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Adapting problem-solving therapy for depressed older adults in methadone maintenance treatment

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Abstract

Late life depression is prevalent in older adults who are dependent on opiates. Depressive disorders among opiate abusers have detrimental effects on their well-being and ability to refrain from illegal drugs. There are numerous barriers to the provision of appropriate mental health care to older adults receiving methadone maintenance treatment. This article focuses on problem solving therapy (PST) and presents evidence that PST may be a promising non-pharmacological treatment for older methadone clients with comorbid depressive disorders that can be applied within the staffing and resource limits of methadone maintenance treatment facilities. The advantages of PST relative to other behavioral therapies for this population are based on evidence that PST is less cognitively demanding for an older adult population with mood and substance use disorders. A properly modified PST for an older adult substance dependent population with subsyndromal or diagnosed depression may be a viable option for methadone maintenance programs with limited resources.

INTRODUCTION

Over the past 15 years there has been a demographic shift to higher age norms of those seeking treatment for opiate addiction (SAMHSA, 2007). Analysis of data from the National Household Survey on Drug Abuse indicates that, due to the high prevalence of substance use of the baby-boom cohort, the estimated number of people aged 50 or older with a substance use disorder is projected to double from 2.8 million (annual average) in 2002–06 to 5.7 million in 2020 (Han et al., 2009). Older adult (aged 50 or older) admissions to substance abuse treatment nearly doubled from 6.6 percent of all admissions 12 years of age or older in 1992 to 12.2 percent in 2008 (SAMHSA, 2010). Beyond the increased number of older adults seeking treatment for substance abuse problems, the more pressing issue has been the changing nature of treatment seeking with an increasing number of older adults entering treatment for opioid dependence. For example, opiates are the second most frequently cited primary substance of abuse (after alcohol) for all admissions to substance abuse treatment by adults over the age of fifty. In 2005, one in 5.3 substance abuse admissions of 50 to 54 years olds were for heroin dependence (SAMHSA, 2007).

The aging of the clinical methadone population has presented substance abuse treatment providers with several challenges. Often, due to years of drug addiction, these individuals enter old age with multiple vulnerabilities (Rosen et al, 2008). While Federal law requires that methadone be distributed in a clinic setting and be coupled with counseling by a qualified Addictions Counselor, the unrecognized and untreated depression of this older adult population presents several barriers to care (SAMHSA, 2007; Rosen, 2004; Levy &

Anderson, 2005). In addition, treatment addressing depression comorbid with substance dependence disorders is hampered at methadone clinics due to inadequate mental health training for staff and financial restrictions (Caplehorn et al., 1998; Glezen & Lowery, 1999, Hu et al., 2006).

We will review the challenges of providing treatment for late-life depression, both subsyndromal and diagnosed major depression, in greater detail and argue that methadone clinics offer an excellent opportunity to screen for symptoms of depression, initiate treatment, and monitor progress. This article focuses on problem solving therapy (PST) and presents evidence that PST may be a promising non-pharmacological treatment for older methadone clients with comorbid depressive disorders. PST can be effectively implemented due to its 1) efficacy in diverse settings with limited financial resources, 2) ability to be implemented by qualified Addiction Counselors, and 3) capacity to effectively treat depression3 in a variety of older adult populations, including those with cognitive impairments.

CO-OCCURING MOOD and SUBSTANCE USE DISORDERS

Health and mental health care providers who serve individuals with psychiatric and substance dependence disorders are facing new challenges as these individuals age (Oslin, 2005; Reynolds & Kupfer, 1999). Medical and treatment advances have increased the life expectancy of individuals with substance dependence disorders, yet members of these "vulnerable cohorts" are entering later life with multiple co-occurring physical, psychological and psychosocial problems. Older adults with opiate addiction are defined as individuals over the age of fifty, due to the high rates of mortality in this population, along with data indicating that many heroin users die in their fifties (Smyth et. al, 2007).

Depression is the most common mental health disorder of later life. Of the nearly 35 million Americans age 65 and older, an estimated 2 million have a depressive illness and another 5 million report sub-clinical yet distressing symptoms which lead to functional impairments (Alexopoulos et al., 2000; Backenstrass et al., 2006; Charney et al., 2003; Unutzer, 2007). The relationship between substance dependence and depressive disorders has been well documented (Blazer and Wu, 2009; Coelho et al., 2000; Conner et al., 2008). In a 33-year follow-up of male narcotic addicts, with a mean age of 57.4, high rates of physical and mental health problems were reported (Hser et al., 2001). In samples of older adult opiate addicts, depression and its related symptoms are the most prevalent disorder. For example, nearly a third (32.9%) of older adults in methadone treatment had a diagnosis of depression in the past twelve months (Rosen et al., 2008).

