4) a neutral comment and (5) a negative comment. The PI and two research assistants then independently coded each comment in reference to these five categories. Any discrepancies among the three coders were resolved by repeated independent coding until consensus was reached. Four group topics were also recorded in the data: (1) interpersonal

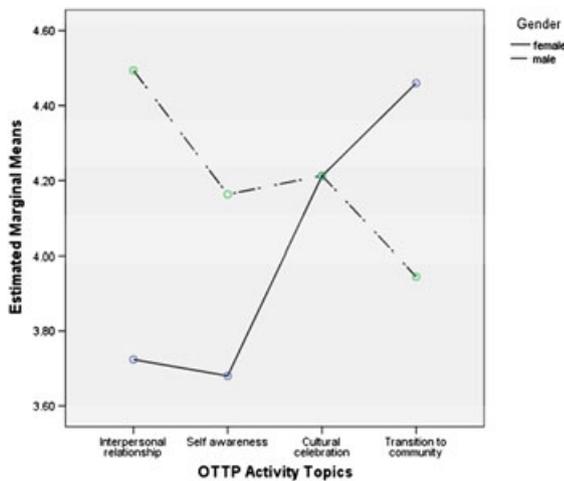


Figure 1. Profile plots of engagement scores of male and female participants in different types of activities

Table 4. Mean occupational engagement (EOAQ total) scores for gender and topic

Gender	OTTP topic	M	SD	95% CI	
				Lower bound	Upper bound
Female	Interpersonal relationships	3.72	.15	3.42	4.03
	Self-awareness	3.68	.12	3.45	3.91
	Cultural celebrations	4.21	.17	3.88	4.54
	The transition to community	4.46	.24	3.99	4.93
Male	Interpersonal relationships	4.49	.23	4.04	4.95
	Self-awareness	4.16	.13	3.91	4.41
	Cultural celebrations	4.21	.19	3.83	4.59
	The transition to community	3.95	.12	3.71	4.19

Table 5. Percentage of completeness and relevance of worksheets/artworks produced by OTPP participants by gender (N = 193)

	Completeness				Relevance			
	Female		Male		Female		Male	
	Freq	%	Freq	%	Freq	%	Freq	%
0–25	4	5.9	5	4.0	1	1.5	2	1.6
26–50	0	0	3	2.4	1	1.5	1	.8
51–75	2	2.9	13	10.4	0	0	3	2.4
76–100	62	92.2	104	83.2	66	97.1	119	95.2
Total	68	100	125	100	68	100	125	100

relationships; (2) self-awareness; (3) cultural celebrations and (4) the transition to community. Table VI displays the results of this analysis. Of the 295 surveys

collected, 115 referred to the topic of self-awareness, 73 to transition to community, 54 to cultural celebrations and 53 to interpersonal relationships.

Of the 203 written responses, 72 (35%) were coded as naming an activity. These responses were either a phrase (“talking about the different holiday,” “learning about money management,” “saying good bye to 2012 and hello to 2013”), or a term (“charades,” “card making,” “friendship bracelet”). Several responses were about spending time with the OT practitioner (“hanging out with [name]”).

More than one-half of the responses (n = 107, 53%) were coded as containing a personal reference and/or self-reflection. The topic of self-awareness generated the most personal reflections (n = 44, 41% of 107 comments). Participants reported that these activities, which related to self-identity and inspiring others, helped them to learn about themselves and gave them the opportunity to express themselves (“knowing what and who I am,” “helped me recognize my positive affirmation,” “when I got to write down who inspires me, it made me recognize who really is there for me”). The topic of interpersonal relationships generated 24 comments. Participants noted that these activities about friendship taught them useful skills (“help me with my relationship,” “identify what I want in a relationship,” “helps you to narrow the traits of your friends and qualities you find in a friend”). There were 20 comments on the transition to community, a topic that included several skills-based activities; participants noted that they learned about the value of money and how to handle it (“made me see how I really deal with the money in life,” “Money isn’t that important”). There were 19 comments on cultural celebrations, expressing self-realization and gratitude for the creative outlet that these activities relating to Thanksgiving and Mother’s Day provided (“the thankful card reminds me of how grateful I am,” “decorating the turkeys, because I got to be creative,” “making my card showed me how much I appreciated my mom and grandma,” “the part when we got to write down what we were thankful for, because we get to write what’s on our mind”).

