Annotated Bibliography for PSR Areas of Employment, Education, Wellness, Life & Leisure Skills, Family Involvement and Peer Support

April, 2013

Supported Education

Background Articles

1. **Storrie, K., Ahern, K., & Tuckett, A. (2010). A systematic review: Students with mental health problems—A growing problem.** ***International Journal of Nursing Practice,16*****(1), 1-6. doi:10.1111/j.1440-172X.2009.01813.x.**

   A systematic review of the literature on the mental health needs of the post-secondary student population. The article notes that the number of students worldwide with mental health problems is growing. The majority of people with serious mental illness want to attend college, but most who attend drop out without completing a degree.

   Implications: Universities and other post-secondary institutions must take steps to provide a supportive environment on campus. Specific actions include developing on-campus mental health expertise (for providing support and for helping students with psychiatric disabilities develop accommodations to support their educational endeavours), developing clear links with off-campus mental health providers, and making students aware of these resources.

2. **Mansbach-Kleinfeld, I., Sasson, R., Shvarts, S., & Grinshpoon, A. (2007). What education means to People with psychiatric disabilities: A content analysis.** ***American Journal of Psychiatric Rehabilitation, 10*****(4), 301-316. doi:10.1080/15487760701680554.**

   This qualitative paper examines the meaning of Supported Education (SEd) for participants who had completed high school courses. The experience allowed people with mental illness to recover lost roles and capabilities. The shift from patient to student role was a very powerful one.

   Implications: The process of rehabilitation should not just be understood in terms of gaining skills, but in terms significant shifts in personal identity.

3. **Hartley, M. T. (2010). Increasing resilience: Strategies for reducing dropout rates for college students with psychiatric disabilities.** ***American Journal of Psychiatric Rehabilitation, 13*****(4), 295-315. doi:10.1080/15487768.2010.523372.**

   A review of the concept of resilience with suggestions for ways the concept could strengthen existing SEd interventions, and improve retention in both 2 year and 4 year college programs. They note common barriers to retention such as active symptoms, lack of academic integration, and lack of supportive peer relationships, and suggest that quality of resilience may distinguish between those who drop out and those who complete post-secondary education.

   Implications: Resilience-based approaches can facilitate protective factors such as confidence for active coping, and skills for developing social support, which can complement the core services of SEd of career planning: academic survival skills, and connection to mental health supports.

4. **Mowbray, C. T., Megivern, D., & Holter, M. C. (2003). Supported education programming for adults with psychiatric disabilities: Results from a national survey. *Psychiatric Rehabilitation Journal, 27*(2), 159-167. doi:10.2975/27.2003.159.167.**

   A national (U.S.) survey describes the number and type of Supported Education programs. They found that the most typical SEd program variation was provided within Clubhouses, that a number of on-campus programs existed, and that there were a smaller number of "freestanding" SEd programs. The article documented differences in terms of budget, type of approach, and collaboration between mental health and specialized educational personnel.

   Implications: SEd can be provided in various ways. The evidence regarding the nature and relative efficacy of these variations, and about what forms of collaboration is necessary, is still emerging.

5. **Mowbray, C. T., Collins, M. E., Bellamy, C. D., Megivern, D. A., Bybee, D., & Szilvagyi, S. (2005). Supported education for adults with psychiatric disabilities: An innovation for social work and psychosocial rehabilitation practice. *Social Work, 50*(1), 7-20. Retrieved from http://www.naswpress.org/publications/journals/sw.html.**

   Mowbray, Collins et al. review the evolving SEd model and the accumulating evidence-base on its effectiveness. The core components include career planning, academic survival skill building, and connection to services and resources, including academic and mental health-related supports. They outline three prototype models: free-standing classrooms, on-site, and the clubhouse model (which often provides support within the clubhouse and within normalized academic settings on an outreach basis). Consistent with psychosocial rehabilitation, the approach seeks to build relevant skills, create supportive environments, and improve the fit between the student and his or her environment. The review outlined the findings of several studies of SEd, one of which was a randomized controlled trial, which showed an increase in enrolment in postsecondary education to approximately 25%, compared to the control group's rate of approximately 5%. The other reviewed studies demonstrated increases in course completion, and greater likelihood of reenrolment in the following academic year, but did not follow students up to assess degree completion. One study showed that students typically were enrolled in two courses per term in two-year programs, which suggests that, in terms of course load, the average SEd student profile is similar to that of the typical part-time community college student. Another study showed that approximately 40% of students worked part-time while going to school, a rate that is lower than typical part-time students, but higher than the general population of students with serious mental illness. Some existing evidence suggests the typical SEd student is in their early 30's, and is of low income. With respect to other outcomes, the Mowbray (2000) trial found increased self-esteem, higher quality of life, and fewer social adjustment problems in the experimental group. There is also some preliminary evidence that participants may make significantly less use of hospital services. The authors of the present review note that SEd is considered an "exemplary practice" by SAMSHA and note that more evidence is needed to improve the intervention, to determine who can benefit most, and in what settings the program is best implemented.

   Implications: Supported Education is a promising approach that should be offered to people who are interested in pursuing higher education, for its own benefits, and as a

way of improving vocational prospects. At this point, there is no reason to believe that any one of the three variations of the model (clubhouse, free-standing, and on-site) should be preferred.

Individual Trials

6. **Mowbray, C. (2000). The Michigan supported education program.** ***Psychiatric Services*****, *51*(11), 1355-1357. doi: 10.1176/appi.ps.51.11.1355.**

   Mowbray reports on the results of an RCT trial on the Michigan Supported Education Program. Participants were required to have completed or be near completion of high school diploma (or GED), and have an interest in pursuing higher education. The program is based on the model program developed at Boston University, provided in three modules, and providing opportunities for students to learn and practice skills in three areas: identifying vocational and educational goals, developing stress management skills, and gaining academic survival skills. The format is a 2.5 hr classroom-based preparatory course twice a week for six months. Students also receive help in completing financial aid forms, college entrance application forms, registering for courses, and are offered help in developing skills for common challenges, such as negotiating with professors. The ultimate goal is to prepare participants for "readiness for matriculation" at a two-year community college. Students in the control condition were connected to a support worker, who at the student's request was able to help with self-defined problems. At the six and twelve month follow-up interviews, participants in active treatment but not those in the control group showed significant improvements in quality of life, self-esteem, and social adjustment and greater participation in college or vocational training. Participants in the intervention group were nearly twice as likely to be involved in school, employment, or both.

   Implications: The Boston University model (upon which the Michigan SEd program is based) appears to be a viable way of increasing enrolment in postsecondary education and participation in vocational activities (or both). Improving retention and completion rates for students participating in SEd, and factors affecting completion, are important issues that requiring further consideration.

7. **Gutman, S. A., Kerner, R., Zombek, I., Dulek, J., & Ramsey, C. A. (2009). Supported education for adults with psychiatric disabilities: Effectiveness of an occupational therapy program.** ***The American Journal of Occupational Therapy, 63*****(3), 245-254. doi:10.5014/ajot.63.3.245.**

   Gutman, Kerner, Zomber, Duleck, and Ramsey reported the results of a trial on the BRIDGE SEd program. Participants attended a two-hour on-campus preparatory class, twice a week for six weeks. Topics of the class included study skills, orientation to research skills, use of the computer/internet, and time management. 76% of participants completed the program. At six-month follow-up, 10 of the 16 participants who completed the program (63%) had enrolled in school, found a job, or were applying to a specific program. Only 1 person from the 17 person control group had enrolled in school.

Implications: Preparatory SEd oriented towards academic skills can improve enrolment in post-secondary education. Retention and completion were not studied, and would require ongoing support.

8. **Manthey, T. (2011). Using motivational interviewing to increase retention in supported education.** ***American Journal of Psychiatric Rehabilitation, 14*****(2), 120-136. doi:10.1080/15487768.2011.569667.**

Manthey (2011) discusses the challenge of retention and post-secondary education completion, in light of findings that between 25% to 50% of SEd students drop out prior to completion, and those students supported through SEd often cycle through the program a number of times before finally completing their education. They present a case study illustrating efforts to incorporate Motivational Interviewing (MI) in order to improve retention and completion rates. The rationale of the intervention is to help participants maintain motivation (as opposed to using MI for initial engagement) and work through ambivalence in the face of barriers to success, such as ambivalence to disclosure, heavy workload, stigma experiences, and other challenges to motivation. The case study illustrates how the education specialist can use active listening to help an individual maintain motivation for staying in school after he has experienced an unpleasant conflict in the classroom.

Implications: The "micro-skills" of education specialists (i.e., competency at active listening using motivational approaches) may be integral to the ongoing support component of SEd, and thus may be important in helping students pursue and complete postsecondary education.

9. **Neuchterlein, K., H., Subotnik, K. L., Turner, L. R., Ventura, J., Becker, D. R., & Drake, R. E. (2008). Individual placement and support for individuals with recent-onset schizophrenia: Integrating supported education and supported employment.** ***Psychiatric Rehabilitation Journal, 31*****(4), 340-349. doi:10.2975/31.4.2008.340.349.**

Neuchterlein et al. (2008) report on an adaptation of the Individual Placement and Support (IPS) model for people with recent onset psychosis. Because the vocational goals of such individuals often include returning to school, the IPS model was adapted to include both Supported Employment (SE) and SEd, which entailed having the employment specialist help place individuals in both educational and work settings. Follow-along support included work with teachers, and aid in study skills and course planning as well as traditional SE activities. Participants chose work, study, or both work and study at equivalent rates. The control group received the brokered vocational rehabilitation approach. The intervention group received a combination of IPS and Skills Training (with the Workplace Fundamentals Module). Results have not yet been published.

Implications: Rehabilitation workers should ascertain whether participants' vocational goals include education. If so, The IPS model appears to be a viable way of delivering SEd.

10. **Robson, E., Waghorn, G., Sherring, J., & Morris, A. (2010). Preliminary outcomes from an individualised supported education programme delivered by a community mental**

health service. ***British Journal Of Occupational Therapy*****, *73*(10), 481-486. doi:10.4276/03082210X12865330218384.**

Robson et al. (2010) report on the preliminary results of an evaluation of a supported education program based on the IPS model, and implemented by occupational therapists within a community mental health team in a rural area of Australia. The program followed 20 participants over an 18 month period and reported promising results, with 70% either continuing with or completing their course of study.

Implications: This study further affirms the viability of the IPS model for improving educational participation of young adults with serious mental illness. It also suggests the viability of implementing this model within generic community mental health teams.

11. **Rudnick, A., & Gover, M. (2009). Combining supported education with supported employment.** ***Psychiatric Services, 60*****(12), 1690. doi:10.1176/appi.ps.60.12.1690.**

Rudnick and Gover (2009) report on their evaluation of a combined supported education/employment intervention. Phase One was a classroom-based preparatory supported education (offering study skills, cognitive remediation, social skills training, and computer skills); Phase Two offered supported education in a specific skilled occupation, using group-based training provided by a skilled tradesperson, and also offering life skills and counselling; and Phase Three included post-training supported employment. The preliminary results show that nearly all participants concluded Phase One, and approximately half had achieved competitive employment in their chosen area.

Implications: Interventions combining SEd/SE for participants who wish to pursue skilled trades appear viable, and appear to help these individual obtain competitive employment. The final results of the study and other similar studies will provide more information about the potential of these interventions, and about how to implement them.

References – Supported Education

Gutman, S. A., Kerner, R., Zombek, I., Dulek, J., & Ramsey, C. A. (2009). Supported education for adults with psychiatric disabilities: Effectiveness of an occupational therapy program. *The American Journal of Occupational Therapy, 63*(3), 245-254. doi:10.5014/ajot.63.3.245

Hartley, M. T. (2010). Increasing resilience: Strategies for reducing dropout rates for college students with psychiatric disabilities. *American Journal of Psychiatric Rehabilitation*, *13*(4), 295-315. doi:10.1080/15487768.2010.523372

Mansbach-Kleinfeld, I., Sasson, R., Shvarts, S., & Grinshpoon, A. (2007). What education means to People with psychiatric disabilities: A content analysis. *American Journal of Psychiatric Rehabilitation*, *10*(4), 301-316. doi:10.1080/15487760701680554

Manthey, T. (2011). Using motivational interviewing to increase retention in supported education. *American Journal of Psychiatric Rehabilitation, 14*(2), 120-136. doi:10.1080/15487768.2011.569667

Mowbray, C. (2000). The Michigan supported education program. *Psychiatric Services*, *51*(11), 1355-1357. doi: 10.1176/appi.ps.51.11.1355

Mowbray, C. T., Megivern, D., & Holter, M. C. (2003). Supported education programming for adults with psychiatric disabilities: Results from a national survey. *Psychiatric Rehabilitation Journal, 27*(2), 159-167. doi:10.2975/27.2003.159.167

Mowbray, C. T., Collins, M. E., Bellamy, C. D., Megivern, D. A., Bybee, D., & Szilvagyi, S. (2005). Supported education for adults with psychiatric disabilities: An innovation for social work and psychosocial rehabilitation practice. *Social Work*, *50*(1), 7-20. Retrieved from http://www.naswpress.org/publications/journals/sw.html

Neuchterlein, K., H., Subotnik, K. L., Turner, L. R., Ventura, J., Becker, D. R., & Drake, R. E. (2008). Individual placement and support for individuals with recent-onset schizophrenia: Integrating supported education and supported employment. *Psychiatric Rehabilitation Journal, 31*(4), 340-349. doi:10.2975/31.4.2008.340.349

Robson, E., Waghorn, G., Sherring, J., & Morris, A. (2010). Preliminary outcomes from an individualised supported education programme delivered by a community mental health service. *British Journal Of Occupational Therapy*, *73*(10), 481-486. doi:10.4276/03082210X12865330218384

Rudnick, A., & Gover, M. (2009). Combining supported education with supported employment. *Psychiatric Services, 60*(12), 1690. doi:10.1176/appi.ps.60.12.1690

Storrie, K., Ahern, K., & Tuckett, A. (2010). A systematic review: Students with mental health problems—A growing problem. *International Journal of Nursing Practice,16*(1), 1-6. doi:10.1111/j.1440-172X.2009.01813.x

Supported Employment

Qualitative Research

12. Dunn, E. C., Wewiorski, N. J., & Rogers, E. S. (2008). The meaning and importance of employment to people in recovery from serious mental illness: Results of a qualitative study. *Psychiatric Rehabilitation Journal, 32*(1), 59-62. doi:10.2975/32.1.2008.59.62.

A recent qualitative study (Dunn, Wewiorski, & Rogers, 2008) interviewed 23 people who were working and had achieved significant recovery for at least two years. This study was part of a larger study on recovery conducted at Boston University. The authors found that work had "personal meaning" for study participants and contributed to their recovery. For employed people with mental illness, work represents a chance to reclaim or affirm a valued sense of self. Returning to work contributed to recovery, first of all, by enabling participants to gain a sense of esteem and status from others (and for those employed in helping professions, to "give back"). Work also enabled study participants to more effectively manage their illness, for instance by providing structure, stimulation, and by helping them build social skills and avoid social isolation.