Adverse consequences related to both depressive disorders and depressive symptoms among older adults are well-known and include impaired social and occupational functioning and decreased compliance with both mental and physical health treatment modalities (American Psychiatric Association, 1994; Stein et al., 2003). Among individuals with opioid dependence, depressive disorders have been widely documented in terms of both their prevalence and their detrimental effects on well-being and ability to refrain from illegal drug use (Hser 2007; Rosen et al, 2008; Stein et al., 2003). Clinicians have begun to view comorbid depression and substance use as interactive and mutually sustaining (Volkow, 2004). Depressive disorders are frequent among individuals with opioid dependence with one study finding nearly half (42%) of the participants in a methadone maintenance program meeting the criteria for major depression within the past six months (Brienza et al., 2000).

[3]The term depression, unless explicitly noted, is used throughout the manuscript to refer to major depressive disorder, other depressive disorders, and to subsyndromal symptoms of depression.

As opioid-addicted individuals age, these mental health problems may be exacerbated by age-related physical health problems or social isolation, and many require specialized medical approaches and psychosocial support (Hser et al., 2001). Thus, depressive symptoms and disorders are common among older adults with substance use disorders, negatively impacts mental and physical health treatment, and warrant particular attention.

TREATMENT for COMORBID MOOD DISORDERS and SUBSTANCE DEPENDENCE

Decades of addiction have taken a toll on the physical and mental well-being of this cohort (Gruber et al., 2007). As individuals who use illegal drugs age, the systems and programs that serve older adults, as well as those that specialize in substance abuse treatment, will find themselves confronting the unique needs of this population. Comorbid mood disorders have been well documented among individuals with substance use disorders (Castel et al., 2006; Golub et al., 2004), yet most interventions relying solely on antidepressant medication have had a modest effect for individuals with combined mood and substance use disorders (Nunes & Levin, 2004). A review of depression treatment for patients with opiate dependence concluded that psychosocial interventions showing promise in addressing depressive symptoms improved coping skills due to high levels of stress (Nunes, Sullivan, & Levin, 2004).

A primary challenge for substance abuse treatment facilities with an aging client base is that many treatment models and tactics for substance dependence related disorders fail to account for age-related physiological, cognitive, and social changes (Center for Substance Abuse Treatment, 2005). Specifically, interventions need to take into account social context (e.g., living in age-segregated housing, dealing with Medicare regulations, etc.). In addition, cohort differences particularly related to the acceptability of mental health treatment, changes in speed of information processing, learning and memory, and emotions will be important to consider (Satre, Knight & David, 2006). For instance, a Treatment Improvement Protocol (TIP 42) from SAMHSA identified that treatment for individuals with co-occurring disorders, especially those in later-life, needs to be cognizant of functional impairment, highly structured, relatively brief, and focused on practical life problems (CSAT, 2005).

Incorporating treatment modalities that acknowledge the interconnectedness of psychiatric and substance dependence disorders is critical in providing appropriate services to an aging population in the United States (Anderson & Levy et al., 2003). Historically, treatment for substance dependence disorders and mental health problems have been addressed in separate locations, however recent findings have highlighted the efficacy of treatment approaches that address both disorders simultaneously (Ziedonis, 2004). Often, the integration of mental health and substance dependence treatment is hindered by accessibility and coordination issues (Grella et al., 2004).

In summary, an intervention to address depressive symptoms and disorders among older adults with substance use disorders needs to be effective in treating depression while able to address challenges related to 1) the treatment setting; 2) age-related changes; and 3) long-term sequelae of lifetime substance use. Interventions most consistently demonstrated to be effective at treating late-life depressive disorders include interpersonal psychotherapy (IPT), cognitive behavioral therapy (CBT) and problem solving therapy (PST). These interventions have been used with mid-life adults and also specifically adapted for older adults. We have summarized the characteristics and treatment rational for each of these treatments in Table 1. Several meta-analyses and reviews have demonstrated that these psychotherapies are all

effective for treating both depressive disorders and symptoms of depression in later-life (Aréan, Hegel & Reynolds, 2001; Cuijpers et al., 2008; Mackin & Aréan, 2005).

