Occupational Therapy Interventions for Adults Living With Serious Mental Illness

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Occupational therapy practitioners have education, skills, and knowledge to provide occupational therapy interventions for adults living with serious mental illness. Evidence-based interventions demonstrate that occupational therapy practitioners can enable this population to engage in meaningful occupations, participate in community living, and contribute to society. Systematic review findings for occupational therapy interventions for adults living with serious mental illness were published in the September/October 2018 issue of the *American Journal of Occupational Therapy* and in the *Occupational Therapy Practice Guidelines for Adults Living With Serious Mental Illness*. Each article in the Evidence Connection series summarizes evidence from the published reviews on a given topic and presents an application of the evidence to a related clinical case. These articles illustrate how research evidence from the reviews can be used to inform and guide clinical decision making. Through a case story, this article illustrates how current evidence is applied for effective occupational therapy intervention with an adult living with serious mental illness.

Posa is a 42-yr-old woman who was diagnosed with schizophrenia at age 23 yr. She completed her high school education but is currently unemployed. Rosa never married and has no children. Her parents are deceased, and she is close to her sister and brother-in-law, who live several states away. During the first 10-yr period after her initial diagnosis, she had three admissions to the local general hospital's inpatient unit for acute episodes; the interventions included medication stabilization and discharge referrals to local mental health services. After her first hospitalization, Rosa attempted to live in an independent apartment but was unable to manage her self-care and household responsibilities. For the past 5 yr, Rosa has lived in a supported-housing, one-bedroom apartment, managed by the local community mental health agency.

Rosa currently participates in the Assertive Community Treatment (ACT) program to address her stated wellness and employment goals. Doug is the ACT team occupational therapy practitioner, collaborating with Inez, the occupational therapy assistant, for intervention implementation.

Occupational Therapy Evaluation and Goal Setting

Doug began the occupational therapy evaluation by administering the Canadian Occupational Performance Measure (COPM; Law et al., 2014) to determine Rosa's strengths and challenges in occupational performance and complete her occupational profile (American Occupational Therapy Association [AOTA], 2017). Doug learned that Rosa's roles include sister and participant in an ACT program. Rosa reported wishing to live in an independent apartment but acknowledged needing assistance from supported housing staff. She reported not socializing with any other residents. With assistance from local vocational rehabilitation services, she worked briefly in several cleaning jobs. Rosa described leaving these jobs because of difficulty with supervisors and coworkers, but she was unable to be more specific about her work challenges. During the COPM assessment, Rosa shared being very dissatisfied with her social participation and unemployment. Rosa voiced wanting to "have friends to connect with" and find a job that she "could do for many years."

To gain additional information to support Rosa's community participation, Doug administered several assessments for the analysis of occupational performance (AOTA, 2014), including the Allen Cognitive Level Screen–5 (ACLS–5;

Citation: Lannigan, E. G., & Noyes, S. (2019). Evidence Connection—Occupational therapy interventions for adults living with serious mental illness. American Journal of Occupational Therapy, 73, 7305395010. https://doi.org/10.5014/ajot.2019.735001 Allen et al., 2007) and the Routine Task Inventory–Expanded (RTI–E; Katz, 2006). The score of 5.0 on both indicated that Rosa experiences difficulty with abstract thinking and uses trial-and-error problem solving (Allen et al., 1995). Rosa will benefit from visual demonstrations accompanied by verbal explanations. Use of concrete explanations and examples will assist Rosa's planning ahead for potential problems.

Results of the Weekly Calendar Planning Activity (Toglia, 2015) supported the findings from the ACLS–5 and RTI–E, demonstrating Rosa's limited ability to monitor her own performance and difficulty in complex thinking for performance. Combined assessment results indicated that Rosa needed assistance to develop strategies for establishing and maintaining daily and weekly routines as well as balancing work, rest, leisure, and social participation. Environmental cues can promote Rosa's success in her home and future work environments. Structured daily and weekly routines, incorporating work and meaningful social interactions, will support and maintain Rosa's recovery. A brief summary of assessment results is presented in Table 1.