Implications: This study provides insight into why Supported Employment (SE) is important to people with mental illness, and helps situate the body of research discussed below in the wider context of recovery from mental illness.

Seminal Studies

13. Mueser, K. T., Clark, R. E., Haines, M., Drake, R. E., McHugo, G. J., Bond, G. R., Swain, K. (2004). The Hartford study of supported employment for persons with severe mental illness. *Journal of Consulting and Clinical Psychology, 72*(3), 479-490. doi: 10.1037/0022-006X.72.3.479.

The Hartford study (Mueser, Clark et al., 2004) was part of the multisite U.S. Employment Intervention Demonstration Program (EIDP) initiative. This study compared Individual Placement and Support (IPS) to PSR and brokered vocational rehabilitation, and showed that IPS achieved significantly better employment rates for competitive employment (74% vs. 18% vs. 28%) and any employment (74% vs. 35& v 54)% during the study period; there was no difference on non vocational outcomes.

Implications: IPS can achieve successful vocational outcomes, and does not negatively impact the clinical status of its participants, contrary to the previously held idea that the stress of work would lead to higher rehospitalisation rates.

14. Gold, P. B., Meisler, N., Santos, A. B., Carnemolla, M. A., Williams, O. H., & Keleher, J. (2006). Randomized trial of supported employment integrated with assertive

community treatment for rural adults with severe mental illness. ***Schizophrenia Bulletin, 32*****(2), 378-395. doi: 10.1093/schbul/sbi056.**

The IPS model was implemented in the context of a rural ACT team in South Carolina (another EIDP study), and compared to the typical approach using parallel vocational and mental health services. This study (Gold et al., 2006) replicated the expected superiority of the model (64% vs. 26% , a greater than 2:1 ratio in terms of employment rates) and greater earnings (approximately $500/month median earnings vs. 0$ median).

Implications: The results show the feasibility of implementing the model, i.e., successfully integrating mental health and vocational rehabilitation supports, in a context where these services are widely dispersed, and achieving superior employment outcomes where job opportunities may be fewer and less diverse. The authors raise the question of whether longer term economic self-sufficiency and career prospects will require supported education and initial placement in jobs where participants can acquire marketable, transferable skills.

15. **Haslett, W. R., Drake, R. E., Bond, G. R., Becker, D. R., & McHugo, G. J. (2011). Individual placement and support: Does rurality matter?** ***American Journal of Psychiatric Rehabilitation, 14*****(3), 237-244. doi:10.1080/15487768.2011.598106.**

A multi-site analysis (Haslett, Drake, Bond, Becker, & McHugo, 2011) looked at 87 IPS programs, which they categorized as metropolitan, micropolitan, and small town, and found little differences in employment rates.

Implications: Population density, and the factors associated with it (number and diversity of employers, cultural norms, etc.) does not affect the ability of IPS programs to achieve employment for their participants.

16. **Drake, R. E., McHugo, G. J., Bebout, R. R., Becker, D. R., Harris, M., Bond, G.R., & Quimby, E. (1999). A randomized clinical trial of supported employment for inner-city patients with severe mental disorders.** ***Archives of General Psychiatry, 56*****(7), 627-633. doi: 10.1001/archpsyc.56.7.627.**

Drake, McHugo et al. (1999) compared IPS to "enhanced vocational rehabilitation" for inner city participants using a transitional "stepwise" approach using parallel vocational rehabilitation services, and found superior outcomes on employment rates (61% vs. 9%), on the likelihood of working over 20 hrs (50% vs. 5%) use of sheltered employment (11% vs. 71%), and found no differences in job satisfaction, and on non-vocational outcomes (self-esteem, quality of life, symptoms, hospitalization). Higher cumulative amounts of vocational services were associated with better employment outcomes; higher cumulative amounts of clinical services were associated with worse employment outcomes.

Implications: The study shows that the IPS model can be successfully implemented in an American inner city, and that participants with "multiple challenges" in these settings can gain the benefits of SE experienced by participants in other study settings. The study raises the question, however, of how outcomes such as job satisfaction and improvements in quality of life could be achieved.

17. Cook, J. A., Leff, H. S., Blyler, C. R., Gold, P. B., Goldberg, R. W., Mueser, K. T., . . . Burke-Miller, J. (2005). Results of a multisite randomized trial of supported employment interventions for individuals with severe mental illness. ***Archives of General Psychiatry, 62*****(5), 505-512. doi:10.1001/archpsyc.62.5.505.**

An article on a seminal multi-site study (Cook, Leff et al., 2005), reported the cross-site findings of the EIDP, which compared "highly integrated" psychiatric and vocational supported employment programs to services as usual, finding that across the seven study sites the intervention group achieved over twice the employment rates, and were 1.5 times as likely to work 40 hrs/month, when demographic, work history and clinical confounds were taken into consideration.

Implications: This American study showed that SE can successfully be implemented and achieve successful employment-related results across a broad array of settings.

18. Cook, J. A., Blyler, C. R., Leff, H. S., McFarlane, W. R., Goldberg, R. W., Gold, P. B., . . . Razzano, L. A. (2008). The employment intervention demonstration program: Major findings and policy implications. ***Psychiatric Rehabilitation Journal, 31*****(4), 291-295. doi: 10.2975/31.4.2008.291.295.**

A follow-up article on the EIDP (Cook, Blyler et al., 2008) reiterates the main findings, which suggest that various forms of SE (not just IPS, but all of those using the critical ingredients -- focus on competitive employment, close integration of vocational and mental health services, services based on consumer preference/desire to work rather than "readiness", rapid job search using job development strategies, and ongoing support) achieve better employment outcomes than "treatment as usual", and presents subsequent evidence suggesting that the job development aspect of the model has relatively more support than the ongoing support function. They quote results that were somewhat lower than other studies (55% vs. 34% employed), but show that employment outcomes improved over time. Those individuals offered job development were five times more likely to obtain competitive employment, and individuals with no prior work history had almost no chance of obtaining competitive employment without job development.

Implications: Various forms of SE (including modified "family-aided" Assertive Community Treatment (ACT), where the employment specialist was integrated into the ACT team that was linked with a local employment consortium, and EARNS, i.e. an SE model which developed a natural support network supporting the individuals' job aspirations) can achieve competitive employment outcomes. Job development, "a collection of activities which match or tailor particular jobs to particular clients" is the "lynchpin" element of the SE model. The review (a multi-site "effectiveness" trial) also shows that the intervention can achieve its effects even in "real world" settings.

Review Articles

Note: for a full description of the SE model, see the "critical ingredients" section below.

19. Twamley, E. W., Jeste, D. V., & Lehman, A. F. (2003). Vocational rehabilitation in schizophrenia and other psychotic disorders: A literature review and meta-analysis of randomized controlled trials. *The Journal of Nervous and Mental Disease, 191*(8), 515-523. doi:10.1097/01.nmd.0000082213.42509.69.

An early review (Twamley, Jeste, & Lehman, 2003) of 11 published RCT studies, 9 of IPS, 5 of which compared SE to traditional vocational rehabilitation, showed a 51 to 18% advantage in terms of competitive employment rates.

Implications: The authors suggest that this effect size be used as a benchmark for comparison in future trials.

20. Moll, S., Huff, J., & Detwiler, L. (2003). Supported employment: Evidence for a best practice model in psychosocial rehabilitation. *The Canadian Journal of Occupational Therapy, 70*(5), 298-310. Retrived from http://www.caot.ca/default.asp?pageid=6.

A Canadian review (Moll, Huff, & Detwiler, 2003) showed similar results, and discusses the practice implications of this evidence for occupational therapists. They point to a number of implementation challenges that should be considered, such as anticipating possible reasons why clients may have their jobs terminated (e.g., interpersonal conflicts, illness management challenges, job satisfaction), and anticipating the length of time needed for high fidelity implementation, citing evidence that a minimum of one year is necessary to restructure services and help build appropriate skills in professionals.

Implications: The authors argue that occupational therapists are uniquely positioned to deliver the IPS model given their skills in individualized assessment and occupational analysis, which would contribute to the process of job development and follow-along supports. However, OT's may have to shift their traditional focus on assessment and skill building towards identifying and developing supports in the work environment, and networking with potential employers. OT's can act as change agents, building support for service change amongst other potential champions, and helping to develop a common vision of the model needed for success.

21. Bond, G. R. (2008). An update on randomized controlled trials of evidence-based supported employment. *Psychiatric Rehabilitation Journal, 31*(4), 280-290. doi:10.2975/31.4.2008.280.290.

A more recent "review update" (Bond, 2008) unlike the Cook, Leff et al. (2005) EIDP multi-site study, was limited to "high fidelity" IPS programs, for instance excluding studies where the job specialist was integrated within an ACT team, and found higher employment rates as compared to traditional programs (nearly a 3:1 ratio vs. an app. 2:1 ratio). Although the paper also noted that while SE programs found jobs more quickly, on average participants took five months to find their first job. It also noted that most participants work part-time, and duration of employment after the first job was approximately half a year. Employment outcomes *do* appear to hold over the longer term; for instance, a ten-year follow-up study showed that nearly 50% of participants

were working and had worked at least five years during that period. The paper also reviewed recent research suggesting that the IPS model could be enhanced by addressing social cognitive deficits, and by using motivational interventions, and that it would benefit people with recent onset psychosis.

Implications: The robustness of the findings appears greater when comparing high fidelity IPS (rather than SE in general) to traditional interventions. Enhancements of the IPS model are desirable and feasible for people with (social) cognitive deficits, and for those experiencing recent-onset psychosis (see "critical ingredients" section below).

22. Crowther, R., Marshall, M., Bond, G. R., & Huxley, P. (2001). Vocational rehabilitation for people with severe mental illness. *Cochrane Database of Systematic Reviews*. doi: 10.1002/14651858.CD003080.

A recent Cochrane review (Crowther, Marshall, Bond, & Huxley, 2010) compared traditional pre-vocational training approaches against supported employment (including IPS), finding that the latter achieved greater employment outcomes at all time periods (e.g. 36% vs. 12% were employed at 12 months), earned more and worked more weeks than participants in traditional approaches (clubhouses and other transitional employment interventions), which fared no better than standard community care on employment-related outcomes. The review was unable to conclude that SE achieved non-vocational outcomes (symptom reduction, self esteem and quality of life improvements) for the intervention groups, but suggested that these in fact were seen in the intervention group participants who actually had found and kept jobs (approximately 63% of the intervention group was not working when these outcomes were measured for). The authors conclude that there was no evidence that researchers "cherry picked" clients more likely to be employed and included good recruitment of women and ethnic minorities, and thus that the review's results are generalizable to the wider population of people with serious mental illness. However, with the exception of one trial, all studies were conducted in the United States. Generalizability to countries with "less dynamic" economies, different welfare systems, and culturally dissimilar attitudes towards work may thus be in question.

Implications: Because SE, including IPS programs, are only sparsely available, these results suggest that policy-makers and funders in all countries, including Canada, make a concerted effort to help agencies and clinicians implement these interventions more widely. More study is needed regarding the costs and cost-effectiveness of these interventions, though there is some indication that the costs may be equivalent to traditional programs.

Generalizability of the IPS Model to Non-U.S. Contexts (Canada, Europe)

23. Latimer, E. A., Lecomte, T., Becker, D. R., Drake, R. E., Duclos, I., Piat, M., . . . Xie, H. (2006). Generalisability of the individual placement and support model of supported employment: results of a Canadian randomised controlled trial. *The British Journal of Psychiatry, 189*(1), 65-73. doi:10.1192/bjp.bp.105.012641.

A group of Canadian researchers (Latimer et al., 2006) successfully implemented the model in Quebec, recruiting participants who weren't currently employed and wanted to work, and compared it to traditional vocational rehabilitation, showing superior employment rates (48% vs. 18%) and more hours worked for those employed (126 vs. 71 hrs/week).

Implications: The IPS model can successfully be implemented in program and system contexts that are very different from where they were initially implemented in the US. In Canada, the model's generalizabilty to Aboriginal people and various ethnocultural groups remains in question.

24. Corbière, M., Lanctôt, N., Lecomte, T., Latimer, E., Goering, P., Kirsh, B., . . . Kamagiannis, T. (2010). A pan-Canadian evaluation of supported employment programs dedicated to people with severe mental disorders. *Community Mental Health Journal, 46*(1), 44-55. doi: 10.1007/s10597-009-9207-6.

A more recent Canadian paper (Corbière et al., 2010) looked at implementation of SE in 26 programs across three provinces. They found several distinct patterns of implementation. One key challenge was integrating mental health and vocational practice. The authors suggest this may have been exacerbated particularly in rural settings where the two components were less likely to be co-located. Employment specialists may also feel reluctant to participate in traditional mental health case conferences based on the medical model rather than rehabilitative paradigm, and may have felt their knowledge was undervalued.

Implications: Achieving fidelity requires striving to achieve a shared interdisciplinary vision of practice.

25. Oldman, J., Thomson, L., Calsaferri, K., Luke, A., & Bond, G.R. (2005). A case report of the conversion of sheltered employment to evidence-based supported employment in Canada. *Psychiatric Services*, *56(*11), 1436 - . doi: 10.1176/appi.ps.56.11.1436.

A Canadian case study (Oldman et al., 2005) documented the evolution of supported employment services within a community mental health agency in Vancouver, BC, which shifted from providing to providing sheltered employment, to pre-employment training, to using brokered employment services, and finally to fully implementing the IPS model (moving its vocational rehabilitation counsellors into external mental health teams. This change occurred over a period of several years and required organizational leadership and a commitment to quality assurance. By implementing IPS, employment rates went from 3, to 15, and finally to 50%.

Implications: With organizational leadership, Canadian community agencies can work with other formal services (e.g. case management teams) to effectively implement evidence-based supported employment.

26. Burns, T., & Catty, J. (2008). IPS in Europe: The EQOLISE trial. *Psychiatric Rehabilitation Journal, 31*(4), 313-317. doi: 10.2975/31.4.2008.313.317.

Authors from a multi-site research team (Burns & Catty, 2008) report on the results of the EQOLISE study, a multi-site European trial showed that across the six centres, IPS doubled the employment outcomes (e.g. 54% vs. 27% worked for "at least one day") and the probability of hospital readmission declined. The variability in employment outcomes was partially explained by local employment rates and welfare system regulations.

Implications: The IPS model can be successfully implemented in Europe, and it can be effective even when achieving positive outcomes are hindered by local employment conditions.

Non-Vocational Outcomes

27. Bond, G. R., Resnick, S. G., Drake, R. E., Xie, H., McHugo, G. J., & Bebout, R. R. (2001). Does competitive employment improve nonvocational outcomes for people with severe mental illness? *Journal of Consulting and Clinical Psychology, 69*(3), 489-501. doi:10.1037/0022-006X.69.3.489.

An important early paper (Bond, Resnick et al., 2001) studied non-vocational outcomes (symptoms, self-esteem, quality of life) in participants receiving various forms of vocational rehabilitation and work situation (competitive, sheltered, minimal work, and no work), finding in the competitively employed compared to minimal-low employed participants higher rates of improvements in symptoms, higher self-esteem, and higher rates of satisfaction with employment, finances and leisure time. These advantages were not found in the sheltered employment group.

