

Cognitive Processes and Skills Training Interventions in Correctional Facilities - Queen's University School of Rehabilitation Therapy, Kingston, Canada

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Introduction

Evidence-based practice ensures interventions that are implemented can effectively help clients reach their goals. However, there is often a lack of knowledge translation between evidence found in the literature and implementing strategies within practice. This project aims to reduce this discrepancy by reviewing and critically appraising literature surrounding cognitive processes and skills training to provide OT clinicians suggestions to guide their practice.

Methods and Materials

A total of 18 articles containing cognitive and process skills training interventions were retrieved.

A search was conducted in the Repository of Occupational Therapy Interventions in Correctional Settings, a previously established database of interventions that fall within the scope of occupational therapy.

An updated literature search was completed in CINAHL, Medline, PsycInfo, Pubmed, and OT seeker databases.

Critical appraisal was completed by two independent reviewers using checklists from the Critical Appraisal Skills Program (CASP), Joanna Briggs Institute (JBI), and Mixed Method Appraisal Tool (MMAT). The overall quality of studies were rated using the Evidence Centre Traffic Light System (Novak and McIntyre, 2010).

Results:

Prisma flowchart outlining the search process

The initial search included articles from the following sources: 467 citations were collected from CINAHL, 326 citations were collected from Medline, 499 citations were collected from Psycinfo, 386 citations were collected from Pubmed, and 72 citations collected from OTSeeker resulting in a total of 866 non-duplicate citations. After title and abstract screening, 758 articles were excluded. 115 citations underwent full-text review. Of these, 6 articles were added independently. After full text review, 97 articles were excluded leaving 18 articles to be included in this study.

Study Characteristics:

Of the included studies, 12 included male participants, 4, included female participants and 2 were mixed.

Nine studies took place in Europe, 8 in the United States and one in South Africa.

Program Categories & Outcomes:

Three categories of interventions were identified: 1) Coping skills & problem-solving training programs; 2) Programs targeted at changing cognitive distortions; and 3) Psychoeducation & experiential learning

programs. A fourth category of programs that used a client-centered approach was also identified. These are presented with related outcomes.

1. Coping skills & problem-solving training programs improved skills to engage in occupation

Three studies were included in this category. A cognitive processes and skills program including coping skills training resulted in decreased post-traumatic stress disorder and mental health symptom severity, and increased self-esteem, proactive coping, and self-efficacy (Wolff et al., 2014)

A cognitive behavioural therapy-based and drama-based intervention led to increased self-efficacy, motivation, and confidence in skills needed for occupational participation and social navigation (Harkins et al., 2011)

An intervention that combined Interpersonal problem solving, self-control and emotional management training showed a positive impact on thinking and attitudes, and a decrease in impulsive action and short-cut problem solving (Gobbett & Sellen, 2014)

2. Programs targeted at changing cognitive distortions showed positive outcomes

Three studies were included in this category. A program targeting social perspective taking, critical reasoning, and management of pro criminal others helped in addressing attitudes that support entitlement of use of aggression to control others, realizing consequences associated with crime, and acting less impulsive (Gobbett & Sellen, 2014)

A program that focused on cognitive restructuring showed a significant change in cognitive biases about women and use of violence against

women, hostility attitudes, and uncontrolled anger (Echeburúa et al., 2006)

A program addressing cognitive distortions through skill building exercises that focused on improving healthy relationships helped decrease harmful behaviours such as engaging in risky sexual behaviour or drug use (Leukefeld et al., 2012)

3. Psychoeducation & experiential learning promoted behavioural change & self- regulation

Five studies were included in this category. A psychoeducation and skill building program led to a decrease in emotion expression suppression and number of disciplinary infractions and days in punishment, and an increase in cognitive reappraisal (Brazão et al., 2018)

A psychoeducational self-administered intervention decreased general thinking that could lead to crime and disciplinary infractions (Folk et al., 2016)

Female individuals who were incarcerated benefited from therapies that focus on interpersonal relationships to help promote emotional self-regulation (Grills et al., 2015)

Drama-based interventions were shown to promote emotional self-regulation (including anger management) (Blacker et al., 2008; Harkins et al., 2011)

4. Interventions were beneficial when a client-centered approach was incorporated

Three studies were included in this category. Ability to voluntarily enroll in a life skills program was deemed important by participants.

