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Implementation of occupational therapy within early intervention in psychosis services: Results from a national survey

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Abstract

Aim: Occupational therapy plays an important role in fostering community participation in areas such as education, employment, leisure, and social relationships, yet its added value within early intervention in psychosis services, especially in the United States, remains poorly understood. The purpose of this research was to conduct a national survey of early intervention in psychosis programs to: (1) understand the role and unique contributions of occupational therapists to early intervention teams, and (2) identify barriers and supports to the implementation of occupational therapy services within these programs.

Methods: Fifty-one senior leaders from U.S.-based early intervention in psychosis programs participated in the national survey. The survey consisted of a series of closed and open-ended questions related to program staffing, the presence of specific services that fall within the occupational therapy scope of practice, and implementation barriers and supports.

Results: Despite there being strong interest in employing occupational therapists, a small proportion of programs (31%) reported having them on staff. Occupational therapists supported clients across multiple life areas and were significantly more likely than other team members to promote daily living activities (e.g., cooking) and to address sensory processing needs and challenges. Implementation was influenced by environmental/organizational and staff factors; the primary barrier was funding.

Conclusions: Findings support the role occupational therapists may play in facilitating the community participation of clients of early intervention services, but significant barriers to implementation of occupational therapy services remain. Additional research is needed to further identify the impact of occupational therapy services within the early intervention model.

KEYWORDS
community participation, evidence-based practice, mental health services, psychotic disorders, young adults

Elizabeth C. Thomas and Halley Read contributed equally to this work.

1 | INTRODUCTION

Emerging adulthood, the developmental period between the ages 18 and 25 years (Arnett, 2000), is characterized by exploration of adult life roles. Community participation, defined as involvement in daily living activities, social relationships, education and employment, and religious, civic, and leisure engagement (World Health Organization, 2001), facilitates this process (Martel & Fuchs, 2017) and contributes to identity development, goal-directed behaviour, and feelings of competence and self-efficacy (Bandura & Schunk, 1981; Berzonsky, 2003; Holland & Lachicotte, 2007).

The period of emerging adulthood is also one of relatively high risk for the onset of serious mental illnesses, including psychotic disorders (Solmi et al., 2021). This is especially concerning because mental health-related challenges can interrupt community participation, which can have detrimental impacts on development and long-term health outcomes (Embrett et al., 2015). For example, a large U.S.-based study demonstrated a significantly higher proportion of young people with first-episode psychosis who were unemployed compared to the general population (65% vs. 15%) (Ramsay et al., 2012). Young people with serious mental illnesses have reported significant barriers to participation in intimate relationships and leisure (Brooke et al., 2020; Pillay et al., 2018). Social contacts are also reduced in this population (Raghavan et al., 2017), which may be partially due to fewer opportunities for participation in community-based activities (Gardner et al., 2017). These findings exist even though young people express that productive, leisure, and social activities are important to them (Thomas et al., 2017).

Early intervention in psychosis (EIP) programs provide developmentally appropriate services to young adults experiencing first-episode psychosis to help them move forward with reaching their life goals. The efficacy of EIP services related to immediately improving work and school participation has been demonstrated in multiple randomized controlled trials (Kane et al., 2016; Srihari et al., 2015). However, longer-term impacts on occupational functioning (i.e., daily living, work, and school participation) have been less impressive (Chan et al., 2019). Furthermore, little is known about how EIP services promote community participation in areas other than education and employment (Thomas et al., 2022). Continued enhancement of early intervention models, including integration of additional services and supports, may be needed to improve outcomes.

Researchers have argued that occupational therapy (OT) adds value to EIP, particularly by impacting occupational and social functioning and participation in meaningful activities (Read et al., 2018). OT practitioners have specialized expertise in identifying and addressing personal and environmental obstacles to community participation to support those with mental illnesses with engaging in valued life roles (Arbesman & Logsdon, 2011). Systematic reviews of interventions falling under the scope of OT practice (e.g., supported employment and education, skills training, cognitive interventions) have shown that they improve employment, education, social engagement, daily living, and other community participation outcomes among individuals with serious mental illnesses (D'Amico et al., 2018; Noyes et al., 2018; Read et al., 2018). While OT services have long been a part of EIP internationally (Fisher & Savin-Baden, 2001; Lalevic et al., 2019; Parlato et al., 1999), they are less common in the United States (Wen, 2020). A deeper understanding of how OT can be effectively implemented within U.S.-based EIP programs is needed. Therefore, the purpose of this study was to conduct a national survey of EIP programs to: (1) understand the role and unique contributions of OT practitioners to early intervention teams, and (2) identify barriers and supports to the implementation of OT services within these programs.