Twenty other responses indicated that “everything” or “all” was meaningful. Two comments, “I don’t know” and “NA,” were considered neutral. Two responses stated that “nothing” was meaningful. And 92 surveys had no response to the open-ended question.

Table 6. Frequency distribution of number of comments coded across categories and OTTP topics (N = 203)

	Names an activity	Personal reference or reflection	Positive	Neutral	Negative	Total number comments	Total number surveys
Interpersonal relationships	8	24	3	1	0	36	53
Self-awareness	29	44	4	1	2	80	115
Cultural celebrations	16	19	7	0	0	42	54
The transition to community	19	20	6	0	0	45	75
Total	72	107	20	2	2	203	295

Discussion

The EOAQ mean total scores across the three JJC units were between 38.6 and 42, indicating that the youth participants were highly involved in the activities and perceived them to be meaningful (Goldberg et al., 2002).

Seventy-three of the 295 completed surveys (24%) have the maximum possible total score of 50. This high frequency of maximum scores may have significantly raised the mean scores of engagement. Two possible explanations for the maximum scoring are proposed. First, participants who marked the maximum scores for all statements may have found each statement to be true. Alternately, they may have arbitrarily marked the highest score for each statement, perhaps because they did not regard the survey seriously, or for some other reasons. Additionally the score of 50 was twice as frequent in EOAQs completed by male as female participants. This may be explained by the longer stay of male participants, who might have attended multiple OTTP sessions and contributed multiple EOAQs analysed in this study. Their positive EOAQ scores may be consistent over time, or their experiences with OTTP interventions may be improved over time aligning their EOAQ scores with those positive experiences.

The gender effect is also apparent when comparing the survey responses of male and female participants: females were more engaged in activities related to the transition to community, and males were more engaged in those about interpersonal relationships. Gender differences within the juvenile justice system have been well-studied, especially when they result from life experiences (Fagan and Wright, 2012; D. Martin et al., 2008; Millett et al., 2013). However this study did not uncover information pertaining to the youth's life experiences. The inmates' length of stay at JJC may again play a role in this gender differences. Female inmates tend to have shorter stays at the JJC,

and the topic of transition to community may be more imminent and relevant to them. Male inmates who tend to have a longer stay at JJC may become more reflective of meaningful interpersonal relationships, which are often deprived within the confined and rigid environment.

A majority of worksheets and artworks were found to be complete and have content relevant to the topic of the intervention, a result suggesting that the youth were engaged in the OTTP activities. The participants' comments also show that, overall, the youth found the majority of the play activities meaningful. They appeared to particularly enjoy hands-on activities such as card-making, bracelet-making, drawing, word puzzles, quizzes and games, frequently naming these activities in their responses. Some noted that the group activities encouraged reflection and a more positive self-image ("The thankful card reminds me of how grateful I am," "The part when we got to write down what was thankful for, because we get to write what is on our mind"). Some also expressed that they value their relationships with loved ones ("Drawing for my mom and my little brother," "writing for my boyfriend"). Participants commented that sharing their experiences during the play activities allowed them to express their feelings, hear about others' situations, and gain a better understanding of self. Some participants further noted that the activities encouraged them to think about making changes in their lives ("the activity made me think about myself and daily choices," "to express what I want to become and do in life").

The intervention topics of self-awareness, interpersonal relationships, cultural celebrations and the transition to community appeared popular among youth participants of both genders. The popularity of these topics, especially self-awareness and interpersonal relationships, is consistent with psychosocial theories of adolescent development (Erikson, 1959). As they prepare for the transition to adulthood,

adolescents are working to develop their own identities and positive self-concept, often through interpersonal relationships and participation in social and cultural events (Erikson, 1959; Jensen, 2011; Shanahan et al., 2005). Youth whose life events have led to incarceration may face significant challenges in this regard, especially if a lack of healthy relationships with adults has negatively impacted their self-concept. Moreover, their transition to adulthood is complicated, as they must first transition back to home and community. Structured play activities that address these developmentally appropriate topics naturally capture these youth's interests and may provide them an opportunity to acknowledge their self-worth, recognize positive relationships and create a vision for the future (Henley et al., 2008).