On the basis of Rosa's interests, goals, and assessment results, Doug collaborated with Rosa to develop intervention goals. Rosa willingly participated in occupational therapy interventions with Doug and Inez to address employment and social participation. Goals included securing competitive employment through an Individual Placement and Support (IPS) model of supported employment, achieving independence in self-care and transportation to support employment (activities of daily living and instrumental activities of daily living tasks), and participating in social and leisure activities in the community. Doug reviewed the evidence from the September/October 2018 issue of the American Journal of Occupational Therapy (see D'Amico et al., 2018; Noyes et al., 2018) and AOTA's Occupational Therapy Practice Guidelines for Adults Living With Serious Mental Illness (Noyes & Lannigan, 2019), incorporating that evidence into Rosa's occupational therapy intervention plan.

Intervention Implementation

On the basis of the strength of the evidence and findings from the systematic reviews, the following interventions were implemented to address Rosa's goals (Doug's intervention implementation included two sessions per week for 12 wk):

- Doug collaborated with Rosa to facilitate her referral to the IPS program sponsored by the local community mental health agency (Areberg & Bejerholm, 2013; Campbell et al., 2010, 2011; Catty et al., 2008; Heslin et al., 2011; Kinoshita et al., 2013; Kukla & Bond, 2013; Michon et al., 2014; Modini et al., 2016; Twamley et al., 2008, 2012; Wong et al., 2008).
- Individual sessions with Rosa focused on skill development for effective workplace grooming and dressing and using public transportation to travel to work independently (Lindström et al., 2012; Roldán-Merino et al., 2013).

Table 1. Assessment Results

Assessment Tool	Results	Intervention Outcomes
СОРМ	Rosa's Performance score was 2/10, and her Satisfaction score was 2/10.	Rosa's scores improved to 9/10 on Performance and 10/10 on Satisfaction at discharge.
ACLS-5 and RTI-E	Rosa's ACLS–5 score was 5.0, corroborated by the same score on the RTI–E.	Rosa collaborated with occupational therapy practitioners to develop new routines for grooming, dressing, and using public transportation as well as for using visual reminders, checklists, and a weekly planner to support maintaining this effective structure.
WCPA	Rosa demonstrated limitations in planning and organization based on mental inflexibility. Difficulty in self-monitoring task performance was also observed.	At discharge, Rosa demonstrated improvements in planning and organization, especially managing her own daily schedule. At work, she continued to require assistance with self-monitoring her task performance but effectively used check-in strategies to address this issue with her supervisor.

Note. ACLS-5 = Allen Cognitive Level Screen-5; COPM = Canadian Occupational Performance Measure; RTI-E = Routine Task Inventory-Expanded; WCPA = Weekly Calendar Planning Activity.

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Rosa attended occupational therapist-led groups at the ACT program to increase social participation (Cook et al., 2009; Štrkalj-lvezić et al., 2013; Tatsumi et al., 2012), with one group intervention using cognitive-behavioral therapy (CBT) to directly address social skills (Rus-Calafell et al., 2013).

Intervention 1

Rosa requested that Doug accompany her on initial appointments with the IPS team to share results of her occupational therapy evaluation. This collaboration addressed making the best possible match between her strengths, skills, and challenges and the requirements of her desired job. Inez visited several potential work settings with Rosa and provided onsite job coaching while Rosa learned the tasks of her chosen retail job.

Intervention 2

During sessions with Inez, Rosa identified workplace requirements for grooming and clothing. Inez accompanied Rosa to visit several secondhand clothing stores, where Rosa purchased appropriate clothing for the retail job. Inez assisted Rosa to create a chart of grooming tasks to be completed daily for her work shifts. Rosa added scheduled times for each task, producing a printed schedule to follow. She posted this chart in her apartment bathroom.

Intervention 3

Inez assisted Rosa in identifying the public transportation route from her apartment to the retail store. Inez accompanied Rosa on a trial run, after which Rosa completed successfully three independent trials of public transportation to the store.

Intervention 4

Doug led occupational therapy social participation groups within the ACT program. Rosa attended six group sessions, participating in the CBT approach to improve her workplace social interactions. She completed role-plays enacting conversations with coworkers and supervisors. Rosa reported feeling more able to engage in workplace conversations and to communicate her needs to the supervised housing staff.

Conclusion

Through use of evidence-based, occupation-focused, and client-centered occupational therapy interventions, Rosa met her goals by the end of her 4-mo intervention plan. Rosa performed her employment responsibilities with decreasing job coaching by Inez. Rosa excitedly reported working at her retail job 2 days per week. She credited Inez with "teaching me all the steps," stating that she knew how to do all the job tasks now. At 4 mo, Rosa no longer required onsite job coaching but continued to meet weekly with Inez to discuss work performance concerns.