2 | METHODS

Senior leaders (i.e., program directors or other team members with substantial knowledge of program policies, practices, and procedures) from U.S.-based EIP programs were invited to participate in the national survey. Programs employing and not employing OT practitioners were eligible, especially to learn about implementation supports and barriers. Program contact lists were obtained from entities tracking the emergence of EIP programs, such as the Early Assessment and Support Alliance (EASA), and email invitations with a direct link to the survey were sent to these contacts. Email invitations were also distributed via listservs, social media sites, and special interest groups relevant to national EIP programs (e.g., PEPPNET). Up to three reminder emails were sent after initial invitation to increase survey response rates.

Webhosting of the survey occurred through Redcap (https://www.project-redcap.org/). A definition of OT was provided at the beginning of the survey, based on the Occupational Therapy Practice Framework (OTPF-4) (American Occupational Therapy Association, 2020). Survey questions consisted of closed and open-ended questions related to program staffing (e.g., "Does your EIP program employ an Occupational Therapy practitioner(s)?" "Is there a team member (other than an OT) that provides services as described in the definition above?"), the presence of specific services that fall within the OT scope of practice (e.g., "Please identify which of the following are provided by an OT/other team member at your site. Check all that apply."), and implementation barriers and supports (e.g., "Does your program experience barriers (facilitators) to integrating OTs on the team?" If yes: "What barriers (facilitators) do you observe?"). Questions were developed based on input from an 11-member advisory board comprised of OT practitioners with experience working with individuals with first-episode psychosis and current or past participants of EIP or other youth mental health programs. Questions about OT services were also informed by the OTPF-4 (American Occupational Therapy Association, 2020) and EASA practice guidelines (Melton et al., 2013). The survey was piloted in two EIP programs, with minor modifications to language prior to widespread dissemination. The survey remained open from March to July 2021.

Closed-ended questions were analysed using descriptive statistics. Due to the small sample size, Fisher's exact tests were conducted to examine potential differences in services and supports provided by

OT practitioners versus other team members. Open-ended questions were analysed qualitatively using thematic analysis (Bradley et al., 2007). The first author read all responses to create a codebook for each open-ended question. Then, using the Constant Comparison Method (Glaser & Strauss, 1967), two research assistants independently coded the data, discussing all differences to consensus. The first author served as a tiebreaker in the few cases in which consensus could not be reached.

This study was approved by the institutional review board of the researchers' academic institution and conformed to ethical standards set forth by the Declaration of Helsinki. Participants reviewed an informed consent form and indicated their intent to participate in the study prior to gaining access to the survey. Upon survey completion, they were invited to provide their contact information to be entered into a raffle to win gift card honoraria for their time.

3 | RESULTS

3.1 | Participant characteristics

In total, 69 individuals responded to the survey. Of these, 18 were excluded from the analyses due to missing data. The final sample consisted of 51 respondents. As shown in Table 1, most respondents were female, had served in their roles between 1–3 years, and had a graduate or professional degree. Programs from 18 states were represented, with the largest percentages within the West and Northeast regions.

TABLE 1 Respondent demographics ($N = 51$)

Variable	N (%)
Gender	
Men	9 (18)
Women	42 (82)
Role in EIP[a] Program	
State-level leadership (e.g., state director)	2 (4)
Program-level leadership (e.g., director/manager, supervisor, team lead)	36 (71)
Program staff (e.g., therapist, supported employment and education specialist, occupational therapist)	5 (10)
Other (e.g., trainer)	4 (8)
Missing	4 (8)
Length of time in role	
Less than 1 year	2 (4)
1–3 years	22 (43)
4–6 years	18 (35)
Greater than 6 years	9 (18)
Education	
Associates/vocational degree	2 (4)
Bachelor's degree	3 (6)
Some graduate or professional school training	2 (4)
Graduate or professional degree	43 (84)
Missing	1 (2)
Practice location	
West	23 (45)
Midwest	6 (12)
Southwest	1 (2)
Northeast	13 (25)
Southeast	6 (12)
Missing	2 (4)

[a]EIP, Early Intervention in Psychosis program.