Youth inmates are largely unable to engage in self-selected meaningful activities (Farnworth, 2000; Gruhl, 2009). Occupational therapy recognizes that engagement in meaningful activities and occupations promotes health and well-being (AOTA, 2014). During the adolescent years, when life skills are learned through participation, youth in detention may be denied the chance to develop such skills. OTTP gave the youth in this study the rare opportunity to participate in play activities that they perceive as meaningful while also learning life skills.

Clinical implications

The results of this study suggest several clinical considerations for occupational therapists:

- 1 Play is an important occupation for adolescents, and structured play, such as organized games, sports and craft activities, may be instrumental to the healthy development of children and adolescents (Farnworth, 2000; Henley et al., 2008).
- 2 Occupational therapy may benefit at-risk youth, especially those in detention, by promoting health and wellness through play activities involving developmentally appropriate topics such as self-awareness, interpersonal relationships, cultural celebrations and the transition to community.
- 3 Structured play activities may help youth in detention acquire social skills, learn problem-solving and practice teamwork (Henley et al., 2008), all necessary for the transition back to home and community.

Limitations and recommendations

The study had several limitations. Exploratory in nature, the study did not undertake a systematic examination of the effectiveness of the OTTP interventions. The unavailability of demographic, clinical and personal background information on participants ruled out an in-depth analysis of the relationship between these factors and other outcomes. The actual number of participants who completed the survey is unknown, impacting the reliability of the data analysed. The measurement tools, EOAQ and AGAS, lacked psychometric testing to assure robust reliability and validity. The evidence of gender effects could not be adequately explained. It may be related to the participants' length of stay in JJC. Finally, the setting and vulnerable population pose significant challenges in the use of equipment, materials and space, and limits the data that can be collected from youth participants.

The evidence of youth participants' engagement in play activities as revealed by this study supports that the youth participants were actively engaged in the OTTP group activities. Their active engagement might have encouraged the youth participants to acquire skills and knowledge necessary for healthier and more productive lives as intended by the group interventions. The results of the study may assist OTTP personnel in advocating to the justice authority for more OT interventions to serve the detained youth. Future studies may examine youth participants' acquisition of life skills over time, especially skills related to self-awareness, interpersonal relationships and the transition to community. The link between occupational engagement in OTTP play activities and acquisition of healthful life skills that may lead to reduction in recidivism is a valuable focus for future study. The potential gender-related preferences for specific topics deserve further investigation in order to maximize youth participants' engagement in the therapeutic process. Furthermore studies comparing the youth's engagement in OTTP interventions to other group interventions in JJC may yield more robust and useful information.