Implications: While earlier studies had showed no negative impact on non-vocational outcomes (e.g., symptoms, hospitalization), practitioners and policy-makers *can* anticipate positive mental health-related changes in conjunction with the improved vocational outcomes resulting from SE.

Individual-Level Predictors of Success

28. Campbell, K., Bond, G. R., & Drake, R. E. (2011). Who benefits from supported employment: A meta-analytic study. *Schizophrenia Bulletin, 37*(2), 370-380. doi:10.1093/schbul/sbp066.

A paper entitled "Who Benefits from IPS" showed that all groups studied, by clinical, demographic and work history variables, favoured IPS on job acquisition, weeks worked, and job tenure outcomes (Campbell, Bond, & Drake, 2011).

Implications: IPS can still benefit clients having characteristics considered to be employment barriers (little work history, symptomatic, etc.). Compared to program factors, individual-level factors are not strong predictors of success, and can be ameliorated by SE.

29. **Mueser, K. T., Campbell, K., & Drake, R. E. (2011). The effectiveness of supported employment in people with dual disorders.** ***Journal of Dual Diagnosis, 7*****(1-2), 90-102. doi: 10.1080/15504263.2011.568360.**

A paper by (Mueser, Campbell, & Drake, 2011) focussing on participants from previously reviewed studies having recent substance use, showed that compared to traditional vocational rehabilitation interventions, the IPS intervention benefitted these participants in similar ways from the overall group, in relation to how quickly a first job was obtained, and in terms of wages, and hours and weeks worked during the study period.

Implications: Substance use should not be a barrier to eligibility to SE services.

30. **Catty, J., Lissouba, P., White, S., Becker, T., Drake, R.E., Fioritti, A., . . . Burns, T. (2008). Predictors of employment for people with severe mental illness: Results of an international six-centre randomised controlled trial.** ***The British Journal of Psychiatry, 192*****(3), 224-231. doi:10.1192/bjp.bp.107.041475.**

Catty et al. (2008) reported on a study looking at success factors (individual, process and service-level characteristics) associated with the superior employment outcomes found in the EQOLISE study, a multi-centre RCT of IPS conducted in six European sites. Having a previous work history, fewer unmet social needs and a better relationship with vocational workers predicted better employment outcomes. Remission of symptoms and swifter service uptake were associated with working more. Having a service closer to the IPS model was the only service characteristic associated with the models' effectiveness.

Implications: Achieving successful results requires achieving high fidelity implementation of IPS and targeting relational skills.

31. **Tsang, A. W. K., Ng, R. M. K., & Yip, K. C. (2010). A six-month prospective case-controlled study on the effects of the clubhouse rehabilitation model on Chinese patients with chronic schizophrenia.** ***East Asian Archives Of Psychiatry, 20*****(1), 23-30. Retrieved from http://easap.asia/index.htm.**

Tsang, Ng, and Yip (2010) a study on predictors of employment outcomes, showed overwhelmingly (contrary to previous results) that cognitive functioning was a significant predictor, as well as identifying other predictors including negative symptoms, education, previously holding a job successfully, age, social skills and support, and rehabilitation support to restore community functioning. The review found that hospitalization, positive symptoms and substance abuse were not significant predictors. Other potential predictors that may be changeable and related to recovery include concerns regarding benefit status, negative/self-stigmatizing beliefs**,** and social skills deficits.

Implications: This study suggests that evidence-based employment programs may be enhanced by developing strategies to help participants address cognitive and social functioning; it also suggests that psychosocial rehab strategies in general, while not sufficient in themselves to achieve employment outcomes, may enhance SE programs.

Innovations and Future Evolution of Supported Employment

32. Drake, R. E., & Bond, G. R. (2008). The future of supported employment for people with severe mental illness. *Psychiatric Rehabilitation Journal, 31*(4), 367-376. doi: 10.2975/31.4.2008.367.376.

Drake and Bond (2008) discuss the future evolution of the model, suggesting that future issues will include: being more systematic about implementation, addressing disability-related policies, more focus on job development and ongoing job support, career development, individualizing the SE model for people with motivation challenges and illness-related barriers (e.g. cognitive deficits), and expanding the model to new populations (e.g. early psychosis, people who have experienced homelessness).

33. McGurk, S. R., Mueser, K. T., & Pascaris, A. (2005). Cognitive training and supported employment for persons with severe mental illness: One-year results from a randomized controlled trial. *Schizophrenia Bulletin, 31*(4), 898-909. doi:10.1093/schbul/sbi037.

McGurk, Mueser, and Pascaris (2005) describe the Thinking Skills for Work intervention, for addressing cognitive impairments that pose employment barriers, and present results of an RCT trial showing the intervention to improve employment outcomes (likeliness to work, hours/weeks worked, wages earned) for people with cognitive deficits (n = 44) compared to usual IPS.

Implications: The study demonstrates the feasibility of integrating cognitive remediation into IPS, and paves the way for more research into its efficacy and generalizability to other settings.

34. Roberts, M. M., Murphy, A., Dolce, J., Spagnolo, A., Gill, K., Lu, W., & Librera, L. (2010). A study of the impact of social support development on job acquisition and retention among people with psychiatric disabilities. *Journal of Vocational Rehabilitation, 33*(3), 203-207. Retrieved from http://www.iospress.nl/journal/journal-of-vocational-rehabilitation/.

Roberts et al. (2010) report on the results of a study which examined the impact on SE outcomes of an approach to social network development known as Person Centered Planning (PCP). The study included participants from seven eligible SE programs in the Northeastern United States, who reported results at the 12 month mark. The authors found a positive relationship between the number of non-paid support network members, and job retention (number of days worked over the course of the study). They found a negative relationship between number of paid workers in the network and job retention. There was also a positive relationship between the quality of implementation of PCP (as measured by quality indicators) and number of days worked.

Implications: Strengthening natural support networks may improve long-term job retention for SE participants. The mechanism by which increased natural support translates into better job retention (or increased number of paid supporters is associated with relatively lower job retention) remains an interesting question to be investigated.

Adapting SE for Early Psychosis

35. Rinaldi, M., Killackey, E., Smith, J., Shepherd, G., Singh, S. P., & Craig, T. (2010). First episode psychosis and employment: A review. ***International Review of Psychiatry, 22*****(2), 148-162. doi:10.3109/09540261003661825.**

Rinaldi et al. (2010) "First Episode Psychosis and Employment: A Review", suggests that people experiencing a first episode of psychosis, like others experiencing mental illness, want to complete school and/or work, but face significant barriers doing so. Many are falling out of school or work settings when they first contact services, and this trend continues as they become engaged in care. Despite these barriers, recent studies of IPS in first episode psychosis (including two randomized trials) showed employment and/or education completion rates of 68%, versus 35% of controls.

Implications: People with first episode psychosis may benefit equally, if not more so, than others with serious mental illness from SE. These interventions may have to be adapted to take the educational aspirations of participants into account, and as such should blend SE with supported education.

36. Eack, S. M., Greenwald, D. P., Hogarty, S. S., Cooley, S. J., DiBarry, A. L., Montrose, D. M., & Keshavan, M. S. (2009). Cognitive enhancement therapy for early-course schizophrenia: Effects of a two-year randomized controlled trial. ***Psychiatric Services, 60*****(11), 1468-1476. doi:10.1176/appi.ps.60.11.1468.**

Eack et al. (2009) used Cognitive Enhancement Therapy for participants recently diagnosed with schizophrenia, compared it to "enriched supportive therapy", and demonstrated superior cognition and employment outcomes (more likely to employed and satisfied with their employment, greater earnings) than the comparison condition, outcomes which were mediated by improvements in cognition (including social cognition).

Implications: The study suggests that for participants with early psychosis, employment outcomes can be successfully impacted with an innovative cognitive remediation intervention alone. A significant but unanswered question is whether this model compares favourably with IPS alone.

SE and Homelessness

37. Burt, M. R. (2012). Impact of housing and work supports on outcomes for chronically homeless adults with mental illness: LA's HOPE. *Psychiatric Services, 63*(3), 209-215.doi:10.1176/appi.ps.201100100.

Burt (2012) reports on the results of Los Angeles' Project Hope, a demonstration project offering supported employment and permanent supported housing to individuals with mental illness who had previously been homeless. Fifty-is participants from three of Los Angeles County's 18 community mental health centers were studied over a period of 13 months. Demonstration project participants demonstrated significantly better housing and employment outcomes than comparison group participants.

Implications: SE can be implemented successfully with people with very challenging mental health histories, when combined with permanent supported housing.

Critical Ingredients and Other Key Issues (Ongoing Job Support/Longer-Term Job Retention; Benefits Counselling, Disclosure)

38. Bond, G. R., Becker, D. R., Drake, R. E., Rapp, C. A., Meisler, N., Lehman, A. F., . . . Blyler, C. R. (2001). Implementing supported employment as an evidence-based practice. *Psychiatric Services, 52*(3), 313-322. doi:10.1176/appi.ps.52.3.313.

Bond, Becker et al. (2001) *Implementing Supported Employment as an Evidence-Based* Practice: The objective of this article was to provide an accessible, plain language review of the emerging findings, e.g. from the first Cochrane Review, of the Supported Employment intervention. It defines SE, and distinguishes it from earlier approaches, often situated at day hospitals or clubhouses, which emphasize lengthy pre-vocational periods using skills training, limited time job placements and sheltered workshops or job units; by contrast SE program place high emphasis on job placement. The findings show compared to traditional approaches, SE at least doubles the employment rate, speeds up the time to first employment amongst those that do, and improves job tenure for employed people; however, half of participants leave their first job within six months. The critical ingredients of the model include: close coordination with clinical services (e.g. case management), basing job search/placement on consumer preference (rather than "readiness"), using employment specialists to find appropriate job settings (job development), helping the participant undergo a rapid job search, and providing indefinite follow-along supports (such as helping with workplace issues such as accommodations and disclosure, being a job coach, participating in case management meetings so that clinical barriers to continued employment can be addressed, and commitment to competitive employment. This is defined as: 1) pays the minimum wage or higher; 2) is located in a mainstream, socially integrated setting; 3) is not set aside for persons with disabilities; and 4) is held independently, i.e., is not agency owned). Caseload size, diverse employment settings, assertive outreach, and benefits counselling have also been identified as critical ingredients, but are less studied. More research is needed on long-term outcomes and on cost-effectiveness, but cost appears to be similar to traditional programs (e.g. Day Programs) at about $2000 to 4000 per client, with some suggestion that this cost may be offset by lower clinical costs.

Implications: Compared to traditional programs, SE interventions following certain principles (or critical ingredients) double the employment rates for people with serious mental illness who want to work.

39. **Tremblay, T., Smith, J., Xie, H., & Drake, R. E. (2006). Effect of benefits counseling services on employment outcomes for people with psychiatric disabilities.** ***Psychiatric Services, 57*****(6), 816-821. doi: 10.1176/appi.ps.57.6.816.**

    Tremblay, Smith, Xie, and Drake (2006) showed that clients of vocational rehabilitation programs receiving specialized benefits counselling (regarding work incentives, managing benefits during transition to employment and information to supporting professionals) made $100 more per month than a comparison group of vocational rehabilitation participants not receiving the counselling.

    Implications: This study provides some research support to the common sense notion that benefits counselling helps employment outcomes, and as such should be considered a critical ingredient to SE.

40. **Bond, G. R., & Kukla, M. (2011). Impact of follow-along support on job tenure in the individual placement and support model.** ***The Journal of Nervous and Mental Disease, 199*****(3), 150-155. doi:10.1097/NMD.0b013e31820c752f.**

    Bond and Kukla (2011) looked at the role of providing ongoing vocational support for clients who obtain employment, a putatively critical, but unverified, aspect of the IPS model, and showed that frequency of ongoing contact was positively and related to job tenure (months of work during the two-year follow-up period).

    Implications: The study supports the typical practice of ongoing vocational support as an important contributor to vocational success, suggesting that IPS program provide weekly support in the initial two months following job acquisition, then monthly check-ins thereafter. The authors pose the question of the characteristics of effective job specialists, and the need to gather further information on this issue.

Alternative Program Delivery Contexts for SE (Clubhouse, PACT, IPS Within Consumer-Run Organization)

41. **Macias, C., Rodican, C. F., Hargreaves, W. A., Jones, D. R., Barreira, P. J., & Wang, Q. (2006). Supported employment outcomes of a randomized controlled trial of ACT and clubhouse models.** ***Psychiatric services, 57*****(10), 1406-1415. doi:10.1176/appi.ps.57.10.1406.**

    Macias et al. (2006) compared benchmark SE outcomes with employment-related outcomes for SE delivered within the context of a certified clubhouse, and of an integrated PACT model, and found comparable employment rates for both ACT and clubhouse models (64% and 47% respectively). Over 24 months, ACT participants had superior service engagement, and better retention rates than Clubhouse participants (98% vs. 74%; and 79% vs. 58%, respectively), however clubhouse participants had better employment performance over the same period, in that they worked significantly more hours (494 vs. 234), over a significantly longer period (199 days vs. 98 days), an effect the

authors attribute in part to the higher earnings earned by clubhouse participants ($3,456 vs. $1,252 total earnings). The difference in employment rates was non-significant.

Implications: Certified clubhouses can achieve similar employment outcomes to those of published "model" SE programs, as well as deliver other rehabilitative supports. ACT programs that integrate employment specialists can also achieve these outcomes, as well as integrated clinical care. This suggests that both certified clubhouses and integrated ACT teams are viable models for SE, a conclusion that is contrary to those found by systematic reviews of SE, which generally favour the IPS model. The study raises the question of why these particular programs have achieved relatively higher employment outcomes, and whether it is possible that these program contexts can also deliver the same essential ingredients provided by IPS.

42. Schonebaum, A. D., Boyd, J. K., & Dudek, K. J. (2006). A comparison of competitive employment outcomes for the clubhouse and PACT models. *Psychiatric Services, 57*(10), 1416-1420. doi: 10.1176/appi.ps.57.10.1416.

Schonebaum, Boyd, and Dudek (2006) compared competitive employment rates for ACT and clubhouse models. After 30 months, participants in both groups had similar employment placement rates, and hours worked per week. Clubhouse participants earned more, and remained employed in significantly more hours per job worked. Both PACT and clubhouse participants had high employment placement rates (74% vs. 60%) respectively.

Implications: This study suggests that ACT and clubhouses are promising models for delivering SE.

43. Barreira, P. J., Tepper, M. C., Gold, P. B., Holley, D., & Macias, C. (2011). Adapting evidence-Based interventions to fit usual practice: Staff roles and consumer choice in psychiatric rehabilitation. *Psychiatric Quarterly, 81*(2), 139-155. doi:10.1007/s11126-010-9124-4.

