Epilogue: The Status of Knowledge Development and the Unknown

Michele Staton-Tindall, Thomas P. Gullotta, William Walton Stoops, and Carl G. Leukefeld

From the conceptualization of this volume through the writing process to this final chapter, the editors have had a remarkable learning experience. In our journey we uncovered the recipe for brewing Chicha, discovered the reasons why tobacco is so addictive that half of the smokers continue their destructive habit despite losing a lung to cancer, understand the value of some therapeutic techniques, and the harm that other interventions can have. In this epilogue, we revisit some of our discoveries and share with the reader our understanding of a field that is moving from an art in which the personal magnetism of the healer blowing smoke is being replaced by a science in which such enemas are no longer seen as powerful medicine.

Evidence-Based Practice

Recent interest in evidence-based practice can be traced to the publication of Effectiveness and Efficiency: Random Reflections on Health Services by the Scottish epidemiologist Archie Cochrane (1972/1999). His pioneering efforts led to the establishment of a medical research database that has grown into an international collaboration directed at identifying medical practices that actually work. Cochrane’s interest began with the recognition that much of medical practice was rooted in oral tradition. That is, clinical reports based on personal experience were the means by which knowledge was transferred from one healer to the other. Thus, Joseph Lister’s positive experience in treating the deadly illness “Milk Fever,”¹ which afflicted new mothers, with washing one’s hands before examining the new mom, was shared with his colleagues. Now, depending on the persuasiveness of the healer and the reported experiences of other doctors, a new treatment, if it did not

¹In Lister’s time (1860s) the high fever some women experienced shortly after the birth of their child was attributed to the start of lactation. No one thought that the filthy hands of the attending physician examining the new mother’s mother’s bruised and damaged birth area was in any way related to the infection “Milk Fever.”
disturb the existing social reality, gradually became a part of medical practice. In Joseph Lister’s case, this was initially not to be. He was ridiculed for his ludicrous beliefs that cleanliness mattered and the practice of examining new mothers with soiled hands continued much to the dismay of orphans who lost their mothers to infectious “Milk Fever.” Therein rested the problem of oral tradition. If the new information challenged an existing cherished belief, say, for example, Hippocrates four humors (black bile, yellow bile, phlegm, and blood which Galen repopularized and whose medical theories dominated medical treatment for centuries), then the information was rejected and existing treatments derived from humoral theory, namely, bloodletting, purging (vomiting), blistering, and enemas, to balance the humors and return the patient to health continued. From this example, realize that the conceptualization of an issue, which is imaging how something behaves, is more important then how it actually operates!

This paradigm shift in physical medicine from thinking something works to evidence that it actually works extends today into the treatment and prevention of behavioral disorders to include science-based interventions, technology transfer, and the novel idea that practitioners should be helpful.

The Institute of Medicine (IOM, 2001) defined evidence-based practice as “the integration of best research evidence with clinical practice and patient values” (IOM, 2001, p. 47). This definition not only recognizes that clinical observations give rise to suspicions (hypothesizes) that can then be tested but also goes further to embrace the critical role the client has in this process because (and this is not attended to enough) it is the client’s life!

Impressions

Treatment

The talented group of authors brought together for this project accomplished their assignment of providing readers with the current state of knowledge on the bi-psycho-social-environmental dimensions of adolescent substance abuse and evidence-based practices for its treatment and prevention. From their work, we saw that substance misuse led to several negative health and social consequences for adolescents. Further, these researchers and practitioners identified a number of social factors contributing to adolescent misuse including family environment and family relationships, peer associations, religious involvement, and school and community settings.

In these chapters, we discovered the current state of knowledge about evidence-based practices that “work” for adolescents across different treatment modalities. One intriguing observation from our reading was that while some therapeutic approaches are considered “evidence-based” for outpatient or family therapy, they have not been “proven” in another setting (residential for example). Clearly, much
work remains to be done. The following table summarizes our understanding of suitable evidence-based practices in different therapeutic settings for adolescent substance users:

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Goal</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Behavioral Therapy (CBT)</td>
<td>Improves the patient’s cognitive (i.e., attitudes, values) and behavioral skills for changing his/her problematic drug use.</td>
<td>Individual, Outpatient</td>
</tr>
<tr>
<td>Behavioral Therapy</td>
<td>Emphasizes overcoming skill deficits and strengthening the patient’s ability to cope with high-risk situations.</td>
<td>Individual, Outpatient</td>
</tr>
<tr>
<td>Brief Intervention</td>
<td>Involves a small number of sessions, which capitalize on the readiness of individuals to change their behavior (i.e., Motivational Enhancement Therapy, MET).</td>
<td>Individual, Outpatient</td>
</tr>
<tr>
<td>Node-Link Mapping</td>
<td>Incorporates visual representations of the range of difficulties, issues, and their potential solutions.</td>
<td>Individual, Outpatient</td>
</tr>
<tr>
<td>Relapse Prevention Therapy (RPT)</td>
<td>Identifies and changes problematic behavior through examining positive and negative consequences of continued drug use.</td>
<td>Individual, Outpatient</td>
</tr>
<tr>
<td>Trauma-Focused Cognitive Behavioral Therapy (TF-CBT)</td>
<td>Adapts CBT for use among children who have been exposed to such traumatic experiences as physical abuse.</td>
<td>Individual, Outpatient</td>
</tr>
<tr>
<td>Multidimensional Treatment Foster Care (MTFC)</td>
<td>Involves a behavioral intervention for delinquent youths and youths in need of out-of-home placement.</td>
<td>Individual, Outpatient</td>
</tr>
<tr>
<td>Multisystemic Therapy (MST)</td>
<td>Reduces drug use problems through interventions with the adolescent, family, and extrafamilial systems.</td>
<td>Family-based</td>
</tr>
<tr>
<td>Multidimensional Family Therapy (MDFT)</td>
<td>Focuses on reducing drug use by tailoring treatment to the characteristics of the adolescent, family, and their involvement with extrafamilial systems.</td>
<td>Family-based</td>
</tr>
<tr>
<td>Functional Family Therapy (FFT)</td>
<td>Emphasizes that the family’s interactions are central to problem development and change occurs through family-based interventions.</td>
<td>Family-based</td>
</tr>
</tbody>
</table>

Evidence-based practices for residential treatment among adolescent substance users are less defined and supported by the clinical and empirical literature. Although there is tremendous variation in the approach taken to the residential treatment of adolescent substance abuse, researchers have begun to identify common key elements and features related to positive outcomes. From the Plant and Panzarella chapter in this volume, we offer these observations:

1. Treatment retention – Adolescents who remain longer in residential substance abuse treatment have demonstrated more positive treatment outcomes.
2. Family involvement – Working with the family as a unit and including the family members in residential treatment interventions has been associated with positive outcomes.

3. Therapeutic milieu – Developing a therapeutic environment that is a good fit for adolescents that includes a motivational approach focused on harm reduction has been associated with positive outcomes.

Building on these key components of success in residential treatment, a number of interventions that have demonstrated effectiveness in home and community settings are being modified and integrated into residential modalities. In particular, Cognitive behavioral approaches (CBT), Motivational Enhancement Therapy (MET), and family-based and/or multisystemic approaches including Multiple Systemic Therapy (MST), Functional Family Therapy (FFT), Brief Strategic Family Therapy (BSFT), and Multidimensional Family Therapy (MDFT) are being incorporated into residential care. The current state of research and knowledge is developing in this area to understand whether these approaches should be considered promising for adolescents in residential substance abuse treatment.

In addition to spotlighting practices that worked, we asked authors to identify practices that were not effective in treating adolescent substance misusers. Authors identified individual or group (Supportive) therapy, and interactional therapy because there is a lack of skill-building to enable adolescents to handle high-risk situations. In addition, group therapy has been associated with negative outcomes for adolescents. The primary reason group therapy is ineffectual is that participants associate with deviant peers in the context of the group environment encouraging their dysfunctional behavior. With regard to residential programs, intervention with negative outcomes included boot camps, Scared Straight Programs, and treatment approaches that incorporated punishment as a consequence for noncompliance.

**Prevention**

In addition to a focus on evidence-based interventions for adolescent substance use, this volume examined approaches to prevent substance misuse. With roots in the Quaker tradition of helping individuals with social problems that were largely believed to be tied to poverty, a number of successful prevention efforts have been launched over the last 200 years to address substance abuse. The reality is that alcohol and drug abuse remain significant social problems which have largely been unchanged by large-scale (Prohibition) or small-scale (state laws) policy changes. Nonetheless, the call for continued evidence-based prevention interventions remains and this volume offers several promising avenues to achieve that end.