3.2 | Role of OT practitioners on EIP teams

Sixteen out of the 51 programs (31%) employed an OT practitioner. Most were employed full time (63%), while 19% were employed part time, and 19% were consultants or contractors. Of the programs not employing an OT, 19 (54%) indicated having at least one team member who provided services comparable to what an OT practitioner might provide. These team members included case managers, peer support workers, therapists/clinicians, supported employment and education specialists or vocational specialists, and others (e.g., psychiatric rehabilitation practitioners, recovery coaches).

Most OT practitioners (69%) administered assessments or evaluations as part of their role. These included measures of occupational performance (e.g., Occupational Self-Assessment [OSA]) (Baron et al., 2006); (instrumental) activities of daily living (e.g., AOTA Occupational Profile) (American Occupational Therapy Association, 2017); educational needs (e.g., Response to Intervention metrics); sensory experiences (Adolescent/Adult Sensory Profile [AASP]) (Brown & Dunn, 2002); motor and praxis skills (e.g., Motor-Free Visual Perception Test [MVPT]) (Calarusso & Hammill, 1972); cognition (e.g., Montreal Cognitive Assessment [MoCA]) (Nasreddine et al., 2005); and habits, routines, roles, and rituals (e.g., Texas Functional Living Scale [TFLS]) (Cullum et al., 2001).

As shown in Table 2, OT practitioners were significantly more likely than other team members to support EIP clients with daily living activities (e.g., dressing, bathing, cooking) and to address sensory processing needs and challenges. Other team members were more likely to support clients with managing medication regimens and side-effects. There were no other significant differences in services and supports provided across disciplines.

3.3 | Implementation barriers and supports

Table 3 presents results from open-ended questions related to implementation barriers and supports. Among programs employing OT practitioners, 69% indicated they were included as part of a fidelity model, practice guideline, or requirement by the program itself. Other reasons for employing OTs included recognition that they contribute uniquely to the team and support EIP clients in specific ways. OT

TABLE 2 Comparison of services and supports provided by OT practitioners versus other team members (Fisher's exact tests)

Variable	*N* (%) *OT*[a]	*N* (%) *OTM*[b]	*p*[c]
How does the OT/other team member support client engagement in life?			
Daily activities (e.g., dressing, bathing, cooking, etc.)	12 (80)	6 (32)	**.007**
Community access	12 (80)	16 (84)	1.000
Leisure/recreation	13 (87)	13 (68)	.257
Spirituality/religious activities	5 (33)	6 (32)	1.000
Social participation	13 (87)	17 (90)	1.000
Civic engagement	6 (40)	6 (32)	.724
Productive roles (e.g., volunteering, caregiving)	12 (80)	12 (63)	.451
Education	11 (73)	18 (95)	.146
Employment	10 (67)	16 (84)	.417
Other	3 (20)	3 (16)	1.000
What treatment modalities does the OT/other team member provide?			
Individual therapy	14 (93)	18 (95)	1.000
Group therapy	12 (80)	15 (79)	1.000
Clinical team consultation	11 (73)	17 (89)	.370
What services are provided by the OT/other team member at your site?			
Direct services, assessments, and/or consultation related to educational supports for clients (e.g., individualized education plans [IEPs] or 504 plans)	12 (80)	14 (74)	1.000
Direct services and/or consultation related to vocational supports/services	10 (67)	15 (79)	.462
Assessing cognition as it relates to function	13 (87)	12 (63)	.240
Addressing cognitive needs with the provision or reduction of visual, tactile, and/or auditory input to support performance	11 (73)	8 (42)	.092
Addressing sensory processing needs/challenges	11 (73)	6 (32)	**.037**
Addressing symptom management	12 (80)	18 (95)	.299
Addressing medication management	11 (73)	19 (100)	**.029**
Helping individuals manage medication side-effects	6 (40)	17 (89)	**.004**
Assessing activities of daily living and other functional routines	12 (80)	15 (79)	1.000
Offering occupation-based groups	8 (53)	7 (37)	.489
Developing profiles that describe engagement in daily life, barriers to engagement and strengths the person has	10 (67)	11 (58)	.728
Conducting activity/performance analyses	9 (60)	5 (26)	.080
Adapting tasks (upgrading or downgrading)	9 (60)	9 (47)	.510
Using experiential strategies to help individuals develop living skills	11 (73)	12 (63)	.715
Adapting the environment to increase independence	11 (73)	10 (53)	.296
Providing consultation to other EIP team members in supporting clients in any of these areas	13 (87)	13 (68)	.257
Other	1 (7)	1 (5)	1.000