Barreira, Tepper, Gold, Holley, and Macias (2011) point out that multi-service settings (such as clubhouses or drop-in centres) providing rehabilitative support across various domains (supported socialization, housing, education, health promotion, cognitive and social skill training) are increasingly adopting evidence-based practices (EBP) but are challenged by fidelity standards of SE and other EBP's requiring that programs hire employment specialists. This study demonstrated that a generalist approach could achieve similar outcomes to published IPS results in terms of increases in mainstream employment, and showed that these results were associated with number of days clients participate in SE supports, and with number of independent providers. This suggests that the generalist model can approximate the effectiveness of traditional IPS, and that in real world settings this may be a viable option for implementing high quality SE.

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Rinaldi, M., Killackey, E., Smith, J., Shepherd, G., Singh, S. P., & Craig, T. (2010). First episode psychosis and employment: A review. *International Review of Psychiatry, 22*(2), 148-162. doi:10.3109/09540261003661825

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Wellness Management & Recovery Interventions

IMR and related interventions: Reviews and Background Papers

44. Sterling, E. W., von Esenwein, S. A., Tucker, S., Fricks, L., & Druss, B. G. (2010). Integrating wellness, recovery, and self-management for mental health consumers. *Community Mental Health Journal, 46*(2), 130-138. doi: 10.1007/s10597-009-9276-6.

Sterling, von Esenwein, Tucker, Fricks, and Druss (2010) in "Integrating Wellness, Recovery & Self-Management" suggest that these three interrelated concepts are complementary and share an underlying similarity of empowering consumers to direct their mental health care. Self-management interventions have helped individuals with various chronic illnesses develop the confidence and skills to address their conditions on a day-to-day basis. This approach also holds unrealized potential for people with serious mental illness and concurrent disorders, especially when situated within a recovery and/or wellness framework. The concept of wellness highlights broader healthy lifestyle and well-being concerns sometimes included but not always emphasized by the recovery philosophy.

Implications: The authors argue that rather than competing for resources, interventions that integrate wellness, recovery and self-management should be implemented as a coherent package. They discuss interventions which do so, including the Wellness Recovery Action Plan (WRAP) intervention, BRIDGES, and the HARP program, described below.

45. Mueser, K. T., Corrigan, P. W., Hilton, D. W., Tanzman, B., Schaub, A., Gingerich, S., . . . Herz, M. I. (2002). Illness management and recovery: A review of the research. *Psychiatric Services, 53*(10), 1272-1284. doi: 10.1176/appi.ps.53.10.1272.

A review (Mueser, Corrigan et al., 2002) begins by defining recovery, which entails discovering or recovering strengths, moving towards life goals, and reclaiming an identity beyond illness. The paper then reviews professionally-led illness management interventions, categorizing these into: *psychoeducation*, which helps individuals learn more about their condition by providing basic information, *behavioural tailoring*, which helps individuals take medications as prescribed by integrating these into their daily routine, *relapse prevention* which helps individuals reduce symptom relapses and rehospitalizations by identifying relapse triggers and warning signs and developing preventive plans, and *coping skills training*, using cognitive behavioural therapeutic (CBT) techniques, which helps individuals deal with symptoms and/or stress, and reduce the severity and distress of symptoms by increasing the use of currently effective strategies or learning new ones.

Implications: This paper identifies a number of critical ingredients that when grouped together can be considered an evidence based practice. Consistent with the first Cochrane Review (Pekalla & Merinder, 2002), this review emphasizes that psychoeducation alone is usually not sufficient to impact compliance or relapse. The

paper is significant in that it emphasizes that psychoeducation provides the basis for a more comprehensive approach to increasing compliance and reducing service use. All of the elements of the more comprehensive approach (psychoeducation, cognitive and behavioural approaches to treatment engagement, relapse prevention and CBT-based coping skills training) were subsequently developed into a standardized intervention (Illness Management & Recovery, or IMR) that is being implemented and trialed in the United States and other countries (see below). The authors point out that at this point there is not enough evidence to suggest that IMR-related interventions are sufficient to impact on broader quality of life, or impact on broader recovery/wellness-related outcomes. The authors call for more research on this issue as well as on consumer-led wellness management approaches, such as the Wellness Recovery Action Plan or WRAP program (see below).

46. Mueser, K. T., Meyer, P. S., Penn, D. L., Clancy, R., Clancy, D. M., & Salyers, M. P. (2006). The illness management and recovery program: Rationale, development, and preliminary findings. *Schizophrenia Bulletin, 32*(Suppl.1), S32-S43. doi: 10.1093/schbul/sbl022.

A paper (Mueser, Meyer et al., 2006) entitled "the IMR program: Rationale and Preliminary Findings", describes the IMR intervention and provides preliminary research demonstrating its acceptability to participants, the feasibility of implementing it in different contexts (US and Australia), and provides data regarding positive outcomes. The program incorporates the four components identified in Mueser, Corrigan et al. (2002), and adds a fifth component, building social support networks. It is offered as a series of modules (e.g., recovery strategies, practical facts about mental illnesses, stress vulnerability model, building medication effectively, drug and alcohol abuse, etc.) offered on a one to one or group basis over a period of nine or ten months, generally in one hour sessions provided once a week. Consistent with one of the theoretical frameworks of the intervention, Proschaka's et al. transtheoretical model of change, in each module participants learn and discuss the new material in the context of their life goals. The authors present preliminary evidence suggesting strong improvements in self-reported effectiveness in coping with symptoms, and clinician-reported global functioning.

Implications: This study showed that a standardized intervention, IMR, which incorporates the critical ingredients of illness management, can be successfully implemented and could achieve positive results and set the stage for future research (see below: Illness Management & Recovery: intervention trials).

47. Lincoln, T. M., Wilhelm, K., & Nestoriuc, Y. (2007). Effectiveness of psychoeducation for relapse, symptoms, knowledge, adherence and functioning in psychotic disorders: A meta-analysis. *Schizophrenia Research, 96*(1), 232-245. doi: 10.1016/j.schres.2007.07.022.

A meta-analysis on psychoeducational interventions (Lincoln, Wilhelm, & Nestoriuc, 2007) examined interventions that fit the Mueser et al. (2002) definition of illness-management in that they provided information, as well as coping skills and strategies. This analysis also examined whether interventions that included families would be more effective than those directed solely at consumers, and found that interventions that

included families were more effective at reducing symptoms by the end of treatment, and reducing relapse at the 7-12 month follow-up period.

Implications: Practitioners should explore the benefits with consumers of involving significant others in illness or wellness management interventions.

Illness Management & Recovery: Evidence on Intervention Types (Motivational Approaches, Psychoeducation, CBT, Other Psychosocial Interventions, Family Psychoeducation)

48. McIntosh, A., Conlon, L., Lawrie, S., & Stanfield, A. C. (2009). Compliance therapy for schizophrenia. *Cochrane Database of Systematic Reviews*. doi: 10.1002/14651858.CD003442.pub2.

This review describes the intervention, which is based on motivational interviewing principles, and helps clients review their history of illness, as well as the potential benefits and drawbacks of taking medication for schizophrenia. The review only included one study and found no significant impact on compliance or attitudes towards medication, but a trend towards reduction in time spent in the hospital over a two-year period.

Implications: The authors maintain that the approach holds promise and should be studied further.

49. Haynes, B. R., Ackloo, E., Sahota, N., McDonald, H. P., & Yao, X. (2008). Interventions for enhancing medication adherence. *Cochrane Database of Systematic Reviews*. doi: 10.1002/14651858.CD000011.pub3.

A Cochrane Review of medication adherence interventions (Haynes, Ackloo, Sahota, McDonald, & Yao, 2008) looked at interventions for various health conditions, which included serious mental illness, but not addictions.

Implications: The review found that in order to be effective the interventions that enhanced adherence were generally complex, and included multiple facets, including providing information, making care more convenient, giving telephone reminders, and other forms of individual follow-up and supervision. The impacts on adherence were generally modest and generally did not extend to other clinical outcomes.

50. Xia, J., Merinder, L. B., Belgamwar, M. R. (2011). Psychoeducation for schizophrenia. *Cochrane Database of Systematic Reviews*. doi: 10.1002/14651858.CD002831.pub2.

A Cochrane Review of psychoeducational interventions, (Xia, Merinder, & Belgamwar, 2011) examined interventions that were consistent with Mueser et al. (2002;2006) definition of illness-management in that they provided information but also sought to influence attitudinal and behavioural change. The findings were consistent with the earlier review, showing that these interventions can improve compliance, reduce relapse and rehospitalisation. There was also some evidence that they can improve quality of life and social functioning.

Implications: This review provides no helpful information that could supplement the Mueser et al.'s (2002;2006) advice as to what the critical components of these interventions should be, nor as to how long they should be carried out for, but it does reinforce the conclusion that illness management interventions should be implemented more broadly.

51. Wykes, T., Steel, C., Everitt, B., & Tarrier, N. (2008). Cognitive behavior therapy for schizophrenia: Effect sizes, clinical models, and methodological rigor. ***Schizophrenia Bulletin, 34*****(3), 523-537. doi: 10.1093/schbul/sbm114.**

A review of CBT for psychosis by Wykes, Steel, Everitt, & Tarrier, (2008) looked not only at the effectiveness of the intervention for addressing positive symptoms, but also other outcomes such as negative symptoms, functioning, mood and social anxiety. The results showed positive outcomes on all of these outcomes.

Implications: CBT for psychosis can impact on a wide range of outcomes, over and above the area considered its specific benefit, i.e. helping people deal with symptoms that don't respond to medication.

52. Jones, C., Hacker, D., Cormac, I., Meaden, A., & Irving, C. B., (2012). Cognitive behaviour therapy versus other psychosocial treatments for schizophrenia. ***Cochrane Database of Systematic Reviews*****. doi: 10.1002/14651858.CD008712.pub2.**

A Cochrane Review comparing CBT for psychosis with less sophisticated psychosocial interventions for people with schizophrenia (Jones, Hacker, Cormac, Meaden, & Irving, 2012) found no clear advantage of CBT, in terms of reducing relapse/rehospitalisation, or addressing positive and negative symptoms.

Implications: Less sophisticated psychosocial interventions consistent with the IMR approach may achieve similar results to CBT.

53. Pharoah, F., Mari, J., Rathbone, J., & Wong, W. (2010). Family intervention for schizophrenia. ***Cochrane Database of Systematic Reviews*****. doi: 10.1002/14651858.CD000088.pub3.**

A Cochrane Review (Pharoah, Mari, Rathbone, & Wong, 2010) on family psychoeducational interventions (many of which provide basic illness-related information, use structured problem solving approaches, provide communication skill training, and include both consumers and families, using individual and multi-family formats) suggests that family interventions can reduce "expressed emotion" (i.e. improve consumer/family interaction styles), and may reduce relapse, rehospitalisation, and treatment compliance.
Implications: Where relevant, psychoeducational and broader IMR/WMR interventions should consider including family members and significant others.

"Illness Management & Recovery" Intervention trials

54. Färdig, R., Lewander, T., Melin, L., Folke, F., & Fredriksson, A. (2011). A randomized controlled trial of the illness management and recovery program for persons with schizophrenia. ***Psychiatric Services, 62*****(6), 606-612. doi:10.1176/appi.ps.62.6.606.**

Färdig, Lewander, Melin, Folke, and Fredriksson (2011) implemented the IMR approach in Sweden, using a group-based approach including app. five participants in each of six study centres. This RCT showed that compared to controls, participants showed better illness management ability post-treatment and at 21 month follow-up, and were also less symptomatic and demonstrated better coping ability, for instance better using the support of others, and adopting proactive strategies for problem-solving illness-related issues.

Implications: Even with participants who already receive extensive community support, the IMR intervention can improve self-management ability. The study also shows the generalizability of results beyond the U.S.

55. Hasson-Ohayon, I., Roe, D., & Kravetz, S. (2007). A randomized controlled trial of the effectiveness of the illness management and recovery program. ***Psychiatric Services, 58*****(11), 1461-1466. doi: 10.1176/appi.ps.58.11.1461.**

Hasson-Ohayon, Roe, and Kravetz (2007) implemented a group-based form of the IMR intervention described above in eight centres in Israel. Their RCT found that compared to controls, participants in the IMR intervention showed significant improvement in knowledge about the illness and made greater progress towards personal goals. Clinicians also rated the intervention group as showing greater overall improvement. Both groups improved their ability to cope with the illness, though the intervention sites with greater fidelity to the IMR model did show an increase in coping compared to treatment as usual. No change in social support was found in either group.

Implications: This study, the first RCT of the IMR intervention, suggests that a standardized, well-implemented but flexible approach to IMR can significantly contribute to coping and attainment of broader recovery goals.

56. Roe, D., Hasson-Ohayon, I., Salyers, M. P., & Kravetz, S. (2009). A one year follow-up of illness management and recovery: Participants' accounts of its impact and uniqueness. *Psychiatric Rehabilitation Journal, 32*(4), 285-291. doi: 10.2975/32.4.2009.285.291.

A 1-year follow-up of the IMR trial (Roe, Hasson-Ohayon, Salyers, & Kravetz, 2009) was a qualitative study conducted with approximately 30 participants from within eight of the IMR implementation centres described by the Hasson-Ohayon et al (2007), paper. It looked in an open-ended fashion for outcomes experienced, as well as sought to understand the elements of the intervention process that may have contributed to these. It showed that one year after the program ended, participants continued to experience the benefits of the program, the majority of whom continued to experience a high positive impact. Unanticipated outcomes included impact on cognitive ability (e.g. concentration), as well as improvements in social support and ability. The format of the program, including the workbook, and the interactive aspect (the Israeli study was implemented in a group-based format) was perceived as contributing to the intervention's helpfulness. Compared to previous interventions, the IMR intervention was perceived as considerably more hopeful in nature.

Implications: The group-based form of IMR in particular may contribute to social support and may accentuate the intervention's ability to convey useful information and skills, and to convey hope for recovery.

57. Salyers, M. P., Rollins, A. L., Clendenning, D., McGuire, A. B., & Kim, E. (2011). Impact of illness management and recovery programs on hospital and emergency room use by medicaid enrollees. *Psychiatric Services, 62*(5), 509-515. doi: 10.1176/appi.ps.62.5.509.

A study looking at IMR integrated with ACT (Salyers, Rollins et al., 2011) examined impact on hospital service use, examined hospitalization rates within five Assertive Community Treatment teams that implemented the IMR approach, and showed that IMR program attendees and graduates were more likely to have no hospitalization, had fewer hospitalization days and fewer emergency room visits than participants who received ACT only. The approach was implemented on an individual basis, rather than in a group-based format. This is the first study to demonstrate the impact of IMR on service usage.

Implications: This was an observational study, but the ability of IMR to improve the already high impact of ACT on service use is promising. Participants tended to have more education (which may suggest difficulties with the accessibility of the program, which contains written material that may be experienced as intensive). As participants were more likely to live in supportive housing than independently, and be white and male; also, the study was conducted in one state (Indiana). All of these factors raise questions about the generalizability of the results.