The life skills program demonstrated good rates of enrolment, retention, and completion (Jolley, 2018)

Consideration of cognitive ability is important as increased retention of information was associated with higher overall cognitive ability (Leidenfrost et al., 2017)

Increased effectiveness of treatment was noted when taking an individualistic approach where participants' goals and ambitions were considered (Gobbett & Sellen, 2014)

Clinical Implications: Relevance to Occupational Therapy (OT) Practice

When developing a cognitive processes and skills program, OTs can incorporate a variety of techniques related to cognitive skill building, such as:

1. Teaching the skills required to evaluate behaviours, increase self-awareness, and recognize effective and ineffective behaviours. This leads to enhanced interpersonal relationships with others and greater personal growth.
 2. Role playing exercises to develop skills required to critically analyze different situations, problem solve, and control emotions.
 3. Targeting thinking styles associated with behaviour that could lead to crime and teach participants to recognize consequences of crime and develop more prosocial patterns of thinking.
 4. Assisting in skills development to enable recognition of maladaptive coping strategies and teach adaptive emotional regulation strategies to promote positive behavioural change.
- Incorporating individual sessions in addition to group therapy to meet individual needs.

Limitations and Future Directions

Findings from studies may not be generalizable due to variability in resources available in different prisons.

Many outcome measures were self-reports which may impact reliability and validity.

Due to variety of techniques used, it is difficult to determine which components promoted change. Therefore, it is suggested to use strategies in combination.

There were no Canadian studies that met the inclusion criteria for this review.

More research is needed to understand cognitive processes and skills programming in Canadian correctional institutions.

Future studies should provide evaluations in follow-up sessions once individuals who are incarcerated are released into the community.

All studies received a yellow traffic light code due to a small sample size, non-randomization, lack of follow-up, lack of a control group, and insufficient evidence to support effectiveness of treatment. Therefore, it is important to evaluate these interventions in practice.

References

- Blacker, J., Watson, A., & Beech, A. R. (2008). A combined drama-based and CBT approach to working with self-reported anger aggression. *Criminal Behaviour and Mental Health, 18*(2), 129–137. <https://doi.org/10.1002/cbm.686>
- Brazão, N., Rijo, D., Salvador, M. do C., & Pinto-Gouveia, J. (2017). The effects of the Growing Pro-Social Program on cognitive distortions and early maladaptive schemas over time in male prison inmates: a randomized controlled trial. *Journal of*

- Consulting and Clinical Psychology*, 85(11), 1064–1079.
<https://doi.org/10.1037/ccp0000247>
- Brazão, N., Rijo, D., Salvador, M. do C., & Pinto-Gouveia, J. (2018). Promoting emotion and behavior regulation in male prison inmates: a secondary data analysis from a randomized controlled trial testing the efficacy of the Growing Pro-Social Program. *Law and Human Behavior*, 42(1), 57–70.
<https://doi.org/10.1037/lhb0000267>
- Canadian Association of Occupational Therapists. (2012). Profile of practice of occupational therapists in Canada. <https://www.caot.ca/document/3653/2012otprofile.pdf>.
- Clark, V. & Duwe, G. (2015). An outcome evaluation of a prison-based life-skills program: the Power of People. *International Journal of Offender Therapy and Comparative Criminology*, 59(4), 384–405. <https://doi.org/10.1177/0306624X13509444>
- Echeburúa, E., Fernández-Montalvo, J., & Amor, P. J. (2006). Psychological treatment of men convicted of gender violence: a pilot study in Spanish prisons. *International Journal of Offender Therapy and Comparative Criminology*, 50(1), 57–70.
<https://doi.org/10.1177/0306624X05277662>
- Folk, J. B., Disabato, D. J., Daylor, J. M., Tangney, J. P., Barboza, S., Wilson, J. S., Bonieskie, L., & Holwager, J. (2016). Effectiveness of a self-administered intervention for criminal thinking: Taking a Chance on Change. *Psychological Services*, 13(3), 272–282.
<https://doi.org/10.1037/ser0000079>
- Ford, J. D., Chang, R., Levine, J., & Zhang, W. (2013). Randomized clinical trial comparing affect regulation and supportive group