[a]OT, occupational therapist.
[b]OTM, other team member.
[c]Two-tailed.

TABLE 3 Implementation barriers and supports (open-ended questions)

Type of team	Survey question	Themes	Example quotes
Teams with an OT practitioner	In your own words, what are the main reasons for including an OT practitioner on your team?	OTs contribute uniquely to the team	*"Covers areas of practice in which other disciplines are untrained and unprepared."*
		Due to an expectation/requirement by the program	*"Included in [blinded] model…included with program budget."*
		To support clients in specific ways	*"To provide strengths based, problem-solving oriented treatment. To improve occupational participation, independence, and overall quality of life."*
	How are OT services funded?	Insurance	*"Medicaid, private insurance"*
		Grant support	*"Outside grants"*
		Local/State/Federal appropriated funds	*"Mental Health Services Act (MHSA)"* *"[Blinded] County Behavioral Health"*
		Internal funding available through the organization/agency	*"OT salary is sustained through the broader outpatient budget, which makes up revenue with other services* (i.e., *individual therapy and medication management)"*
	Please describe barriers to collecting data to track outcomes for those that receive OT services.	Lack of outcome measures specific to OT	*"An outcome tool that is specific to function and accurately reflects OT services has not been identified."*
		Assessments dictated by county/state	*"Data is collected for all clients on county-specific outcomes every 6 months, but these do not indicate which services a client is receiving and would be difficult to identify how engaged the client was in OT (ex-consult basis, bimonthly* vs. *weekly sessions, no shows, etc)."*
		Inconsistent use of OT-specific measures	*"Inconsistent use of COPM to track outcomes."*
		Difficulty isolating the effects of OT given team-based care	*"Role blending of the OT, so not all goals are OT specific."*
		Logistical issues	*"Time and person power."*
	Describe barriers to integrating OTs on the team.	Lack of funding/reimbursement	*"Funding barriers. Lack of OT reimbursement."*
		High OT salary	*"OT salary is high due to outdated budgets."*
		Location	*"Location makes it very hard to hire an OT."*
		Documentation barriers	*"The electronic medical record software is not designed for OT services/documentation."*
		Challenges with recruitment	*"Recruitment and availability, higher salary/usually not funded as full-time in our programs."*
		Limited awareness of the value of OTs by non-OTs in leadership	*"Limited awareness of impact of OTs by non-OTs who make structure and hiring decisions."*

(Continues)

TABLE 3 (Continued)

Type of team	Survey question	Themes	Example quotes
	What facilitators that support, promote, or enhance the integration of OTs into your team do you observe?	Opportunities for networking/consultation with other OTs	*"Cross-site network of OTs/mentoring."*
		Requirement by program	*"Inclusion in fidelity model."*
		Training/education to non-OT team members about role of OT	*"OTs used to share the results and recommendations stemming from their assessments in team meeting, which helped to educate other team members about what OT does and how to implement their findings to support the client."*
		Collaboration/communication between OT and other team members	*"Strong collaboration and communication between disciplines."*
		Advocacy for OT within team/organizational leadership	*"Strong advocacy for OT by director of the program – a psychiatrist."*
		Opportunities for OT students	*"OT now taking OT students."*
		Having an EIP model inclusive of different kinds of team members	*"Transdisciplinary model."*
		Role clarity among team members	*"Well-defined roles."*
Teams without an OT practitioner	What might get in the way of employing an OT practitioner on your team?	Lack of funding/reimbursement	*"Billing and reimbursement."*
		Perceived duplication of roles	*"Duplication of roles."*
		Not consistent with fidelity model	*"Not part of the [blinded] Model."*
		Challenges with recruitment	*"From my understanding it has been difficult to find an OT that wants to work in our program."*
		Lack of capacity to support OT	*"We don't have the internal expertise, training, or supervisors who could effectively support OT."*
		Environmental circumstances	*"COVID."*
		Lack of support from leadership	*"Leadership buy in (feeling tasks are already being addressed by other disciplines)."*
		Location	*"The ability to fill that position in a rural county."*