58. Salyers, M. P., McGuire, A. B, Rollins, A. L., Bond, G. R., Mueser, K. T., & Macy, V. R. (2010). Integrating assertive community treatment and illness management and

recovery for consumers with severe mental illness. ***Community Mental Health Journal, 46*****(4), 319-329. doi: 10.1007/s10597-009-9284-6.**

Another paper by the same research group (Salyers, McGuire et al., 2010) provides additional information on the initiative to integrate IMR specialists within ACT teams using peer specialists. As found in Salyers, Rollins et al.'s (2011), those individuals actually exposed to the intervention experienced lower hospital service usage. However, the authors point to certain implementation challenges. For instance, ACT team members may feel pressure to do crisis oriented work which can take away from IMR work. The individually provided approach limits the "penetration rate" of IMR, which limited the intervention to only approximately 25% of consumers on ACT teams during the study period.

Implications: ACT teams can benefit from implementing IMR, but need to develop strategies for integrating this work into day to day practice in ways that can realize its benefits.

59. **Lecomte, T., Leclerc, C., Corbière, M., Wykes, T., Wallace, C. J., & Spidel, A. (2008). Group cognitive behavior therapy or social skills training for individuals with a recent onset of psychosis? Results of a randomized controlled trial.** ***The Journal of Nervous and Mental Disease, 196*****(12), 866-875. doi: 10.1097/NMD.0b013e31818ee231.**

Lecomte et al. (2008) report on the results of this Canadian study, an RCT comparing group-based CBT, group-based social skills training (based on the Liberman model), and a waitlist control group. The interventions were carried out within early psychosis clinics in BC and Quebec by non-specialist staff, and outcome measures for the 129 participants were taken at 3 and 9 months. Compared to the waitlist control group, the CBT group showed improvements on overall symptoms, self-esteem, and active-coping strategies. Both intervention groups improved on negative and positive symptoms.

Implications: This group-based intervention holds promise for participants with early psychosis, and can be feasibly implemented in Canadian service delivery contexts.

Wellness Recovery Action Plan (WRAP) and Other Peer-Led or Peer-Professional Led Wellness Management Intervention Studies

60. **Cook, J. A., Copeland, M. E., Hamilton, M. M., Jonikas, J. A., Razzano, L. A., Floyd, C. B., . . . Grey, D. D. (2009). Initial outcomes of a mental illness self-management program based on wellness recovery action planning.** ***Psychiatric Services, 60*****(2), 246-249. doi: 10.1176/appi.ps.60.2.246.**

A paper on WRAP initial outcomes (Cook, Copeland, Hamilton et al., 2009) describes this intervention and presents initial findings. WRAP is delivered over a course of eight weeks, co-facilitated by two peer facilitators offering a 2.5 hour session, once per week. Facilitators have completed the program and attended a five-day process to certify them as "recovery educators". The program is intended for individuals with a variety of conditions who may or may not identify their issues with the medical model or participate in formal mental health services. Unlike IMR it avoids use of diagnostic labels, but similar to IMR helps participants learn about triggers and warning signs of

relapse. WRAP participants develop a "wellness and recovery" action plan by developing coping skills for avoiding relapse and staying well. Peer modelling and drawing on the personal experiences of facilitators and participants is integral to the intervention. This initial study, a pre-post evaluation across five study sites in Ohio, showed improvements in a number of self-management related outcomes, including symptoms, hope, and physical health. No changes were found in social support.

Implications: This first published study of WRAP shows that the peer-led model is consistent with illness management and recovery critical ingredients, that it appears feasible to implement, and holds potential in improving illness management and recovery-related outcomes. WRAP may be a preferable alternative for people who do not adopt the illness model of mental health.

61. Cook, J. A., Copeland, M. E., Corey, L., Buffington, E., Jonikas, J. A., Curtis, L. C., . . . Nichols, W. H. (2010). Developing the evidence base for peer-led services: Changes among participants following Wellness Recovery Action Planning (WRAP) education in two statewide initiatives. *Psychiatric Rehabilitation Journal, 34*(2), 113-120. doi: 10.2975/34.2.2010.113.120.

Cook, Copeland, Corey et al. (2010) present results from a pre-post evaluation in two states (Vermont and Minnesota) where the WRAP program was implemented in multiple regions. The results showed significant changes in participants' wellness management knowledge, abilities and attitudes, including hopefulness about recovery, awareness of triggers and warning signs, and knowledge of strategies for staying well.

Implications: This study provides further evidence of the promise of the WRAP model across various contexts, and the feasibility of implementing the model across an entire state (or province).

62. Fukui, S., Starnino, V. R., Susana, M., Davidson, L. J., Cook, K., Rapp, C. A., & Gowdy, E. A. (2011). Effect of Wellness Recovery Action Plan (WRAP) participation on psychiatric symptoms, sense of hope, and recovery. *Psychiatric Rehabilitation Journal, 34*(3), 214-222. doi: 10.2975/34.3.2011.214.222.

A study on WRAP impact on recovery-related outcomes (Fukui et al., 2011) was a quasi-experimental trial conducted at five sites in Kansas, which showed that intervention group members experienced fewer symptoms and greater hopefulness following the intervention and at six month follow-up. There was no change on recovery, as measured by the Recovery Markers Scale. The intervention was delivered by a peer educator (who had been trained in a two-day event) and a psychosocial rehabilitation practitioner, using sessions of approximately 1.5 to 2 hrs, in groups that were initially between four and twelve members.

Implications: The results suggest that peer-led WMR/IMR interventions can be useful complement to other evidence-based recovery-oriented supports. The authors suggest also that the impacts of these interventions could be improved if they were integrated more closely with formal supports.

63. Cook, J. A., Copeland, M. E., Jonikas, J. A., Hamilton, M. M., Razzano, L. A., Grey, D. D., . . . Boyd, S. (2011). Results of a randomized controlled trial of mental illness self-

management using Wellness Recovery Action Planning. ***Schizophrenia Bulletin*****. doi:10.1093/schbul/sbr012.**

Cook, Copeland, Jonikas et al. (2011) present the first RCT of the WRAP intervention which shows that compared to a waitlist control, the approximately 260 test group participants significantly reduced symptom levels, improved hopefulness, and improved their quality of life over time. These results were still significant at six-month follow-up.

Implications: This study suggests that the WRAP program, implemented in all fifty states and in some Canadian provinces, and in use for the past several years, can achieve wellness management outcomes and contribute to recovery. This peer led intervention appears to be on track to be considered an evidence-based practice. The results are consistent with peer-delivered self-management related interventions for other health conditions (e.g. the Chronic Disease Self Management Program, Bodheimer, Lorig & et al., (2002)) which appear to achieve outcomes at least in part via positive social comparisons and self-efficacy beliefs through behaviour and results modelled by similar others.

64. Jonikas, J. A., Grey, D. D., Copeland, M. E., Razzano, L. A., Hamilton, M. M., Floyd, . . . Cook, J. A. (2011). Improving propensity for patient self-advocacy through wellness recovery action planning: Results of a randomized controlled trial. ***Community Mental Health Journal*****. Advanced online publication. doi: 10.1007/s10597-011-9475-9.**

An RCT of WRAP impact on patient self-advocacy (Jonikas et al., 2012) found the intervention to have greater impact on patient self-advocacy, which in turn was related to greater hopefulness, fewer psychiatric symptoms, and higher environmental quality of life.

Implications: Taken together with the Cook, Steigman et al.'s (2012), RCT study, the results suggest that peer-led IMR interventions would be a useful part of a full array of recovery-oriented supports.

65. Cook, J. A., Steigman, P., Pickett, S., Diehl, S., Fox, A., Shipley, P., . . . Burke-Miller, J. K. (2012). Randomized controlled trial of peer-led recovery education using Building Recovery of Individual Dreams and Goals through Education and Support (BRIDGES). ***Schizophrenia Research, 136*****(13), 36-42. doi: 10.1016/j.schres.2011.10.016.**

Cook, Steigman et al. (2012) reported on the results of a multi-site trial in Tennessee, of the Building Recovery of Individual Dreams and Goals through Education and Support, which compared to a waitlist control found higher self-perceived recovery on a number of dimensions, as well as improved hopefulness (agency) at program completion and six-month follow-up. These impacts were found in people with co-occurring depression but to a lesser degree. Like WRAP, the intervention is taught by a certified peer educator in eight sessions, lasting 2.5 hours, in groups of 4-13 people, using curriculum based information, structured exercises, personal anecdotes and group discussion to illustrate and process the concepts. Along with basic mental health-related treatment information (traditional and non-traditional), and material about preventing relapse and coping skills, building social and community support systems, the content includes information about the recovery process, as well as structured problem solving and

communications skills. Instructors received backup support from clinical leaders to deal with group process issues, and a backup teacher was available for emergencies.

Implications: This, the second successful RCT trial of a peer-led WMR/IMR intervention demonstrates that well implemented peer led interventions can impact significantly on illness management and recovery-related outcomes.

66. Barbic, S., Krupa, T., & Armstrong, I. (2009). A randomized controlled trial of the effectiveness of a modified recovery workbook program: Preliminary findings. *Psychiatric Services, 60*(4), 491-497. doi: 10.1176/appi.ps.60.4.491.

Barbic, Krupa, and Armstrong (2009) conducted a randomized controlled trial of the Boston Center for Psychiatric Rehabilitation's Recovery Workbook; the intervention was shortened from the recommended 40 weeks, to 12 two-hour sessions conducted once a week by a peer support worker (a paid worker of an ACT team) and an occupational therapist, and offered in groups of seven to nine, to members of an Assertive Community Treatment Team in Kingston, ON. Like the WRAP program, the Recovery Workbook offers information and skills, provides education about the recovery process and strategies, and helps participants develop an action plan. Though the intervention was shortened, all topics in the original curriculum were covered, and delivered through a mixture of instruction, discussion, and practice exercises. Immediately after completion of the intervention, the study found significant increases in hopefulness, empowerment, and aspects of recovery, as measured by the Recovery Assessment Scale (RAS).

Implications: This trial shows that there a number of promising options for delivering IMR/WMR interventions which appear to promote recovery, and in which peers are involved as educators.

67. Druss, B. G., Zhao, L., von Esenwein, S. A., Bona, J. R., Fricks, L., Jenkins-Tucker, S., . . . Lorig, K. (2010). The Health and Recovery Peer (HARP) program: A peer-led intervention to improve medical self-management for persons with serious mental illness. *Schizophrenia Research, 118*(1-3), 264-270. doi:10.1016/j.schres.2010.01.026.

Druss et al. (2010) present the results of an RCT of the Health and Recovery Program (HARP), an adaptation of the Stanford Chronic Disease Self Management Program (CDSMP) for people with serious mental illness and other co-morbid conditions. The study found a relative advantage in terms of patient activation, and use of primary care health care at six-month follow-up. Though not statistically significant, the intervention participants tended to have, physical activity, physical health related quality of life, and greater adherence to treatment.

Implications: This peer-led program shows promise, and may be another opportunity to effectively engage the peer workforce.

68. Lawn, S., Battersby, M. W., Pols, R. G., Lawrence, J., Parry, T., & Urukalo, M. (2007). The mental health expert patient: Findings from a pilot study of a generic chronic condition self-management programme for people with mental illness. *International Journal of Social Psychiatry, 53*(1), 63-74. doi: 10.1177/0020764007075010.

Lawn et al. (2007) implemented the Stanford CDMSP program for people with serious mental illness (the largest subgroup of whom had first episode psychosis). Participants' self-management abilities and preferences were assessed by a case manager in a primary care setting, and then offered collaborative care structured problem solving approach, and either the Stanford model or 1:1 peer-based self management training. The pilot project showed increases in self-management ability and mental functioning at six-month follow-up.

Implications: Despite implementation challenges, a self-management intervention involving both the primary care and mental health sectors can improve self-management ability of people with serious mental illness.

Implementing IMR-related interventions within real-world service settings

69. Levitt, A. J., Mueser, K. T., DeGenova, J., Lorenzo, J., Bradford-Watt, D., Barbosa, A., . . . Chernick, M. (2009). Randomized controlled trial of illness management and recovery in multiple-unit supportive housing. *Psychiatric Services, 60*(12), 1629-1636. doi: 10.1176/appi.ps.60.12.1629.

A paper reporting on the results of an RCT of IMR in multi-unit supportive housing (Levitt et al., 2009) described how the IMR approach was implemented in a group format (of approximately 7 or 8 participants) by a housing agency for its clients, and showed significant improvements in self and clinician rated self-management ability, in symptoms, and in psychosocial functioning. There was no impact on rehospitalisation or on substance use, which were relatively low to begin with. There was a relatively high drop out rate (approximately 50%) which post-hoc focus groups indicated were due to the content being viewed as too basic for some participants, who already had a significant degree of knowledge about their illness and how to manage it.

Implications: The IMR model can be implemented in routine mental health settings, such as housing agencies. Facilitators need to be cognizant that group members are at similar baseline levels of knowledge and self-management ability. [As suggested earlier, this may be harder to accomplish with larger groups of participants.]

70. Salyers, M. P., Godfrey, J. L., McGuire, A. B., Gearhart, T., Rollins, A. L., & Boyle, C. (2009). Implementing the illness management and recovery program for consumers with severe mental illness. *Psychiatric Services, 60*(4), 483-490. doi: 10.1176/appi.ps.60.4.483.

Salyers, Godfrey et al. (2009) examined implementation in seven sites in one state, and demonstrated that it is feasible to implement the model with high fidelity. It generally took one year to achieve these fidelity levels, which were achieved through initial training sessions, supervision, group leader teleconferences supervised by a trainer, and fidelity site visits. This pre-post evaluation demonstrated similar results as found in the published trials (Hasson-Ohayon et al., 2011; Färdig et al., 2011) finding increases in self-management ability, but not in hope or satisfaction with other services. The authors also discuss some key implementation challenges.

Implications regarding implementation challenges: On the basis of their experience the authors suggest that given the amount of material, that the group-based format using approximately 4 participants may be most feasible. Attempts to include 7 or 8, as recommended initially, may be less feasible, given that the intervention seeks to address individually set life goals of each of its participants. They also suggest that sites start with one pilot project rather than attempt to implement the model on a broad scale right away. Another recommendation is for programs to internalize the fidelity monitoring and outcome measurement functions, rather than continue to rely on outside technical assistance support.

71. Michon, H. W. C., van Weeghel, J., Kroon, H., & Schene, A. H. (2011). Illness self-management assessment in psychiatric vocational rehabilitation. ***Psychiatric Rehabilitation Journal, 35*****(1), 21-27. doi: 10.2975/35.1.2011.21.27.**

Michon, van Weeghel, Kroon, and Shene (2011) suggest that illness management ability may improve vocational outcomes, and present data on an assessment scale that holds promise as an adjunct to vocational assessment which may help participants identify and address illness-related barriers in the workplace.

Implications: Assessing and addressing work-specific illness management barriers may help consumers find and maintain employment.