Bloom in this volume states that primary prevention involves planned actions focusing on (1) predictable problems in relatively healthy individuals and groups, (2) protecting existing states of health and healthy functioning, and (3) promoting desired future states not yet attained. One of the most important venues for
substance abuse prevention interventions is the school. The need for school-based prevention and evidence-based practices is important because of the harmful effects of substance use for adolescents, the fact that possession of tobacco and alcohol products by persons under the age of 18 is illegal, and research which suggests that use of tobacco and alcohol may increase risk for later, more extensive drug use. School-based prevention interventions have been shown to be effective, due in large part because adolescents spend a significant amount of time in school, schools provide an environment conducive to enforcing social norms, and schools are a safe place for adolescents and children. In addition to school-based prevention interventions, interventions that are delivered by whole communities that target whole communities have also demonstrated effectiveness for adolescent substance abuse.

Whether evidence-based prevention interventions are delivered in schools or in the community, the use of technology is critical to the development, implementation, and dissemination of prevention practices for adolescent substance users. Bloom described five technologies to consider as fundamental elements of any adolescent substance abuse prevention effort: education, promotion of self-competency, connections with natural caregivers, impacting change at the community organization and systems level, and redesigning the social environment.

**Final Thoughts**

We end this book on two hopeful notes and a challenge for graduate programs. Encouragingly, the psychological bloodletting, purging, blistering, and enemas of yesteryear have been replaced with more successful interventions. Still, too many youth do not respond to current treatments and too many return to dysfunctional behaviors too quickly. We do not seek a utopia in which self-destructive behavior does not exist. We are too old for that dream. Rather, we seek a society that acknowledges the pathway it has paved for bio-psycho-social-environmentally vulnerable youth to walk and to better attend to environmental controls to limit the number of those who fall prey to the misuse of legal and illegal substances. We are encouraged by the progress that those who seek to promote resiliency and prevent substance misuse in schools and other settings have made, but these remain baby steps and more remains to be done particularly with harm risk reduction and distribution of consumption models. Further, the first generation of evidence-based models in treatment and prevention are just that – first generation. Improvements to these approaches and the development of still more robust actions that can withstand the inevitable tinkering that occurs in the field must be encouraged. We urge those who would fund these new developments to invest their dollars in a variety of approaches that are both interdisciplinary and multifactorial. If we have learned anything from the field of prevention, it is that single technology approaches are of limited, if any, value.

Toward that end, we have challenged graduate programs to reengineer the process by which doctoral degrees are conferred (Gullotta & Blau, 2008). Presently, the
system is built around a course of study and the undertaking of a dissertation of marginal value that will reside forlorn in some neglected corner of cyberspace. Imagine instead a school, ideally many schools in an international collaboration, embarking on a behavioral research database developing, testing, refining, and disseminating practices that work. We have no shortage of theories (psychoanalytic, behavioral, humanistic, transpersonal) offering a multitude of approaches for helping those in need. Are the adherents of logotherapy, gestalt, analysis, behaviorism, theosophy, and a thousand other interventions blowing worthless smoke over and into those seeking their help? Are new “Dare,” carding, and traffic stop points effective prevention efforts? Granted, there are beginning databases collecting information. But these are potentially flawed efforts packed with programs that have been well funded by the maintainers of the database. Recall our earlier observation about social reality. Change in practice occurred if it did not disturb the existing pattern of social beliefs. The creation, maintenance, and entry into a database maintained by Gallen would value the humors, by Freud would favor the Oedipal complex, or by behavioral analysts would omit feelings. Transpersonal approaches would find no place in their databases, and yet in the new North America where both Canada and the US are in the midst of ethnic and cultural transformation theosophical approaches matter. This could be a time of psychological renaissance across schools of higher learning and the field identifying effective approaches to maintain existing health, foster new health abilities, prevent distress, and successfully treat illness when it develops. We know there is no magic silver bullet to achieve this. We suspect this behavioral formulary will be as large as it is for pharmacology. Still, it needs to be undertaken and now is the time.

References


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