- therapies for victimization-related PTSD with incarcerated women. *Behavior Therapy*, 44(2), 262–276.
<https://doi.org/10.1016/j.beth.2012.10.003>
- Gobbett, M. J., & Sellen, J. L. (2014). An evaluation of the HM prison service “Thinking Skills Programme” using psychometric assessments. *International Journal of Offender Therapy and Comparative Criminology*, 58(4), 454–473.
<https://doi.org/10.1177/0306624X12472485>
- Grills, C., Villanueva, S., Anderson, M., Corsbie-Massay, C. L., Smith, B., Johnson, L., & Owens, K. (2015). Effectiveness of Choice Theory Connections: a cross-sectional and comparative analysis of California female inmates. *International Journal of Offender Therapy and Comparative Criminology*, 59(7), 757–771.
<https://doi.org/10.1177/0306624X13520129>
- Harkins, L., Pritchard, C., Haskayne, D., Watson, A., & Beech, A. R. (2011). Evaluation of Geese Theatre’s Re-Connect Program: addressing resettlement issues in prison. *International Journal of Offender Therapy and Comparative Criminology*, 55(4), 546–566. <https://doi.org/10.1177/0306624X10370452>
- Jolley, M. (2018). Rehabilitating prisoners: the place of basic life skills programmes. *Safer Communities*, 17(1), 1–10.
<https://doi.org/10.1108/SC-02-2017-0009>
- Jordaan, J., Beukes, R., & Esterhuysen, K. (2018). The development and evaluation of a life skills programme for young adult offenders. *International Journal of Offender Therapy and Comparative Criminology*, 62(10), 3077–3096.
<https://doi.org/10.1177/0306624X17737682>

- Kelley, T., Hollows, J., Lambert, E. G., Savard, D. M., & Pransky, J. (2018). Teaching health versus treating illness: the efficacy of Three Principles Correctional Counseling with people in an english prison. *International Journal of Offender Therapy and Comparative Criminology*, 62(9), 2831–2856.
<https://doi.org/10.1177/0306624X17735253>
- Leidenfrost, C.M., Schoelerman, R. M., Maher, M., & Antonius, D. (2017). The development and efficacy of a group intervention program for individuals with serious mental illness in jail. *International Journal of Law and Psychiatry*, 54, 98–106.
<https://doi.org/10.1016/j.ijlp.2017.06.004>
- for women offenders. *AIDS Education and Prevention*, 24(4), 339–349. <https://doi.org/10.1016/j.aead.2012.04.004>
- Leukefeld, C., Havens, J., Tindall, M. S., Oser, C. B., Mooney, J., Hall, M. T., & Knudsen, H. K. (2012). Risky relationships: targeting HIV prevention 1521/aeap.2012.24.4.339
- Messina, N., Grella, C. E., Cartier, J., & Torres, S. (2010). A randomized experimental study of gender-responsive substance abuse treatment for women in prison. *Journal of Substance Abuse Treatment*, 38(2), 97–107.
<https://doi.org/10.1016/j.jsat.2009.09.004>
- Novak, I., & McIntyre, S. (2010). The effect of Education with workplace supports on practitioners' evidence-based practice knowledge and implementation behaviours. *Australian Occupational Therapy Journal*, 57(6), 386–393.
<https://doi.org/10.1111/j.1440-1630.2010.00861.x>
- Tew, J., Dixon, L., Harkins, L., & Bennett, A. (2012). Investigating changes in anger and aggression in offenders with high levels of

psychopathic traits attending the Chromis violence reduction programme. *Criminal Behaviour and Mental Health*, 22(3), 191–201. <https://doi.org/10.1002/cbm.1832>

Wolff, N., Huening, J., Shi, J., Frueh, B. C., Hoover, D. R., & McHugo, G. (2014). Implementation and effectiveness of integrated trauma and addiction treatment for incarcerated men. *Journal of Anxiety Disorders*, 30, 66–80. <https://doi.org/10.1016/j.janxdis.2014.10.009>