72. Salerno, A., Margolies, P., Cleek, A., Pollock, M., Gopalan, G., & Jackson, C. (2011). Wellness self-management: An adaptation of the illness management and recovery program in New York state. ***Psychiatric Services, 62*****(5), 456-458. doi: 10.1176/appi.ps.62.5.456.**

Salerno et al. (2011) described the initiative of New York State to adapt the IMR approach. The main changes were to add material that was more "wellness" focussed, and to adapt the approach (originally designed as an individual intervention) to the group format by developing a participant workbook, a specific group facilitation approach, and developing a process for helping participants set individual action steps to accomplish personal goals. Across all the approximately 100 programs, about 400 participants identified individualized goals at baseline, and at the end of treatment had made significant progress towards achieving 75% of these.

Implications: A structured, easy to implement facilitation process and individualized workbook can help jurisdictions adapt the IMR intervention for their own purposes. The IMR intervention can be made more "wellness" focussed by adding a module focussing on physical health.

73. Whitley, R., Gingerich, S., Lutz, W. J., & Mueser, K. T. (2009). Implementing the illness management and recovery program in community mental health settings: Facilitators and barriers. ***Psychiatric Services, 60*****(2), 202-209. doi: 10.1176/appi.ps.60.2.202.**

Whitley, Gingerich, Lutz, and Mueser (2009) describe a study of implementation of IMR, which showed four factors that contributed: *leadership*, at multiple-levels (jurisdiction, agency and program), and where the work of the various leaders was synergistic; *organizational culture*: marked by agencies that had implemented innovative practices in

the recent past and saw the IMR project as an opportunity to facilitate recovery, rather than something that took resources away from organizational concerns about maintaining the status quo or survival; *training*, from a well-respected competent individual is necessary for strong implementation, but appears to require the presence of strong leadership and organizational culture to succeed; and *staffing and supervision* from individuals who had developed similar skills and who were "bought in" to the value of illness management and recovery; low fidelity sites expressed concerns about perceived program shortcomings (e.g. dense material) while higher fidelity sites were able to work around these.

Wellness & Lifestyle Interventions – Reviews

74. Faulkner, G., Cohn, T., & Remington, G. (2007). Interventions to reduce weight gain in schizophrenia. *Schizophrenia Bulletin, 33*(3), 654-656. doi: 10.1093/schbul/sbm022.

Faulkner, Cohn, and Remington (2010) reported on a Cochrane Review looking at weight loss interventions for people with serious mental illness, and found that CBT and pharmacological adjunct therapy both prevented wait gain compared to a control group. The review also found that CBT was effective in helping people lose weight.

Implications: Both psychosocial and pharmacological interventions can have modest impacts in terms of preventing weight gain, and psychosocial interventions can achieve weight loss, which may have an impact with respect to preventing diabetes, stroke, and heart disease.

75. Gorczynski, P., & Faulkner, G. (2010). Exercise therapy for schizophrenia. *Cochrane Database of Systematic Reviews*, (5). doi: 10.1002/14651858.CD004412.pub2.

Gorczynski and Faulkner (2011) review the health benefits of exercise for people with schizophrenia. The results of this Cochrane review are similar to existing reviews that have examined this issue. Although studies included in this review are small and used various measures of physical and mental health, results indicated that regular exercise programmes are possible, and that they can have healthful effects on both the physical and mental health and well-being of individuals with schizophrenia. Larger randomised studies are required before any definitive conclusions can be drawn.

Implications: Exercise-related interventions can be implemented and can benefit the physical and mental health of people with serious mental illness.

76. Kisely, S., Quek, L.-H., Pais, J., Lalloo, R., Johnson, N. W., & Lawrence, D. (2011). Advanced dental disease in people with severe mental illness: systematic review and meta-analysis. *The British Journal of Psychiatry, 199*(3), 187-193. doi: 10.1192/bjp.bp.110.081695.

Kisely et al. (2011) show that people with serious mental illness have disproportionate rates of advanced dental disease.

Implications: People with serious mental illness should have access to oral hygiene and management of dental psychiatric medication side-effects integrated into regular care.

77. **Tsoi, D. T., Porwal, M., & Webster, A. C. (2010). Interventions for smoking cessation and reduction in individuals with schizophrenia.** ***Cochrane Database of Systematic Reviews*****. doi: 10.1002/14651858.CD007253.pub2.**

A Cochrane Review of a smoking cessation intervention for people with schizophrenia (Tsoi, Porwal, & Webster, 2011) suggests that Bupropion increases smoking abstinence rates in smokers with schizophrenia, without jeopardising their mental state. Bupropion may also reduce the amount these patients smoke. Contingency reinforcement with money may help this group of patients to quit and reduce smoking. The authors failed to find convincing evidence that other interventions have a beneficial effect on smoking behaviour in schizophrenia.

Implications: There are helpful interventions to offer people with schizophrenia who wish to quit smoking, which can be integrated into their regular healthcare.

Integrated Dual Diagnosis Treatment (IDDT) and Psychosocial Interventions

78. **Drake, R. E., O'Neal, E. L., & Wallach, M. A. (2008). A systematic review of psychosocial research on psychosocial interventions for people with co-occurring severe mental and substance use disorders.** ***Journal of Substance Abuse Treatment, 34*****(1), 123-138. doi: 10.1016/j.jsat.2007.01.011.**

A review of integrated dual diagnosis treatment and psychosocial interventions (IDDT) (Drake, O'Neal, & Wallach, 2008), showed that a number of interventions (group counselling, contingency management, and residential dual diagnosis treatment) were effective for helping participants manage substance use disorder.

Implications: Integrated Dual Diagnosis Treatment (IDDT) has a large and heterogeneous evidence base which supports several forms of interventions. More research is required regarding staging of the interventions, and determining which interventions work for which subgroup.

79. **Cleary, M., Hunt, G. E., Matheson, S., & Walter, G. (2009). Psychosocial treatments for people with co-occurring severe mental illness and substance misuse: Systematic review. *Journal of Advanced Nursing, 65*(2), 238-258. doi:10.1111/j.1365-2648.2008.04879.x.**

A Cochrane Review of psychosocial interventions for PWDD (Cleary, Hunt, Matheson, & Walter, 2009) found no difference between various approaches (integrated case management, non-integrated case management, motivational interviewing, CBT) and care as usual.

Implications: There is no evidence supporting any particular approach to IDDT, although methodological problems prevent proper comparisons of the different interventions.

80. **Torchalla, I., Nosen, L., Rostam, H., & Allen, P. (2012). Integrated treatment programs for individuals with concurrent substance use disorders and trauma experiences: A systematic review and meta-analysis. *Journal of Substance Abuse Treatment*, 42(1), 65-77. doi: 10.1016/j.jsat.2011.09.001.**

Torchalla, Nosen, Rostam and Allen (2011) conducted a systematic review of psychotherapeutic integrated treatment (IT) for individuals with trauma histories and substance use.

Implications: Both integrated and non-integrated treatment had a positive impact of trauma symptoms and substance abuse.

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81. **Bodenheimer, T., Lorig, K., Holman, H., & Grumbach, K. (2002a). Patient self-management of chronic disease in primary care. *JAMA, 288*(19), 2469-2475.**

82. **Pekalla, E. & L. Merinder (2002). Psychoeducation for Schizophrenia. *Cochrane Database of Systematic Reviews.* 4 (update).**

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Drake, R. E., O'Neal, E. L., & Wallach, M. A. (2008). A systematic review of psychosocial research on psychosocial interventions for people with co-occurring severe mental and substance use disorders. *Journal of Substance Abuse Treatment, 34*(1), 123-138. doi: 10.1016/j.jsat.2007.01.011

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Whitley, R., Gingerich, S., Lutz, W. J., & Mueser, K. T. (2009). Implementing the illness management and recovery program in community mental health settings: Facilitators and barriers. *Psychiatric Services, 60*(2), 202-209. doi: 10.1176/appi.ps.60.2.202

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Life & Leisure Skills

General Life Skills

83. Tungpunkom, P., Maayan, N., & Soares-Weiser, K. (2012). Life skills programmes for chronic mental illnesses. *Cochrane Database of Systematic Reviews*, (1), doi: 10.1002/14651858.CD000381.pub3.

Tungpunkom, Maayan and Soares-Weiser (2011) carried out a Cochrane Review comparing life skills interventions, standard care, and support groups; they found no significantly different impact on social performance, quality of life, or symptomatology.

Implications: This review does not describe any of the interventions categorized as "life skills" interventions, so it is difficult to ascertain the implications of the paper; however, providing life skills training appears to offer no advantage when compared to regular community care.

84. Gibson, R. W., D'Amico, M., Jaffe, L., & Arbesman, M. (2011). Occupational therapy interventions for recovery in the areas of community integration and normative life roles for adults with serious mental illness: A systematic review. *The American Journal of Occupational Therapy, 65*(3), 247-256. doi: 10.5014/ajot.2011.001297.

Gibson, D'Amico, Jaffe and Arbesman (2011) carried out a systematic review that looked at OT interventions for enhancing skills and performance in "normative roles", finding that the evidence for social skills training (SST) was strong, whereas the evidence for life skills/activities of daily living (ADL)-related interventions is moderate, as was the evidence for neurocognitive + skill training in the areas of work, social participation, and ADL's.

Implications: SST can improve social performance, ADL training can help with activities of daily living, but in and of themselves life skill/ADL-related interventions and neurocognitively-oriented skill training do not appear effective for improving performance of normative life roles in the longer term. As discussed elsewhere in this bibliography, however, all of these interventions (neurocognitive skill training, SST, and other life skills interventions) may be useful adjuncts to supported employment and/or supported education. OT's may have to diversify their traditional focus on assessment and skill building towards the complementary task of identifying and developing supports in the work environment.

Social Skills Training

85. Pilling, S., Bebbington, P., Kuipers, E., Garety, P., Geddes, J., Martindale, B., . . . Morgan, C. (2002). Psychological treatments in schizophrenia: II. Meta-analyses of randomized controlled trials of social skills training and cognitive remediation. *Psychological Medicine, 32*(05), 783-791. doi: 10.1017/S0033291702005640.

Pilling et al. (2002) conducted a meta-analytical review of social skills training interventions (SST), and cognitive remediation, comparing these to other "active interventions" and standard care. They found no relative benefit for SST on relapse rate, global adjustment, social functioning, quality of life or treatment compliance. Cognitive remediation had no benefit on attention, verbal memory, visual memory, planning, cognitive flexibility or mental state.

Implications: The authors' conclusion is that these interventions are not recommended given the current state of evidence.

86. Kurtz, M. M., & Mueser, K. T. (2008). A meta-analysis of controlled research on social skills training for schizophrenia. *Journal of Consulting and Clinical Psychology, 76*(3), 491-504. doi: 10.1037/0022-006X.76.3.491.

Kurtz and Mueser (2008) conducted a meta-analysis of social skills training interventions (SST), examining effect sizes of SST on proximal, medial and distal outcomes, but not comparing these to those produced by standard care other active interventions that might be comparable. They found a strong effect on content-mastery, a moderate effect on performance-based measures of ADL and role performance, a moderate effect on community functioning and negative symptoms, and a small effect on other symptoms and relapse.

Implications: SST helps people with serious mental illness perform the activities of daily living, and improves general community functioning and thus should be considered as an aspect of a comprehensive psychosocial rehabilitation approach. It may also be helpful for illness management.

87. Roder, V., Mueller, D. R., Mueser, K. T., & Brenner, H. D. (2006). Integrated Psychological Therapy (IPT) for schizophrenia: Is it effective? *Schizophrenia Bulletin, 32*(Suppl. 1), S81-S93. doi: 10.1093/schbul/sbl021.

Roder, Mueller, Mueser, and Brenner (2006) reviewed seven high-quality studies of Integrated Psychological Therapy (IPT), an intervention that combines traditional SST with an approach that targets cognitive (including social cognitive) function, and found that compared to standard care, IPT achieved superior "global therapy outcomes", as well as superior neurocognition, psychopathology improvement scores, and psychosocial functioning, which were maintained eight months later, across all outcome domains and assessment formats, for a variety of participant populations at various stages in their illness.

Implications: This manualized five-module group-based intervention significantly helps the interpersonal problem-solving ability and social competence of persons with serious mental illness and thus should be considered as part of a comprehensive psychosocial

rehabilitation approach. Unlike computer-based cognitive remediation approaches that help participants process "cold cognitions", in the IPT approach cognitive remediation is carried out in an interactive fashion and in conjunction with social problem solving. This may account for the differences in findings between this review and that conducted by Pilling et al.'s (2002), which was not as supportive of cognitive remediation approaches. The IPT intervention has largely been implemented in European settings. Thus, there are questions surrounding its generalizability to a Canadian context, and about implementation, given its unfamiliarity here. However, as described elsewhere in this bibliography (see Eack et als. 2009, under Supported Employment), a recent RCT of a similar approach known as Cognitive Enhancement Therapy (CET) for participants with "early course schizophrenia" showed similar results in terms of social role performance, and showed significant improvements in employment-related outcomes, even though the intervention did not directly target employment status.

88. **Reddon, J. R., Hoglin, B., & Woodman, M.-A. (2008). Immediate effects of a 16-week life skills education program on the mental health of adult psychiatric patients.** ***Social Work in Mental Health, 6*****(3), 21-40. doi:10.1300/J200v06n03_02.**

Reddon, Hoglin, and Woodman (2008) report on the results of a pre-post evaluation of a Canadian intervention that addresses social perception, interpersonal communication, problem-solving, and self/emotional awareness, which showed improvements in depression, and in "psychiatric and social symptomatology" (which measures psychosocial adjustment), though only for women.

Implications: Though only suggestive in and of itself, this study is consistent with and thus reinforces the conclusions of the evidence presented above suggesting that social cognitively-oriented interventions should be part of an overall approach to psychosocial rehabilitation, and also suggests that these interventions can successfully implemented in a Canadian context.

Social Skills Training and other Psychosocial Rehabilitation Approaches in Older Populations

89. **Pratt, S. I., Van Citters, A. D., Mueser, K. T., & Bartels, S. J. (2008). Psychosocial rehabilitation in older adults with serious mental illness: A review of the research literature and recommendations for development of rehabilitative approaches.** ***American Journal of Psychiatric Rehabilitation, 11*****(1), 7-40. doi: 10.1080/15487760701853276.**

Pratt, Van Citters, Mueser, and Bartels (2008) review the literature pertaining to psychosocial rehabilitation approaches for older adults. The results suggest that specific interventions that help independent living skills and social skills which "hold promise" for older populations include Functional Adaptation Skills Training (FAST), Cognitive-Behavioural Social Skills Training (CBSST) and Skills Training and Health Management (ST + HM). The FAST intervention is based on social learning theory and is a 24-week modularlized program which addresses illness management, skill-training for Activities of Daily living, and communication skills. Two RCTs of the intervention have been conducted, including one adapting the intervention for the Latino community, and

showed improved negative symptoms and improvements in performance-based measures of the community functioning, but no "real world" outcomes were measured. CBSST combines social skills training and CBT for persistent symptoms using cognitive restructuring techniques. Two RCTs have been conducted which demonstrated improvements in cognitive insight about symptoms (but not symptoms themselves), and some aspects of social functioning (leisure and transportation skills), though no measures were conducted in actual community settings. ST + M combines traditional SST and health management (see the next abstract for a fuller description of the intervention). One RCT has demonstrated improvements in general health outcomes (e.g. connection to primary care physicians, improved health prevention) and improvements in performance-based social and community functioning. ***Implications:*** Psychosocial interventions combining SST, wider life skills, and illness management approaches including CBT should be considered for older people with serious mental illness. A number of rehabilitative interventions hold promise and should be considered, as should other proven rehabilitation approaches such as Supported Employment and medication adherence-related interventions. Decision-makers should also consider implementing these in the context of service delivery formats such as Assertive Community Treatment or Intensive Case Management. For further consideration of how such interventions could be implemented within various Canadian service delivery, system and community contexts, decision-makers should consult McCourt et al.'s (2011), who on behalf of the Mental Health Commission of Canada have produced a comprehensive report on recovery-oriented supports for seniors with or at risk of serious mental illness and mental health issues.