services were funded via a variety of sources, including insurance, grant support, local/state/federal appropriated funds, and internal funding available through the organization/agency. While 63% of programs reported providing OT practitioners with training related to working with people experiencing first-episode psychosis, 50% indicated that OTs were provided with OT-specific training and/or supervision. Only 31% of programs reported tracking specific outcomes for clients receiving OT services; barriers to assessment included lack of outcome measures specific to OT; assessments dictated by county/state; inconsistent use of OT-specific measures; difficulty isolating the effects of OT given team-based care; and logistical issues (e.g., lack of time and other resources needed for evaluation). The most frequently reported barrier to integrating OT practitioners on EIP teams was funding; other barriers included: relatively high OT salary; location; documentation barriers; challenges with recruitment; and limited awareness of the impact of OTs by non-OTs in leadership. Facilitators to OT integration included opportunities for networking/consultation with other OTs; inclusion of OT as a requirement by the program; training/education to non-OT team members about the role of OT; strong collaboration/communication between OT and other team members; advocacy for OT within team/organizational leadership; opportunities for OT students; having an EIP model inclusive of different kinds of team members; and role clarity among team members.

Of those programs not employing an OT practitioner, the most commonly perceived barrier to employment was also funding. Other barriers included perceived duplication of roles; inconsistency with the program's fidelity model; challenges with recruitment; lack of capacity of the program to support an OT; environmental circumstances; lack of support from leadership; and location. Nevertheless, there appeared to be strong interest in employing OT practitioners if these barriers were not present (on a scale of 0–100 with higher scores indicating greater interest, the mean interest rating was 84.34 [SD = 18.32]).

4 | DISCUSSION

Given its focus on improving community participation, OT may be especially useful for EIP programs to consider as they seek to expand their array of services to holistically respond to the needs of young adult clients. This study addresses an important knowledge gap by increasing understanding of how OT practitioners may contribute uniquely to EIP teams in the United States and factors influencing implementation of OT services.

Although a small proportion of programs employed OT practitioners, there appeared to be widespread recognition of their value. It was acknowledged that OTs possess a distinctive skill set, making them well-equipped to target client outcomes such as occupational participation, independent living, and quality of life.

Findings support the role that OT practitioners may play in facilitating the community participation of EIP clients. According to respondents, a significant proportion of OT practitioners supported clients across multiple life areas, especially with community access, leisure and recreation, social participation, productive roles (i.e., volunteering, caregiving), and education. OT practitioners were also more likely than other team members to promote engagement in daily living activities. To do this, many offered services such as facilitating educational supports, assessing and addressing cognitive and sensory processing needs, conducting functional assessments, supporting symptom management, supporting living skills and independence through use of experiential strategies and environmental adaptations, and providing consultation to other team members. OT practitioners also administered a variety of assessments related to outcomes of interest to the profession (e.g., occupational performance). It is important to note that approximately half of programs without OT practitioners did not have another team member that provided comparable services. These findings bolster the unique contributions of OTs to EIP teams.

Although our survey did not assess use of specific evidence-based practices and cannot answer questions about the effectiveness of services provided by OT practitioners versus other team members, findings encourage use of empirically supported interventions in the areas addressed by OTs. As has been suggested by others, these interventions may include supported employment and education (specifically following the evidence-based Individual Placement and Support model [Bond, 1998]), cognitive remediation, and occupation-based and psychoeducational interventions focused on daily living activities and social participation (D'Amico et al., 2018; Noyes et al., 2018; Read et al., 2018). Additional research is needed to clarify specific roles that OT practitioners may have in delivering these interventions within the context of team-based EIP services.