Our decision to focus on PST derives from our read of the PST literature and information on the challenges faced by older adult methadone clients experiencing depressive disorders. Combined with cognitive and physical changes due to aging, depression in later-life can be particularly debilitating. PST can be taught to a qualified Addiction Counselors and introduced at a methadone maintenance program with minimal cost. In addition, PST may have a lower dropout rate than CBT (Cuijpers, van Straten, Andersson, & van Oppen, 2008). Clients may find it more difficult to understand how cognition works and can be changed, resulting in a higher dropout rate. In comparison, PST focuses on current difficulties and the immediate applicability may help retain patients. Older patients readily accept the rationale in PST that low mood is related to difficulty solving problems (Hegel, Barrett & Oxman, 2000). Given these attributes, we will focus on the potential utility of PST for older adults with significant depressive symptoms who are in methadone maintenance treatment.

Problem Solving Therapy

Problem Solving Therapy (PST) is an empirically-tested, relatively brief intervention for older adults with late-life mood disorders. It is designed to be provided by mental health and similarly trained professionals and focuses on teaching problem solving skills (Hegel & Aréan 2003). This treatment modality guides patients to focus on current problems and to develop a more realistic view of those problems while encouraging patients to articulate strategies to address these issues (Alexopoulos, Raue, & Aréan, 2003). One advantage of PST, relative to other behavioral therapies for this population, is that it is less cognitively demanding than other interventions (Mackin & Aréan, 2007).

PST treatment consists of seven steps that address psychosocial problems and promotes a positive attitude towards solving problems and active problem solving. These stages are (1) selecting and defining the problem, (2) establishing realistic and achievable goals, (3) generating alternative solutions, (4) evaluating pros and cons, (5) choosing a preferred solution, (6) developing an action plan, and (7) evaluating the outcome. The critical teaching points for these steps include addressing problems that are under patients' control, setting realistic and achievable goals, generating and evaluating potential solutions systematically, and evaluating the outcome of the proposed action plan. The key factor is not whether the person's preferred solution is ultimately successful, but whether the patient learns a more positive and structured approach to coping with problems. PST was developed to be administered by a broad range of trained providers, such as nurses, social workers, and other health professionals. The initial session usually lasts around one hour with subsequent sessions lasting approximately thirty minutes. Treatment duration typically involves 6–8 sessions and the total treatment time is brief 4 ½ - 6 hours.

Efficacy of PST with depressed older adults

Psychosocial interventions, like PST, are particularly relevant for older adults. Drug-drug and drug-disease interactions can be avoided (Williams et al., 2000), and surveys of older adults in primary care settings document that they prefer psychotherapy to medication (Aréan & Mirana, 1996; Backenstrass et al., 2006; Gum et al., 2006). Though the epidemiology of substance abuse problems among older adults suggest that some of those surveyed in primary care settings would have substance dependence problems, it is unknown whether older adults in methadone maintenance clinics will prefer psychotherapy over medication. Manualized PST has been effective in reducing a variety of diagnosed physical and mental health problems (see reviews by D'Zurillia & Nezu, 1999; Malouff, Thorsteinsson, & Schutte, 2007) and is an effective treatment for both major depression and

symptoms of depression (see manuals by D'Zurilla & Nezu, 2007; Hegel & Aréan, 2003). PST has been found to be an effective treatment for late-life mood disorders (Aréan et al., 1993; Bartels et al., 2002) and substance abuse (Zanis et al., 2001).

Several meta-analyses summarizing the effectiveness of PST have been completed (see Table 2). As summarized in Table 2, while all three meta-analyses find significant effect sizes overall and conclude that PST is an effective intervention for depressive disorders or depressive symptoms, these studies had slightly different goals which impact the interpretation of the results. Cuijpers and colleagues (2007) analysis included studies treating depressive symptoms or depressive disorders among adults and older adults utilizing several adaptations of PST with the goal of demonstrating the efficacy of PST and understanding the impact of type of treatment (adaptations of PST, type of control intervention) treatment modality (individual versus group), and outcome (major depression versus other depressive disorder). This meta-analysis demonstrated a large overall effect size (Cohen's d) of 0.83 (95% CI 0.45 −1.21) (using a random effects model) when PST was used to treat all forms of depression and a robust effect size (Cohen's d) of 1.27 (95% CI 0.95 −1.60) when PST was used to treat non-major depression, like subsyndromal depression (Cuijpers et al., 2007). PST was more effective than other psychological interventions (reminiscence, CBT, stress management, problem-focused therapy) in the fixed effects model (d = 0.29, 95% CI 0.07 – 0.50) but not in the random effects model. Individual comparisons between specific psychological treatments and PST were not completed.