90. Mueser, K. T., Pratt, S. I., Bartels, S. J., Swain, K., Forester, B., Cather, C., & Feldman, J. (2010). Randomized trial of social rehabilitation and integrated health care for older people with severe mental illness. ***Journal of Consulting and Clinical Psychology, 78*****(4), 561-573. doi: 10.1037/a0019629.**

Mueser et al. (2010) present the results of three-site RCT of the group-based HOPES program, a year-long social rehabilitation intervention (with a one year maintenance phase) for adults over 50 with serious mental illness, which showed, compared to treatment as usual significant improvements of moderate effect size in performance-related measures of social skill, psychosocial and community functioning, negative symptoms, and self-efficacy. Psychosocial functioning improvements included an improvement in the use of recreational and leisure performance, two areas which are directly addressed by the intervention. The intervention is delivered in modules to approximately 6-8 people, and is based on standardized SST approaches in terms of its curriculum (communication, making friends, using leisure time effectively, healthy living, using medications effectively, and making the most of a healthcare visit) and its approach (information, skill practice, role play and feedback, homework), with a specific focus on a broader health concerns and on use of leisure/recreational skills.

Implications: This study shows that existing social/life skills training approaches can be successfully adapted for older adults and can provide benefits in psychosocial functioning, including use of leisure and recreational time. The intervention may also improve general health management, but more study using more appropriate measures would be needed to ascertain this. The psychosocial functioning performance scales on

which participants reported improvement are predictive of ongoing real world role performance, so no firm conclusions can be drawn about these longer term outcomes.

Home-Management Skills

91. Hellrich, C. A., Chan, D. V., & Sabol, P. (2011). Cognitive predictors of life skill intervention outcomes for adults with mental illness at risk for homelessness. ***The American Journal of Occupational Therapy, 65*****(3), 277-286. doi: 10.5014/ajot.2011.001321.**

Hellrich, Chan, and Sabol (2011) present results of a skill training intervention targeted at participants with mental illness who are at risk of becoming homeless. Using a pre-post design they showed significant improvements in self-care, room management, and money-management.

Implications: The results of this study, which represents the traditional approach to housing-related rehabilitation, should be considered in the context of the wider literature on supported housing. This is because, as was the case with supported employment, traditional approaches to home-management skill training (or other role-related training) though helpful for housing or other role-related performance, do not appear sufficient to significantly improve participants' prospects of maintain their housing.

Money-Management Skills

92. Elbogen, E. B., Tiegreen, J., Vaughan, C., & Bradford, D. W. (2011). Money management, mental health, and psychiatric disability: A recovery-oriented model for improving financial skills. ***Psychiatric Rehabilitation Journal, 34*****(3), 223-231. doi: 10.2975/34.3.2011.223.231.**

Elbogen, Tiegreen, Vaughan, and Bradford (2011) review the literature on money management.

Implications: In consideration of the results of clinical case studies, published studies, and general articles on financial literacy, they suggest that money management approaches should be incorporated into the psychosocial rehabilitation toolbox, and can improve: knowledge about and access to disability benefits, basic financial skills, and protection from financial exploitation. The approaches should be done in a way that enhances self-determination.

93. Elbogen, E. B., Wilder, C., Swartz, M. S., & Swanson, J. W. (2008). Caregivers as money managers for adults with severe mental illness: How treatment providers can help. *Academic Psychiatry, 32*(2), 104-110. doi:10.1176/appi.ap.32.2.104.

Elbogen, Wilder, Swartz, and Swanson (2008) review the issue of caregiver involvement in money management.

Implications: Case managers should be aware of whether caregivers are involved in money management and take steps to minimize the downsides (e.g. conflict between consumers and families, dependence, etc.) and potentiate the upsides of this situation. They can do so by establishing strategies for increased collaboration in money management, building money management skills in consumers, and making advanced plans for financial decision-making.

94. Ries, R. K., Dyck, D. G., Short, R., Srebnik, D., Fisher, A., & Comtois, K. A. (2004). Outcomes of managing disability benefits among patients with substance dependence and severe mental illness. *Psychiatric Services, 55*(4), 445-447. doi:10.1176/appi.ps.55.4.445.

Ries et al. (2004) report the RCT trial results of a contingency-management approach for paying disability benefits for people with mental illness with recent cocaine or opiate use. Compared to a non-contingent approach (i.e. where participants are paid regardless of substance use, the contingent approach showed better money management, and used significantly less alcohol and drugs. Participants found this voluntary intervention useful.

Implications: Using contingency management may help participants become better money managers and also may have some positive impact on illness (and addictions) management outcomes.

95. Rosen, M.I., Carroll, K. M., Stefanovics, E., & Rosenheck, R. A. (2009). A randomized controlled trial of a money management-based substance use intervention. *Psychiatric Services, 60*(4), 498-504. doi: 10.1176/appi.ps.60.4.498.

Rosen, Carroll, Stefanovics, and Rosenheck (2009) report the RCT trial results of a motivational money management approach, known as ATM (Advisor-Teller) for people with mental illness and addictions. This is a voluntary intervention where a money manager stores the individual's money (chequebooks, cards, money, etc.), and spending is linked to participants' self-defined goals. Compared to the control conditions, participants in the intervention group showed greater reductions in addiction severity, and better money management.

Implications: Motivational interventions show promise in helping clients with concurrent mental illness and substance use disorders improve money management and illness/substance use management.

Supported Housing

96. Chilvers, R., Macdonald, G., & Hayes, A. (2006). Supported housing for people with severe mental disorders. *Cochrane Database of Systematic Reviews*. doi: 10.1002/14651858.CD000453.pub2.

Chilvers, Macdonald, and Hayes (2010) performed a Cochrane review looking at supported and supportive housing and found that more high quality evidence is needed to draw firm conclusions.

Implications: Supportive housing (i.e., housing with built-in support) may provide a "safe haven" for people with serious mental illness that improves community tenure. These benefits, however, need to be weighted against the potential for creating dependence on mental health services.

97. Leff, H. S., Chow, C. M., Pepin, R., Conley, J., Allen, I. E., & Seaman, C. A. (2009). Does one size fit all? What we can and can't learn from a meta-analysis of housing models for persons with mental illness. *Psychiatric Services, 60*(4), 473-482. doi: 10.1176/appi.ps.60.4.473.

Leff et al. (2009) conducted a meta-analysis which compared model (supported and supportive, i.e. residential care and treatment) and non-model housing, looking at satisfaction, housing stability, symptom reduction and rehospitalisation. Model housing differed significantly from non-model housing on all outcomes. Residential care and treatment was superior to non-model housing with respect to symptom reduction; supported housing was associated with greater satisfaction and with greater housing stability than non-model housing (though this latter finding was not statistically significant).

Implications: Both supportive and supported housing offer benefits in terms of housing stability, symptom reduction and rehospitalisation, though permanent supported housing may be more preferred.

98. Nelson, G., Hall, G. B., & Forchuk, C. (2003). Current and preferred housing of psychiatric consumers/survivors. *Canadian Journal Of Community Mental Health, 22* (1), 5-19. Retrieved from http://www.cjcmh.com/.

Nelson, Hall, and Forchuk (2003) showed that while 79% of people with serious mental illness preferred independent apartments (supported housing), 73% of the sample were in some other form of housing.

Implications: Current housing options generally do not correspond with the preferences of people with serious mental illness, in one Ontario region. This finding is consistent with research from other areas.

99. Grant, J. G., & Westhues, A. (2010). Choice and outcome in mental health supported housing. *Psychiatric Rehabilitation Journal, 33*(3), 232-235. doi: 10.2975/33.3.2010.232.235.

Grant and Westhues (2010) examined differences in outcomes (health, mental health, mastery, and social support satisfaction) in high vs. low-support housing settings. Both groups improved on most outcomes over the study period, and there were no differences between study groups. Differences appear to be more attributable to choice over housing, than to level of support.

Implications: In terms of supporting people with serious mental illness to live successfully in the community, choice over living environment appears to be an important contributor, irrespective of level of support.

100. Siegel, C. E., Samuels, J., Tang, D.-I., Berg, I., Jones, K., & Hopper, K. (2006). Tenant outcomes in supported housing and community residences in New York city. *Psychiatric Services, 57*(7), 982-991. doi:10.1176/appi.ps.57.7.982.

Siegel et al. (2006) examined housing tenure associated with different models of housing provision (supported housing and community residential facilities) for previously homeless people with serious mental illness with similar illness characteristics and homeless histories. The study found that substantial proportions of people remained housed over the study period (18 months) regardless of the housing type. The supported housing group showed greater autonomy but some struggled with social isolation. Regardless of housing type, the presence of depression or anxiety at entry was associated with poorer housing outcomes.

Implications: Supported housing is a viable entry point into housing for previously homeless people with mental illness, even for people whose histories would suggest they would more appropriately be placed in community residences.

101. Nelson, G., Aubry, T., & Lafrance, A. (2007). A review of the literature on the effectiveness of housing and support, assertive community treatment, and intensive case management interventions for persons with mental illness who have been homeless. *American Journal of Orthopsychiatry, 77*(3), 350-361. doi:10.1037/0002-9432.77.3.350.

Nelson, Aubry, and LaFrance (2007) conducted a systematic review of housing approaches for previously homeless people with serious mental illness. The review found that combining supported housing and case management (either intensive case management or assertive community treatment) was associated with better housing tenure, and reduced hospitalization.

Implications: This study supports the Housing First model, and suggests that supported housing with mobile evidence-based care should be provided to people with serious mental illness who have been homeless.

102. Nelson, G., Sylvestre, J., Aubry, T., George, L., & Trainor, J. (2007). Housing choice and control, housing quality, and control over professional support as ontributors to the subjective quality of life and community adaptation of people with severe mental illness. *Administration and Policy in Mental Health and Mental Health Services Research, 34*(2), 89-100. doi: 10.1007/s10488-006-0083-x.

Nelson, Sylvestre, Aubry, George, and Trainor (2007) examined the hypothesis that choice/control over housing and support, and over housing quality would be associated with greater subjective quality of life and with better community adjustment; they also examined a second hypothesis which was that apartments (i.e. the supported housing model) would be associated with a greater sense of control. The study found support for both hypotheses.

Implications: There is some evidence that the supported housing model appears to lead to better quality of life and better community adjustment.

Leisure/Recreation/Outdoor Education and Therapy

103. Davidson, L., Shahar, G., Stayner, D. A., Chinman, M. J., Rakfeldt, J., & Tebes, J. K. (2004). Supported socialization for people with psychiatric disabilities: Lessons from a randomized controlled trial. *Journal of Community Psychology*, 32(4), 453-477. doi: 10.1002/jcop.20013.

Davidson et al. (2004) describe a supported socialization and recreation intervention, which was designed to engage socially isolated individuals in social and recreational activities by linking them with a volunteer partner who was either an individual with a history of mental illness or without. The comparison group also received an intervention but was not linked with a partner. Compared to baseline, all participants showed improvements in symptoms, functioning and self-esteem, but differences between groups were significant and were correlated with amount of contact with the volunteer partner.

Implications: Interventions involving volunteer partners can increase social and recreational engagement which, in turn can improve symptoms, functioning and self-esteem.

104. Frances, K. (2006). Outdoor recreation as an occupation to improve quality of life for people with enduring mental health problems. *The British Journal of Occupational Therapy, 69*(4), 182-186. Retrieved from http://www.ingentaconnect.com/content/cot/bjot.

Frances (2006) discuss outdoor recreation for people with serious mental illness. The authors make the case that outdoor recreation can be considered as an occupational role, which if fulfilled can improve self-esteem and wider recovery related outcomes for people with serious mental illness.

Implications: Taken together these two papers provide some theoretical and empirical support for the commonly held idea that recreation-specific interventions should be developed and implemented, because they can facilitate the social recovery of people

with serious mental illness. More attention should be given to the issue of how recreational approaches could be combined with other psychosocial rehabilitation approaches.

Navigating Systems and Services/Accessing Community Services

105. Anderson, J.E. & Clarke, S.C. (2009). The Sooke Navigator project: using community resources and research to improve local service for mental health and addictions. ***Mental Health in Family Medicine*****. 6(1), 21-28. doi:**

Anderson & Clarke (2009) describe the Sooke Navigator Project, and how a rural BC community engaged in an innovative action research project to improve access to mental health and addiction services for citizens and increase connections and communication between primary care, community-based providers, and the formal mental health service system. Developed by a community-based steering committee, the Navigator model is aimed at any person with mental health and addictions issues seeking help in the Sooke region. The model includes: timely needs assessment, collaborative assistance with need-based care planning, appropriate information, referral, and linkage facilitation. Key features of the Navigator model are discussed, including community engagement, and guiding principles. In this rural and remote community, a community-supported Navigator model was effective in increasing access to comprehensive, strengths-based assessment, planning and referral facilitation.

Implications: A joint community effort can increase collaboration between primary care and formal mental health services, and can help people with mental health and addictions issues access and navigate appropriate care.

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Frances, K. (2006). Outdoor recreation as an occupation to improve quality of life for people with enduring mental health problems. *The British Journal of Occupational Therapy, 69*(4), 182-186. Retrieved from http://www.ingentaconnect.com/content/cot/bjot

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Peer Support

Initial Reviews

107. Davidson, L., Chinman, M., Kloos, B., Weingarten, R., Stayner, D., & Tebes, J. K. (1999). Peer support among individuals with severe mental illness: A review of the evidence. *Clinical Psychology: Science and Practice, 6*(2), 165-187. doi: 10.1093/clipsy/6.2.165.

An early review (Davidson, Chinman, Kloos et al., 1999) provides some evidence and a helpful conceptual framework. It defines 3 types of peer support: naturally occurring, consumer-run services (e.g. mutual support groups), and peer-providers within conventional services. Existing studies of mutual support groups suggest that they may improve symptoms, promote larger social networks, and enhance quality of life. This research is largely from uncontrolled studies, however, and will need to be evaluated further using prospective, controlled designs.

Implications: Consumer-run services and the use of consumers as providers promise to broaden the access of individuals with psychiatric disabilities to peer support

108. Solomon, P. (2004). Peer support/peer provided services underlying processes, benefits, and critical ingredients. *Psychiatric Rehabilitation Journal, 27*(4), 392-401. doi: 10.2975/27.2004.392.401.