Rosa reported managing communication at her workplace, such as feeling comfortable asking questions of her direct supervisor when needed. She also reported considerable improvement in her use of structured routines to effectively complete self-care activities before going to work, sharing her supervisor's comment that her appearance at work contributed to her employment success. Rosa also described successfully using public transportation for work. Rosa made plans to meet two peers from the social skills group socially after discharge. She described having "a much easier time knowing what to say" to coworkers at her job, which made her feel more confident.

Doug and Inez met with Rosa at the end of 4 mo for reevaluation of her daily living, social participation, and employment goals. Rosa intended to continue the IPS program as support for maintaining her job. Rosa requested continuing attendance in therapeutic groups to address communication and employment concerns because of her desire to seek employment with greater responsibilities. She reviewed other discharge recommendations and

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community resources with Doug and Inez. Together, they researched opportunities for increasing social interactions in her community through the local community recreation and adult education centers.

References

- Allen, C. K., Austin, S. L., David, S. K., Earhart, C. A., McCraith, D. B., & Riska-Williams, L. (2007). *Allen Cognitive Level Screen–5 (ACLS–5) and Large Allen Cognitive Level Screen–5 (LACLS–5)*. Camarillo, CA: ACLS and LACLS Committee.
- Allen, C. K., Earhart, C. A., & Blue, T. (1995). Understanding cognitive performance modes. Ormond Beach, FL: Allen Conferences.
- American Occupational Therapy Association. (2014). Occupational therapy practice framework: Domain and process (3rd ed.). *American Journal of Occupational Therapy*, 68(Suppl. 1), S1–S48. https://doi.org/10.5014/ajot.2014.682006
- American Occupational Therapy Association. (2017). AOTA occupational profile template. *American Journal of Occupational Therapy*, 71, 7112420030. https://doi.org/10.5014/ajot.2017.716S12
- Areberg, C., & Bejerholm, U. (2013). The effect of IPS on participants' engagement, quality of life, empowerment, and motivation: A randomized controlled trial. *Scandinavian Journal of Occupational Therapy*, 20, 420–428. https://doi.org/10.3109/11038128.2013.765911
- Campbell, K., Bond, G. R., & Drake, R. E. (2011). Who benefits from supported employment: A meta-analytic study. *Schizophrenia Bulletin*, *37*, 370–380. https://doi.org/10.1093/schbul/sbp066
- Campbell, K., Bond, G. R., Drake, R. E., McHugo, G. J., & Xie, H. (2010). Client predictors of employment outcomes in high-fidelity supported employment: A regression analysis. *Journal of Nervous and Mental Disease*, 198, 556–563. https://doi.org/10.1097/NMD.0b013e3181ea1e53
- Catty, J., Lissouba, P., White, S., Becker, T., Drake, R. E., Fioritti, A., . . . Burns, T.; EQOLISE Group. (2008). Predictors of employment for people with severe mental illness: Results of an international six-centre randomised controlled trial. *British Journal of Psychiatry*, 192, 224–231. https://doi.org/10.1192/bjp.bp.107.041475
- Cook, S., Chambers, E., & Coleman, J. H. (2009). Occupational therapy for people with psychotic conditions in community settings: A pilot randomized controlled trial. *Clinical Rehabilitation*, *23*, 40–52. https://doi.org/10.1177/0269215508098898
- D'Amico, M. L., Jaffe, L. E., & Gardner, J. A. (2018). Evidence for interventions to improve and maintain occupational performance and participation for people with serious mental illness: A systematic review. *American Journal of Occupational Therapy*, 72, 7205190020. https://doi.org/10.5014/ajot.2018.033332
- Heslin, M., Howard, L., Leese, M., McCrone, P., Rice, C., Jarrett, M., . . . Thornicroft, G. (2011). Randomized controlled trial of supported employment in England: 2 year follow-up of the Supported Work and Needs (SWAN) study. *World Psychiatry*, 10, 132–137.
- Katz, N. (2006). Routine Task Inventory-Expanded: RTI-E manual. Norton, MA: Allen Cognitive Network.