In a later meta-analysis again focused on treating depression (subsyndromal or diagnosed depression) but including more studies than the previous meta-analysis (Bell & D'Zurilla, 2009), and focusing on the impact of components of PST (problem orientation training, number of problem solving skills taught, assessment of problem solving skills) the standardized mean difference effect size was significant (d = 0.40, $p < .05$). In addition, PST was shown to be equally effective to other psychotherapies overall (d = 0.17) and medication therapies (d = −0.13). In this metal-analysis, the effectiveness of PST compared to other specific psychotherapies and control groups was examined. PST was more effective than supportive therapy and attention control groups (d = 0.45, $p < .001$).

Finally, a third meta-analysis of PST focused on both mental health and physical health problems across the lifespan (Malouff, Thorsteinsson & Schutte, 2007). PST was more effective than being on a wait list (d = 1.37, 95% CI 0.91 – 1.84), treatment as usual (d = 0.54, 95% CI 0.12 – 0.96), and attention control groups (d = 0.54, 95% CI 0.12 – 0.95). While PST was not more effective than other psychotherapies, the trend was in that direction (d = 0.22, 95% CI −0.08 – 0.52). In addition to treating depression, studies in this meta-analysis included medical conditions (obesity, cancer distress, low back pain) and substance abuse disorders (alcoholism, drug abuse). Problem-solving skills have been beneficial for family caregivers of persons with stroke, spinal cord injuries, the elderly and individuals with cancer (Elliott et al., 2001; Grant et al., 2001; Toseland et al., 1990; 1992; 1995). We note that three meta-analyses share only 9 studies and that none focused exclusively on older adults. However, two literature reviews have focused on older adults, conclude that psychotherapies are effective for reducing depressive symptoms in older adults, and point to PST as warranting further research and development (Arean, Hegel, & Reynolds, 2001; Mackin & Arean, 2005). Thus, we expect PST to be a beneficial intervention for older adults dealing with depression and substance dependence problems.

Cognitive deficits in adult opiate addicts

Research on substance dependent older adults indicates that PST would be an appropriate intervention to address depression in later-life for individuals with cognitive impairment.

Changes in cognitive functioning, particularly decreases in information processing speed and declines in explicit memory are a normal part of the aging process, but are exacerbated by heroin dependence. While limited research on the neurocognitive functioning of older adults with opiate addiction exists, studies of adults with substance dependence have demonstrated cognitive decline within this population. One study of methadone-maintained and abstinent heroin users established that both groups had more neuropsychological impairments than healthy controls in a series of cognitive functioning tests (Prosser et al., 2006). Other research on individuals with concurrent opioid agonist treatment and benzodiazepine use, a high risk subpopulation, has revealed that working memory may be persistently affected in opioid-dependent patients treated with methadone or buprenorphine (Rapeli et al., 2009). While evidence exists that cognitive/neuropsychological impairments are associated with long-term opiate addiction, there is no empirical evidence that opioid agonist treatment exacerbates these deficits.

Medical comorbidity issues could also potentially exacerbate cognitive deficits within an older adult opioid dependent population. In a comparison of younger (aged 25–34) and older (50–60) men and women in a methadone maintenance program Lofwall and colleagues (2005) established that while rates of psychiatric disorders and substance dependence were comparable, that health status and functioning were worse in the older group than the younger group. In addition, cognitive impairments are associated with poor response to antidepressants (Alexopoulos et al., 2008) even when not in the context of substance use disorders. Studies on the treatment of depression in adult patients with opioid dependence have also demonstrated that antidepressant treatment was not significantly associated with a reduction in relapse risk or the prevalence of depression (Galarneau et al., 2006; Nunes & Levin, 2004). The limits of antidepressant treatment suggest the need for interventions that address the cognitive deficits of those in methadone maintenance for opiate addiction.