Building on the Davidson et al. (1999) review, a more recent one (Solomon, 2004) provides more evidence and outlines several elements that appear to be critical to the effectiveness of peer-provided support. This review reports strong evidence regarding benefits of inclusion of peers in conventional services, e.g. two trials found equivalent impact of peer provision and standard provider provision of conventional services (e.g. using peers as case managers or discharge planners); three similar studies found superior results in terms of reduced hospitalization or crisis services. The review reports less strong but promising evidence of peer provided services, including peer-run drop-ins, self-help groups, and peer-run employment programs. Based on these findings, the author suggests that the critical elements of peer support include: use of experiential knowledge; mutual benefit/reciprocity; natural support; primary control by peers (though may involve professionals); delivered by peers who are effective managers of mental health and substance use issues, and who are knowledgeable about the mental health system.

Implications: Peer support in all its forms can provide equivalent or superior care to traditionally provided services. More evidence is needed to replicate the findings described in this review.

109. Davidson, L., Chinman, M., Sells, D., & Rowe, M. (2006). Peer support among adults with serious mental illness: A report from the field. Schizophrenia Bulletin, 32(3), 443-450. doi: 10.1093/schbul/sbj043.

A subsequent "report from the field" (Davidson, Chinman, Sells et al., 2006) based on four RCT's, again shows few differences between conventional care provided by peer and non-peer case managers.

Implications: Consumer providers can provide equivalent care to traditional services. More empirical research is needed to discern the unique "value-add" or critical ingredients of peer support.

Subsequent Studies and Reviews Looking at Critical Ingredients of Peer Support

110. Sells, D., Davidson, L., Jewell, C., Falzer, P., & Rowe, M. (2006). The treatment relationship in peer-based and regular case management for clients with severe mental illness. *Psychiatric Services, 57*(8), 1179-1184. doi: 10.1176/appi.ps.57.8.1179.

An RCT trial examining the "value add" of using consumers as case managers (Sells, Davidson, Jewell, Falzer, & Rowe, 2006) showed that consumer providers were rated more highly than non-consumer providers in terms of their ability to communicate positive regard and show understanding. It also showed that non-engaged participants were more likely to contact peer providers at the outset of treatment. The findings strongly suggest that peer providers serve a valued role in quickly forging therapeutic connections with persons typically considered to be among the most alienated from the health care service system.

Implications: These findings and others (e.g. Felton et al., (1995)) in relation to the contribution of peer workers on ICM teams to quality of life outcomes) have contributed to inclusion of peer specialists within regular case management teams, both ACT and ICM.

111. Repper, J., & Carter, T. (2011). A review of the literature on peer support in mental health services. *Journal of Mental Health, 20*(4), 392-411. Advance on-line publication. doi: 10.3109/09638237.2011.583947.

A recent review and analysis (Repper & Carter, 2011) presents evidence Peer Support Workers (PSWs) can be more successful than professionally qualified staff at promoting hope and belief in the possibility of recovery. They also appear to be more successful at facilitating increased self-esteem, self-efficacy and self-management. They also confer advantages in terms of reduced social inclusion. In addition, employment as a PSW brings benefits for the PSWs themselves. The literature also presents a number of common challenges including the need to consider boundary and power issues, both within the peer relationships and with other professionals, and the stress of the role on the PSW.

Implications: Peer support workers may confer a "value-add" to traditional services in terms of promoting hope, social inclusion and recovery. The approach also confers benefits to the PSW's themselves. In order to realize these benefits, there are certain implementation challenges (e.g. boundary issues, power differentials, potential burn-out) that must be addressed.

Evidence on the Ontario Consumer/Survivor Development Initiative (CSDI), the U.S. COSP Study, and other interventions looking at the using consumer-operated programs to augment support

112. Nelson, G., Ochocka, J., Janzen, R., & Trainor, J. (2006). A longitudinal study of mental health consumer/survivor initiatives: Part 2—A quantitative study of impacts of participation on new members. ***Journal of Community Psychology, 34*****(3), 261-272. doi: 10.1002/jcop.20098.**

113. Nelson, G., Ochocka, J., Janzen, R., Trainor, J., Goering, P., & Lomotey, J. (2007). A longitudinal study of mental health consumer/survivor initiatives: Part V–Outcomes at 3-year follow-up. Journal of Community Psychology, 35(5), 655-665. doi: 10.1002/jcop.20171.

These two papers report on initial and subsequent findings of a longitudinal study on the impact of Consumer/Survivor Initiatives in Ontario. They compared new, active participants with non-active participants at two time periods. At 9 months, there was a significant reduction in utilization of emergency room services for active participants, but not for non-active participants. At 18 months, the active participants showed significant improvement in social support and quality of life (daily activities) and a significant reduction in days of psychiatric hospitalization, whereas the non-active participants did not show significant changes on these outcomes. Also, active CSI participants were significantly more likely to maintain their involvement in employment (paid or volunteer) and/or education over the 18-month follow-up period when compared with those who were not active in CSIs. At 36 months, the continually active participants scored significantly higher than those who were never active and those who had decreased involvement over time on measures of community integration, quality of life (daily living activities), and instrumental role involvement, and significantly lower on symptom distress.

Implications: Participating in a consumer/survivor initiative (related to education, mutual support, and/or system advocacy) confers greater benefits than non-participation in terms of service usage, social support, quality of life and participation in meaningful activities. More research is needed in terms of replicating and discerning critical ingredients.

114. Ochocka, J., Nelson, G., Janzen, R., & Trainor, J. (2006). A longitudinal study of mental health consumer/survivor initiatives: Part 3—A qualitative study of impacts of participation on new members. *Journal of Community Psychology, 34*(3), 273-283. doi: 10.1002/jcop.20099.

A qualitative study on the same initiative (Ochocka, Nelson, Janzen, & Trainor, 2006) provides the participant perception regarding critical ingredients of consumer/survivor directed initiatives. The helpful qualities that participants reported were: (1) safe environments that provide a positive, welcoming place to go; (2) social arenas that provide opportunities to meet and talk with peers; (3) an alternative worldview that provides opportunities for members to participate and contribute; and (4) effective facilitators of community integration that provide opportunities to connect members to the community at large.

Implications: Consumer/Survivor initiatives appear to achieve their impact on quality of life, recovery and role functioning by providing a safe environment which provides a chance for interaction, social inclusion and empowerment.

115. Rogers, E. S., Teague, G. B., Lichenstein, C., Campbell, J., Lyass, A., Chen, R., & Banks, S. (2007). Effects of participation in consumer-operated service programs on both personal and organizationally mediated empowerment: Results of a multisite study. *Journal of Rehabilitation Research & Development, 44*(6), 785-800. doi: 10.1682/JRRD.2006.10.0125.

The multi-site U.S. COSP study (Rogers et al., 2007) examined the impact of different types of consumer-run programs (e.g. drop-ins, advocacy and education oriented programs) which were offered as an adjunct to traditional services. The study showed modest improvement in empowerment-related outcomes, which were augmented for those participants who participated more in COSP programs. This result supports other findings on the same initiative (Cook, 2005) of significantly increased well-being in COSP participants who had greater program participation.

Implications: Consumer-Operated Programs offered as a complement to traditional services can confer benefits in terms of increased well-being and empowerment.

116. Resnick, S., & Rosenheck, R. (2008). Integrating peer-provided services: A quasi-experimental study of recovery orientation, confidence, and empowerment. *Psychiatric Services, 59*(11), 1307- 1314. doi: 10.1176/appi.ps.59.11.1307.

Resnick and Rosenheck (2010) describe a "Vet to Vet" peer education and support program which was provided as an augment to "standard care" provided by the Veterans Affairs Administration, and showed an improvement in recovery-related and clinical outcomes, such as functioning and alcohol abuse.

Implications: This provides additional support that consumer-run alternatives provide an effective adjunct to traditional services.

117. Segal, S., Silverman, C., & Temkin, T. (2010). Self-help and community mental health agency outcomes: A recovery-focused randomized controlled trial. ***Psychiatric Services, 61*****(9), 905-910. doi: 10.1176/appi.ps.61.9.905.**

Segal et al. (2010) compared participants in five sites who received standard care from a community mental health agency and those who also participated in a consumer-run drop-in, looking at five recovery-focused outcome measures: personal empowerment, self-efficacy, social integration, hope, and psychological functioning. The sample with combined services showed greater improvements in personal empowerment, self-efficacy, and independent social integration. Hopelessness and symptoms dissipated more quickly and to a greater extent in the combined condition than in the community mental health agency-only condition.

Implications: Participation in member-run self-help combined with traditional services produced more positive recovery-focused results than traditional community services alone. This provides additional evidence that consumer-run approaches are effective complements to traditional care.

118. Verhaeghe, M., Bracke, P., & Bruynooghe, K. (2008). Stigmatization and self-esteem of persons in recovery from mental illness: The role of peer support. ***International Journal of Social Psychiatry, 54*****(3), 206–218. doi: 10.1177/0020764008090422.**

Verhaeghe, Bracke, and Bruynooghe (2008) examined the hypothesis that peer-provided social support would buffer the impacts on quality of life and stigma related to the stress and stigma associated with mental illness. They found that positive impacts on self-esteem accrued only amongst those participants who did not initially have stigmatizing experiences or perceptions regarding mental illness.

Implications: Pre-existing stigma can act as a barrier to the benefits of peer support. Such attitudes should be assessed and addressed when considering offering peer support.

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Resnick, S., & Rosenheck, R. (2008). Integrating peer-provided services: A quasi-experimental study of recovery orientation, confidence, and empowerment. *Psychiatric Services, 59*(11), 1307- 1314. doi: 10.1176/appi.ps.59.11.1307

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Family Involvement

Mannion, E., Marin, R., Chapman, P., Real, L., Berman, E., Solomon, P., Dinich, D., Molinaro, M. & Cantwell, K. (2012). Overcoming systemic barriers to family inclusion in community psychiatry: The Pennsylvania experience. ***American Journal of Psychiatric Rehabilitation, 15 (1),*** **61-80. Link: http://dx.doi.org/10.1080/15487768.2012.655643**

This article describes an initiative to increase family involvement by community psychiatrists, initiated by the Pennsylvania Psychiatric Leadership Council. The barriers identified including the need for more flexibility in reimbursing psychiatrists for family involvement, lack of knowledge of the benefits of involvement, and need for improved competencies. Psychiatrists also identified the issue of "family estrangement", where no family was available to be involved. Recommendations that were made to increase involvement included changing payment mechanisms, asking consumers for consent, reminder phone calls, and creating "family friendly environments", e.g. by hiring family peer specialists, and including families on planning and advisory boards.

Implications: Efforts to increase family involvement must target a range of issues, related to knowledge, skills, funding, and organizational support for family involvement.

Molinaro, M., Solomon, P., Mannion, E., Cantwell, K. & Evans, A. (2012). Development and implementation of family involvement standards for behavioral health provider programs. ***American Journal of Psychiatric Rehabilitation, 15(1),*** **81-96. Link: http://dx.doi.org/10.1080/1547768.2012.655644**

An effort was made to create and promote family involvement standards within an American jurisdiction, but there was limited change in practice patterns.

Implications: Standards may be necessary but they are not sufficient in and of themselves for increasing family involvement. The authors speculate that standards must be accompanied by training about the benefits of involvement, as well as by organizational change.

Mottaghipour, Y. & Bikerton, A. (2005). The Pyramid of Family Care: A framework for family involvement with adult mental health services. ***Australian e-Journal for the Advancement of Mental Health (AeJAMH), 4 (3)*** **ISSN: 1446-7984.**

Implications: The pyramid model of family involvement (involvement in assessment, general information, psychoeducation) is a useful organizational framework for promoting and evaluating family involvement. For some families, family therapy may be helpful.

Solomon, P., Molinaro, M., Mannion, E. & Cantwell, K. (2012). Confidentiality policies and practices in regard to family involvement: Does training make a difference? ***American Journal of Psychiatric Rehabilitation, 15 (1),*** **97-115. Link: http://dx.doi.org/10.1080/15487768.2012.655648**

Despite evidence that involvement of families and significant others improves rehabilitation outcomes, a significant proportion of service providers may incorrectly believe that maintaining confidentiality with the client precludes them from involvement. Approximately 50% of staff

surveyed in an American community agency believed that they were prevented from even listening to families. An intervention to provide training was evaluated using a pre-post test design, and found that staff often failed to retain that information. Actual changes in practice were not measured.

Implications: Agencies wishing to increase family involvement must not only provide information to staff to address misconceptions. They should also seek to understand and address attitudinal barriers (e.g. that involvement makes their job more difficult) and structural barriers (e.g. lack of supervision and policies that facilitate involvement) to family involvement.

Summerville, C. (2012). Meaningful inclusion and participation of family members in shared decision making. ***Schizophrenia Society of Canada.***

This paper recommends that professionals seek to involve families in shared decision-making. Even if the consumer refuses that involvement, professionals should explore the reasons for that refusal, and communicate the potential benefits of including the family. When involvement is not possible, professionals must be aware that confidentiality does not prevent them from taking information from the family. Families also require general information about mental illness and about the nature and benefits of treatment and support. Ideally, they should also be involved in psychoeducation concerning the specifics of their own loved one.

Implications: Family involvement should be promoted according to the "pyramid" model (see Mottaghipour and Bikerton, 2005), which at its most basic level entails involving families in the assessment process (by eliciting information), but also involves providing general information about mental illness, and more detailed psychoeducation.

Other References

Fraser Health (2011). Families are part of the solution: a strategic direction for family support and inclusion. Fraser Health Authority Mental Health and Substance Use Services.

The F.O.R.C.E. (2012). Families matter: a framework for family mental health in British Columbia. The F.O.R.C.E. Society.

References – Family Involvement

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Summerville, C. (2012). Meaningful inclusion and participation of family members in shared decision making. *Schizophrenia Society of Canada.*

Appendix A: Annotated Bibliography Methodology and Qualifying Statement

This Annotated Bibliography is based on a comprehensive review, analysis and discussion of the evidence based best and promising practices in the five life domains of focus: employment, education, leisure, wellness and basic living skills.

The process for developing the Annotated Bibliography has included:

- A literature review which has focused on literature since 2000. A search of **Psych Info** and **MEDLINE** databases from 2000 to the present was conducted using appropriate generic Key Words including psychosocial rehabilitation, psychiatric rehabilitation, PSR as well as Key Words specific to each section, e.g. peer support, wellness, illness management and recovery, life style, health education, psycho education for families , self-management, nutrition, exercise and weight management
- Wherever possible, level 1 and 2 evidence has been used. Level 1 evidence includes Cochrane and other rigorous reviews, Meta analyses and randomized controlled trials. Level 2 evidence includes quasi experiments and correlational studies.
- Grey literature has been included where it is considered to make a significant addition to the body of knowledge

There are some limitations to the literature review on which this Annotated Bibliography is based. PSR is a relatively new field and there is a shortage of substantial literature in several of the topic, particularly supported education and leisure. Similarly, there is little literature on PSR approaches for persons with substance use problems.