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REFERENCES

- Ainley M, Ainley J (2011). Student engagement with science in early adolescence: the contribution of enjoyment to student's continuing interest in learning about science. *Contemporary Educational Psychology* 36(1): 4–12.
- AOTA (2014). *Occupational Therapy Practice Framework: Domain and Process* (3rd edn.,). Bethesda AOTA.
- Arnett JJ (2001). Conceptions of the transition to adulthood: perspectives from adolescence through midlife. *Journal of Adult Development* 8(2): 133–143.
- Arnett JJ (2014). Presidential address: the emergence of emerging adulthood: a personal history. *Emerging Adulthood* 2(3): 155–162.
- Bazyk S, Bazyk J (2009). Meaning of occupation-based groups for low-income urban youths attending after-school care. *American Journal of Occupational Therapy* 63(1): 69–80.
- Clair M, Stein LA, Martin R, Barnett NP, Colby SM, Monti PM, Lebeau R (2011). Motivation to change alcohol use and treatment engagement in incarcerated youth. *Addictive Behaviors* 36(6): 674–680.
- Dawes NP, Larson R (2011). How youth get engaged: grounded-theory research on motivational development in organized youth programs. *Developmental Psychology* 47(1): 259–269.
- A Day in the Life of Detention. (2008–2016). from <http://www.clallam.net/juvenileservices/dayindetention.html>
- DeForest D, Watts JH, Madigan MJ (1991). Resonance in the model of human occupation: a pilot study. *Occupational Therapy in Mental Health* 11(2–3): 57–71.
- Eakman AM, Carlson ME, Clark FA (2010). Factor structure, reliability, and convergent validity of the Engagement in Meaningful Activities Survey for older adults. *OTJR: Occupation, Participation and Health* 30(3): 111.
- Erikson EH (1959). Identity and the life cycle: selected papers. *Psychological Issues* 1: 1.
- Fagan AA, Wright EM (2012). The effects of neighborhood context on youth violence and delinquency: does gender matter? *Youth Violence and Juvenile Justice* 10(1): 64–82.
- Faigel GC (1975). The adolescent with a learning problem. Experience and insight with delinquent boys. *Acta Paediatrica Scandinavica. Supplement* (256): 56–59.
- Fanchiang S-P, Snyder C, Zobel-Lachiusa J, Loeffler CB (1990). Sensory integrative processing in delinquent-prone and non-delinquent-prone adolescents. *American Journal of Occupational Therapy* 44(7): 630–639.
- Farnworth L (2000). Time use and leisure occupations of young offenders. *American Journal of Occupational Therapy* 54(3): 315.
- Fave AD, Massimini F (2005). The investigation of optimal experience and apathy: developmental and psychosocial implications. *European Psychologist* 10(4): 264.
- Foran AC (2011). Learning from experience: shared constructs in virtual reality and occupational therapy. *International Journal of Therapy & Rehabilitation* 18(7): 362.
- French R, Reardon M, Smith P (2003). Engaging with a mental health service: perspectives of at-risk youth. *Child & Adolescent Social Work Journal* 20(6): 529–548.
- Goldberg B, Brintnell ES, Goldberg J (2002). The relationship between engagement in meaningful activities and quality of life in persons disabled by mental illness. *Occupational Therapy in Mental Health* 18(2): 17.
- Gourley M (2000). Careers. High-risk youths receive OT intervention. *OT Practice* 5(11): 9–10.
- Gruhl KLR (2009). The politics of practice: strategies to secure our occupational claim and to address occupational injustice. *New Zealand Journal of Occupational Therapy* 56(1): 19–26.
- Hafen CA, Allen JP, Mikami AY, Gregory A, Hamre B, Pianta RC (2012). The pivotal role of adolescent autonomy in secondary school classrooms. *Journal of Youth and Adolescence* 41(3): 245–255.
- Hardison J, Llorens LA (1988). Structured craft group activities for adolescent delinquent girls. *Occupational Therapy in Mental Health* 8(3): 101–117.
- Helfrich CA, Aviles AM, Badiani C, Walens D, Sabol P (2006). Life skill interventions with homeless youth, domestic violence victims and adults with mental illness. *Occupational Therapy in Health Care* 20(3–4): 189–207. DOI:10.1080/J003v20n03_12.
- Henley R, Schweizer I, De Gara F, Vetter S (2008). How psychosocial sport & play programs help youth manage adversity: a review of what we know & what we should research. *International Journal of Psychotherapy* 12(3): 53–61.
- Hess LM, Bundy AC (2003). The association between playfulness and coping in adolescents. *Physical & Occupational Therapy in Pediatrics* 23(2): 5–17.
- Jensen LA (2011). Navigating local and global worlds: opportunities and risks for adolescent cultural identity development. *Psychological Studies* 56(1): 62–70. DOI:10.1007/s12646-011-0069-y.
- Ketteridge A, Boshoff K (2008). Exploring the reasons why adolescents participate in physical activity and identifying strategies that facilitate their involvement in such activity. *Australian Occupational Therapy Journal* 55(4): 273.
- Kim H, Munson MR, McKay MM (2012). Engagement in mental health treatment among adolescents and young