A significant advantage of PST relative to other behavioral therapies for this population is based on evidence that PST is less cognitively demanding for an older adult population with mood and substance use disorders (Mackin & Aréan, 2005). PST has been used successfully with other populations with cognitive deficits, including developmentally delayed individuals (Nezu, Nezu & Aréan, 1991), people with psychotic disorders (Leclerc et al., 1999) and people with mild brain injury (Rath et al., 2003). In one study of depressed-executively impaired elderly patients, PST, as opposed to supportive therapy, improved both depression and disability (Alexopoulos et al., 2003). Thus PST has proven efficacious in addressing both neuropsychological functioning and the need to successfully solve problems within the context of one's own life and may therefore be particularly relevant for depressed older adults with comorbid substance dependence disorders.

Life situations of older adult opiate addicts

Another potential advantage of PST over other psychotherapies is that it allows people to develop effective means for coping with stressful life events that are both contributors to and complications of depression. Several studies point to a set of unique difficulties faced by older adults with an opiate addiction problem. Often, older addicts were surprised that they were still alive and were ill-equipped to deal with the challenges of aging (Hamilton and Grella, 2009). Feelings of marginality and social isolation were prevalent themes for many of the older adults as they entered the later stages of their life (Anderson and Levy, 2003; Smith and Rosen, 2009). These feelings were exacerbated by the vulnerability of declining health that was aggravated by years of substance dependence (Anderson and Levy, 2003; Rosen et al., 2008).

Findings from one study of older adults with substance dependence indicate that the impact of multiple stigmas serve as a significant barrier to treatment seeking (Conner and Rosen,

2008). Respondents focused on specific incidents of stigma with family and friends that were constant problems in their daily life and hindered their ability to remain abstinent from illegal drug use. Particularly illuminating were the comments of Lacey, a 65-year-old African American woman on methadone maintenance treatment, who stated “you know, if they was to stop and try to learn, you know, sit down and to talk to us instead of judging us, we would all be better off” (Conner and Rosen, 2008, p. 252).

The dual need to improve mood while remaining free of illegal drug use presents many challenges for the complex lives of older adults with opiate addiction. Some of these challenges, like stigma, may not be easily changed but represent a context within which the person must learn to solve problems. Solving problems within the context of one’s own life is a central tenet of PST. Systematic problem solving skills are taught to participants so that they can develop a more positive and also realistic approach to addressing current problems that they face, and then continue to address future problems with the skills they have acquired.

Efficacy of PST in Substance Abuse Treatment Settings

There are few studies examining the efficacy of PST for individuals with substance abuse and dependence. Platt and colleagues (1993) examined the impact of adding a PST group intervention to usual care on employment outcomes among methadone patients. PST plus usual care recipients had a higher rate of employment at the end of acute treatment and after 6-months of follow-up compared to usual care recipients, but there was no difference between the groups at the end of 12 months. Carey and colleagues (1990) treated a small sample of patients with comorbid mood and substance use disorders, including patients diagnosed with bipolar disorder, major depressive disorder, schizophrenia, anxiety and adjustment disorders, and organic delusional disorder. Their comparison of PST to a control found no differences between patient outcomes (perceived stress). While the initial evidence for the effectiveness of PST is not strong, the two studies are hampered by small sample size (approximately 20 patients) and heterogeneous Axis I diagnoses that cannot provide definitive evidence for the effectiveness or lack of effectiveness of PST for treating depression in this population.

However, there is evidence that problem solving deficits are related to substance use among college students (Elliot, Johnson & Jackson, 1997; Williams & Kleinfelter, 1989), among patients diagnosed with pathological gambling (Borsoi & Toneatto, 2003), adult alcoholics (Nixon, Tivis & Parsons, 1992), and heroin addicts (Platt, Scura & Hannon, 1973). This relationship between problem solving deficits and both depression and substance use supports the rationale for PST and suggests that further examination of the effectiveness of PST is warranted.

Methadone clinics are also well-suited for addressing co-occurring disorders in that they offer a controlled environment to address these disorders. Federal mandates require states to have requirements for qualified Addiction Counselors to provide some form of counseling in order to receive methadone maintenance treatment. Training of Addiction Counselors in PST allows for a “breaking down of the silos” between mental health and substance abuse treatment. It is worth noting that the need for clients to return regularly to the clinic for their methadone treatment also obligates them to participate in mental health counseling.