Respondents provided important insights into considerations for implementing OT services. Consistent with implementation science models such as the Consolidated Framework for Implementation Research (Damschroder et al., 2009), factors influencing implementation ranged from environmental and organizational factors to staff knowledge and communication. Programs appearing most successful at implementation tended to include OT as part of a fidelity model or practice guideline, have leadership buy-in, and provide opportunities for interdisciplinary collaboration which resulted in greater appreciation of OT as a unique but complementary profession.

The primary implementation barrier, noted by programs with and without OT practitioners, was funding. Other barriers, such as limited awareness of the value of OT by leadership/decision-makers, likely impact funding. Therefore, advocacy efforts at state government levels to include OT practitioners in the definitions of who can deliver mental health services (e.g., qualified mental health professionals) is needed (Wilburn Hoss et al., 2021). As an illustration of the effectiveness of such advocacy, Virginia changed the definition of mental health practitioner to include OT after a strong effort by local, state and national OT practitioners and advocates in 2017 (American Occupational Therapy Association, 2017). This example demonstrates that a collective effort is needed to create change. Specifically, EIP team members working alongside OT practitioners could advocate for changing state rules regarding the definition(s) of who is a mental health professional.

Another strategy to overcome funding issues is partnership with academic institutions to build a presence and capture the efficacy of OT within EIP programs. For example, DeAngelis et al. (2019) utilized a collaborative OT faculty/student fieldwork model for community interventions within a nonprofit organization. The organization paid the university 8 h a week throughout the academic year for a licensed OT/faculty member to provide onsite supervision while two OT students provided individual therapy, consultative and group interventions. Areas addressed by the OT program included coping strategies, education, healthy habits and routines development, sleep hygiene, relapse prevention, anger, financial, and medication management, and educational/vocational goals. Another potential university-based opportunity is partnership with OT doctoral capstone students, who could collaborate with an EIP program to capture the efficacy of OT services. Beker and DeAngelis (2021) captured positive outcomes using the doctoral capstone model within a permanent supportive housing organization that served young adults with a history of homelessness who had aged out of foster care.

Several limitations to this study merit consideration. The response rate was relatively low and thus findings may not be representative of all EIP programs in the United States. Further, while a definition of OT services was provided we did not offer a description of each type of OT service, which may have led to an underestimation of OT activities or an overestimation of activities by team members other than an OT, especially among respondents without an OT background. Nevertheless, this study provides a foundation for future research on the implementation and effectiveness of OT within EIP.

4.1 | Conclusions

Occupational functioning and community participation are vital outcomes of EIP care and contribute to the overall recovery process. This study suggests that OT practitioners have the relevant skills and tools to promote growth in addressing these areas as part of the EIP team-based approach. Findings show that OT practitioners can assist individuals with a wide variety of functional areas, sometimes addressed by various staff, thus potentially serving as a cost-effective member of an EIP team. Nevertheless, themes emerged pointing to significant extant barriers to incorporating OT practitioners into EIP teams, despite interest in the position, due to factors such as funding issues, lack of training and supervision, and absence of uniformity in use of OT specific assessment and outcome measures. This study shows the promise of OT, however additional research is needed to further identify the impact of OT services within the EIP model, especially long-term (post discharge) outcomes. This survey also suggests a need for future research on *how* services may be provided differently by OT versus non-OT practitioners. This could support the value added of having skilled OT practitioners and why they should be included and paid their worth. This research should be considered in large scale national efforts as it aligns with the purpose of improving and expanding existing EIP best practices in the United States (https://nationalepinet.org/).

The current youth mental health crisis (U.S. Surgeon General's Advisory, 2021) indicates a projected increase in youth seeking EIP care, which results in an increased need for a skilled workforce. Since the inception of the OT profession in 1917 (Jacobs, 2012), OT practitioners have worked in mental health settings using evidence-based practice to support clients with an array of mental health diagnoses, including psychosis. In the future, we hope to see this shift into EIP models as well through additional funding, research, and inclusion of OT in EIP teams to promote recovery, enhance quality of life, and foster successful community participation.

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CONFLICT OF INTEREST

The authors declare no conflicts of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author, [E.C.T.], upon reasonable request.

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