- adults: a systematic review. *Child & Adolescent Social Work Journal* 29(3): 241–266.
- Mallinson T, Mahaffey L, Kielhofner G (1998). The occupational performance history interview: evidence for three underlying constructs of occupational adaptation. *Canadian Journal of Occupational Therapy/Revue Canadienne D'Ergothérapie* 65(4): 219–228.
- Martin CV, Rash JD (1978). The therapeutic community in an open ward psychiatric hospital as an alternative for incarceration for juvenile offenders. *Corrective & Social Psychiatry & Journal of Behavior Technology, Methods & Therapy* 24(2): 51–55.
- Martin D, Martin M, Dell R, Davis C, Guerrieri C (2008). Profile of incarcerated juvenile comparison of male and female offenders. *Adolescence* 43(171): 607–622.
- Miller S, Reid D (2003). Doing play: competency, control, and expression. *Cyberpsychology & Behavior: The Impact of the Internet, Multimedia and Virtual Reality on Behavior and Society* 6(6): 623–632.
- Millett LS, Kohl PL, Jonson-Reid M, Drake B, Petra M (2013). Child maltreatment victimization and subsequent perpetration of young adult intimate partner violence: an exploration of mediating factors. *Child Maltreatment* 18(2): 71–84.
- Morgan WJ (2010). What, exactly, is occupational satisfaction? *Journal of Occupational Science* 17(4): 216.
- O'Connell M, Farnworth L (2007). Occupational therapy in forensic psychiatry: a review of the literature and a call for a united and international response. *British Journal of Occupational Therapy (College of Occupational Therapists Limited)* 70(5): 184–191 188p.
- O'Connell M, Farnworth L, Hanson EC (2010). Time use in forensic psychiatry: a naturalistic inquiry into two forensic patients in australia. *The International Journal of Forensic Mental Health* 9(2): 101–109. DOI:10.1080/14999013.2010.499558.
- Pinto JD, Hahn MS (1978). Sao Paulo—Brasil: the involvement of occupational therapy with minority groups. *WFOT Bulletin* 2: 12–14.
- Piper BJ, Le Grow D (1956). Tutoring for behavioral delinquents. *American Journal of Occupational Therapy* 10: 147–149.
- Potasz C, Varela MJVD, Carvalho LCD, Prado LFD, Prado GFD (2013). Effect of play activities on hospitalized children's stress: a randomized clinical trial. *Scandinavian Journal of Occupational Therapy* 20(1): 71–79.
- Primeau LA (2008). AOTA's societal statement on play. *American Journal of Occupational Therapy* 62(6): 707–708.
- Reid D (2010). Mindfulness and flow in occupational engagement: presence in doing. *Canadian Journal of Occupational Therapy* 78(1): 50–56.
- Reisinger HS, Bush T, Colom MA, Agar M, Battjes R (2003). Navigation and engagement: how does one measure success? *Journal of Drug Issues* 33(4): 777.
- Rohde P, Jorgensen JS, Seeley JR, Mace DE (2004). Pilot evaluation of the Coping Course: a cognitive-behavioral intervention to enhance coping skills in incarcerated youth. *Journal of The American Academy of Child and Adolescent Psychiatry* 43(6): 669–676.
- Roush DW (1993). Juvenile detention programming. *Federal Probation* 57(3): 20–33.
- Schwartz SJ, Cote JE, Arnett JJ (2005). Identity and agency in emerging adulthood: two developmental routes in the individualization process. *Youth & Society* 37(2): 201–229.
- Shanahan MJ, Erickson LD, Bauer DJ (2005). One hundred years of knowing: the changing science of adolescence, 1904 and 2004. *Journal of Research on Adolescence* 15(4): 383–394. DOI:10.1111/j.1532-7795.2005.00103.x.
- Snyder C, Clark F, Masunaka-Noriega M, Young B (1998). Los Angeles street kids: new occupations for life program. *Journal of Occupational Science* 5(3): 133–139.
- Stav WB, Hallenen T, Lane J, Arbesman M (2012). Systematic review of occupational engagement and health outcomes among community-dwelling older adults. *American Journal of Occupational Therapy* 66(3): 301–310.
- Sturgess J (2003). A model describing play as a child-chosen activity: is this still valid in contemporary Australia? *Australian Occupational Therapy Journal* 50(2): 104–108.
- Wimpenny K, Savin-Baden M, Cook C (2014). A qualitative research synthesis examining the effectiveness of interventions used by occupational therapists in mental health. *British Journal of Occupational Therapy* 77(6): 276–288. DOI:10.4276/030802214x14018723137959.