Modifying PST for Substance Dependent Older Adults in Methadone Treatment with Depression

The special circumstances of older adult opiate addicts seeking treatment in methadone clinics require some slight adaptations of PST. These adaptations are needed to address

several broad themes: 1) respecting the context of other treatments, including both individual treatment histories and clinic level issues; 2) managing neurocognitive deficits; and 3) acknowledging the unique psycho-social issues of this population.

When considering the treatment context, one must remember that the clients themselves may be more "treatment savvy." A history of failed treatment endeavors may make clients more skeptical of treatment and less likely to engage in treatment or its "homework". As a result, trust issues with clients may also be more challenging for clinicians. Therefore, an extended "meet and greet" session will allow for clients to tell their story in an unhurried fashion. Clinicians should use this opportunity to develop a rapport with the client while also explaining the goals of PST. It is crucial to use the client's own words and to connect PST with the client's overall goals. The PST process is designed for clients to take "ownership" of the problems and challenges in their lives. Thus, the importance of the therapeutic relationship, particularly in substance abuse settings, is critical in the course of PST (Mee-Lee et al., 2010).

In behavioral interventions like PST, it is important to help clients take the new skills home; we have found that for older adults receiving methadone treatment, personalized approaches and careful listening are required to applaud clients' use of skills and the ways that they can own the skills. Finally, it is essential to acknowledge that patients in methadone maintenance will be at different stages of readiness to change their drug-related behaviors (see Prochaska & DiClimente, 1984). While PST does not specifically address stages of change, it can be used to address problems at different stages of change and to address substance use problems directly (e.g., a plan to use less or not at all) or indirectly (e.g., how to avoid situations where substance use is more likely or how to solve problems relating to supporting abstinence).

Older adult methadone clients are more likely to have enhanced neurocognitive deficits due to age and decades of substance use and may require more prompts and reminders in the problem solving therapy process. Clinicians' comfort with the "cue and review" process of orienting clients to what step they're on, summarizing the previous steps, and checking in to make sure the client is following the process seems more important in this context. However, care must be taken to make such repetition of the material respectful and collaborative, rather than at all negative. Clinicians may find it helpful to provide folders for the various papers associated with PST and to institute standard reminder calls of appointments. The neurocognitive deficits of clients may impact the decision making process, increase the likelihood of feelings of lethargy, and make it more difficult for clients to complete the brief homework assignments associated with PST. These obstacles can and should be inquired about and addressed during the development of the action plan.

Clinicians trained in other forms of therapy will need to be aware of avoiding a deficit model of treatment. The use of the word "problem" may in itself encourage clients to focus on current insufficiencies rather than the gap between the reality of their lives and where they want to be. Another component of PST that may initially be confusing to clients is the use of the metaphor "steps" to describe the problem solving process. The "steps" metaphor is also used in the 12-step programs of Alcoholics and Narcotics Anonymous. Clinicians should articulate that "steps" in PST are tools that move one forward versus the "steps" of the 12-step program that refer to strengthening one's daily sobriety. If cognition challenges or potential confusion exist on the part of the client on this difference then the use of an alternative word for "steps" would be appropriate.

Finally, as with any population of individuals in substance abuse treatment, it is important to remember that many of the problems being addressed by clients are rooted in poverty.

Individuals who have used illegal drugs for decades are often facing economic deprivation that makes every aspect of their life unstable. A history of poverty, racism, incarceration, and other forms of oppression will need to be addressed as part of the therapeutic process. In some cases, this leads to situations where clients want to address urgent needs earlier in the PST process or situations where issues escalate to crisis mode rather quickly.

Successful PST clinicians will be cognizant of assessing urgent needs that will benefit from problem solving without functioning as case managers. PST can help clients invoke other individuals (e.g., a case manager, an advocate at a social service agency, friends and family) to support solving the problem rather than having the clinician solve the problem directly. In more complex cases (neurocognitive decline, medical comorbidity, etc.), PST counselors may need to incorporate case management skills. In these instances, a PST counselor, utilizing case management, will need to be very clear to differentiate between those resolutions that will be acted upon by the client and those by the counselor.