- Kinoshita, Y., Furukawa, T. A., Kinoshita, K., Honyashiki, M., Omori, I. M., Marshall, M., . . . Kingdon, D. (2013). Supported employment for adults with severe mental illness. *Cochrane Database of Systematic Reviews*, 2013, CD008297. https://doi.org/10.1002/14651858.CD008297.pub2
- Kukla, M., & Bond, G. R. (2013). A randomized controlled trial of evidence-based supported employment: Nonvocational outcomes. *Journal of Vocational Rehabilitation*, *38*, 91–98. https://doi.org/10.3233/JVR-130623
- Law, M., Baptiste, S., Carswell, A., McColl, M., Polatajko, H., & Pollock, N. (2014). Canadian Occupational Performance Measure (5th ed.). Ottawa: CAOT Publications.
- Lindström, M., Hariz, G.-M., & Bernspång, B. (2012). Dealing with real-life challenges: Outcome of a home-based occupational therapy intervention for people with severe psychiatric disability. OTJR: Occupation, Participation and Health, 32, 5–14. https://doi.org/10.3928/15394492-20110819-01
- Michon, H., van Busschbach, J. T., Stant, A. D., van Vugt, M. D., van Weeghel, J., & Kroon, H. (2014). Effectiveness of individual placement and support for people with severe mental illness in the Netherlands: A 30-month randomized controlled trial. *Psychiatric Rehabilitation Journal*, *37*, 129–136. https://doi.org/10.1037/prj0000061
- Modini, M., Tan, L., Brinchmann, B., Wang, M. J., Killackey, E., Glozier, N., . . . Harvey, S. B. (2016). Supported employment for people with severe mental illness: Systematic review and meta-analysis of the international evidence. *British Journal of Psychiatry*, 209, 14–22. https://doi.org/10.1192/bjp.bp.115.
- Noyes, S., & Lannigan, E. G. (2019). Occupational therapy practice guidelines for adults living with serious mental illness. Bethesda, MD: AOTA Press. Noyes, S., Sokolow, H., & Arbesman, M. (2018). Evidence for occupational therapy intervention with employment and education for adults with serious mental illness: A systematic review. American Journal of Occupational Therapy, 72, 7205190010. https://doi.org/10.5014/ajot.2018.033068
- Roldán-Merino, J., García, I. C., Ramos-Pichardo, J. D., Foix-Sanjuan, A., Quilez-Jover, J., & Montserrat-Martinez, M. (2013). Impact of personalized in-home nursing care plans on dependence in ADLs/IADLs and on family burden among adults diagnosed with schizophrenia: A randomized controlled study. *Perspectives in Psychiatric Care*, 49, 171–178. https://doi.org/10.1111/j.1744-6163.2012.00347.x
- Rus-Calafell, M., Gutiérrez-Maldonado, J., Ortega-Bravo, M., Ribas-Sabaté, J., & Caqueo-Urízar, A. (2013). A brief cognitive-behavioural social skills training for stabilised outpatients with schizophrenia: A preliminary study. *Schizophrenia Research*, *143*, 327–336. https://doi.org/10.1016/j.schres.2012.
- Štrkalj-Ivezić, S., Vrdoljak, M., Mužinić, L., & Agius, M. (2013). The impact of a rehabilitation day centre program for persons suffering from schizophrenia on quality of life, social functioning and self-esteem. *Psychiatria Danubina*, *25*(Suppl. 2), S194–S199.
- Tatsumi, E., Yotsumoto, K., Nakamae, T., & Hashimoto, T. (2012). Effects of occupational therapy on hospitalized chronic schizophrenia patients with severe negative symptoms. *Kobe Journal of Medical Sciences*, *57*, E145–E154.



Toglia, J. (2015). Weekly Calendar Planning Activity (WCPA): A performance test of executive function. Bethesda, MD: AOTA Press.

Twamley, E. W., Narvaez, J. M., Becker, D. R., Bartels, S. J., & Jeste, D. V. (2008). Supported employment for middle-aged and older people with schizophrenia. *American Journal of Psychiatric Rehabilitation*, 11, 76–89. https://doi.org/10.1080/15487760701853326

Twamley, E. W., Vella, L., Burton, C. Z., Becker, D. R., Bell, M. D., & Jeste, D. V. (2012). The efficacy of supported employment for middle-aged and older people with schizophrenia. *Schizophrenia Research*, 135, 100–104. https://doi.org/10.1016/j.schres.2011.11.036

Wong, K. K., Chiu, R., Tang, B., Mak, D., Liu, J., & Chiu, S. N. (2008). A randomized controlled trial of a supported employment program for persons with long-term mental illness in Hong Kong. *Psychiatric Services*, *59*, 84–90. https://doi.org/10.1176/ps.2008.59.1.84

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