CONCLUSION

Late-life depression among older adults addicted to opiates interferes with both treatment to remain abstinent form illegal drug use and the well-being of older adults. An aging population is changing the demographic characteristics of substance abuse facilities that find themselves ill-equipped to treat geriatric mental health disorders. Compounding the problem of late-life depression among older adults with substance dependence is evidence that pharmacological approaches are not as effective with older adults with cognitive deficits.

In this article we suggest that PST is a theoretically justified approach for treating late-life depression that has yet to be fully tested in a large sample of older adults with opiate addiction. PST offers a relatively brief intervention that has been found to be effective in treating late-life depression and efficacious for individuals with cognitive deficits. Unlike other non-pharmacological interventions, PST can be easily taught to and administered by qualified Addiction Counselors. The frequency and duration of PST sessions offers an ideal approach for treatment that is cost effective and feasible within a methadone maintenance treatment program. In addition, by having the client identify the problems that they want to address, PST has been shown to have lower drop-out rates than cognitive behavioral therapy (Cuijpers et al., 2008). Methadone clinics, with a federal mandate to provide counseling and limited financial resources to conduct effective treatment, offer a perfect setting to address late-life depression.

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Table 1

Summary of acute phase interventions for late-life depression

	Rationale	Average Acute Treatment	Format	Average session length	Advanced mental health training required for counselor	Amount of treatment modification required for cognitive deficits
IPT	Depression occurs in interpersonal contexts. Patient's interpersonal disputes, role transitions, grief, or interpersonal deficits are resolved.	12–16 hours	Individual	~ 1 hour	Yes	Substantial
CBT	Dysfunctional thoughts impact current and future behavior. Patient's thoughts are monitored, evaluated, challenged, and modified.	16–20 hours	Individual or group	~1 hour for individual ~2 hour for group	Yes	Moderate
PST	Inability to solve problems in the hear-and-now leads to depression. Patients are taught specific systematic skills for solving problems.	5 hours	Individual	~ 1 hour for first session; ~ 30 minutes subsequent sessions	No	Minimal

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Table 2

Meta-analyses summary on the effectiveness of PST

Authors	Goal of publication	Primary endpoints	Moderators examined	Comparison Groups	# of studies/N	Overall Effect size / fail safe number[4]
Malouff, Thorsteinsson & Schutte (2007)	Examine efficacy of PST across mental or physical health problems	Measures of mental health (e.g., depression) or physical health (e.g., BMI)	• Including problem orientation training vs. not • Hours of PST • Homework assignments vs. not • Author is PST developer or not • Individual vs. group intervention • Clinical vs. community participants • Mental health vs. physical health outcome • Self-report vs. interview outcome • Effects in follow-up	• Waitlist/no treatment • Treatment as usual • Attention control • Other experimental treatment	• 31 studies • N = 2,895	• d = 0.54, CI_{95} = (0.31, 0.77) • Fail-safe number = 136
Cuijpers, van Straten, & Warmerdam (2007)	Meta-analysis of randomized controlled trials of PST	Depression	• Individual vs. group intervention • Major depressive disorder or other depressive disorder as outcome • Type of PST (social problem solving, PST for primary care) • Type of control intervention	• Supportive therapy • Reminiscence therapy • Waitlist/no treatment • Antidepressant • Drug placebo • Cognitive MCP • Current events group • Cognitive behavioral therapy • Stress management	• 13 studies • N = 1,053	• d = 0.34 for fixed effects model, CI_{95} = (0.02, 0.48) • d = 0.83 for random effects model, CI_{95} = (0.45, 1.21)) • Fail-safe number not noted
Bell & D'Zurilla (2009)	Meta-analysis of randomized controlled trials of PST	Depression (preferred BDI)	• Including problem orientation training vs. not • Including training in all PST skills versus a subset • Offering a complete PST package (problem	• Supportive therapy • Any other named psychotherapy • Waitlist/no treatment	• 21 studies • N = 1,264	• d = 0.40 for random effects • Fail-safe number = 99

Authors	Goal of publication	Primary endpoints	Moderators examined	Comparison Groups	# of studies/N	Overall Effect size / fail safe number[4]
			orientation training plus training in all PST skills) • Assessed problem solving skills	• Antidepressant		

[4]The fail-safe number points to the number of non-significant, unpublished (or missing) studies that would need to be included in a meta-analysis to decrease an overall statistically significant observed result to nonsignificance. If this number is large compared to the the number of observed studies, then one can feel reasonably certain in the summary conclusion.