

INNOVATIONS IN CORRECTIONAL ASSESSMENT AND TREATMENT

ROBERT K. AX

Midlothian, Virginia

THOMAS J. FAGAN

Nova Southeastern University

PHILIP R. MAGALETTA*

Federal Bureau of Prisons

ROBERT D. MORGAN

Texas Tech University

DAVID NUSSBAUM

University of Toronto, Scarborough & Whitby Mental Health Centre

THOMAS W. WHITE

Training and Consulting Services

This article considers innovations in the assessment and treatment of incarcerated individuals. The emphasis is on immediate patient needs and inmate management concerns, rather than on rehabilitation. Assessment of this diagnostically complex population is framed in dimensional and biopsychosocial terms. Scarce resources, new scientific knowledge and technology, organizational barriers, and role transformations for psychologists will guide improvements and future research in correctional mental health care, as reflected in specific areas: dimensional assessment, suicide risk assessment, neuropsychological correlates of chronic maladaptive behavior, prescriptive authority for psychologists, and telehealth. In particular, outcome research based on a broader range of interventions will be increasingly crucial to the effectiveness of correctional psychologists' work. In the near future, the degree of impact that psychologists have will depend largely on their individual and collective initiative in promoting the benefits of their services.

Keywords: offender assessment; suicide risk assessment; neuropsychology; psychopharmacology; telehealth

Approximately 9 million people are incarcerated worldwide, with more than 2 million of these individuals being confined in U.S. prisons and jails (P. M. Harrison & Beck, 2005; Seena & Denesh, 2002). Exactly how many of these individuals have mental health problems has been the focus of considerable discussion. Ditton (1999) estimated that between 7% and 16% of the total U.S. prison and jail population (i.e., about 283,000 people) and 16% of individuals on parole or probation status (i.e., about 547,800 people) suffer from mental illness. Beck and Maruschak (2001) indicated that about 10% of state inmates had significant mental health problems. To define mental health problems, the authors of both of these studies used self-report data from offenders who admitted having a mental or emotional condition and/or reported an overnight stay in a mental hospital or program. Karberg and James (2005) noted that approximately 68% of individuals housed

AUTHORS' NOTE: Correspondence concerning this article may be addressed to Robert Ax, PhD, 5610 Chatmoss Road, Midlothian, VA 23112; e-mail: shrinkart@aol.com. Authorship order is alphabetical.

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in U.S. jails were found to be dependent on or to have abused alcohol or drugs prior to their confinement. P. M. Harrison and Beck (2005) found that 53% of federal prisoners and 20% of state prisoners were incarcerated for drug-related offenses. In a review of the literature on the presence of personality disorders in prisons and jails, Rotter, Way, Steinbacher, Sawyer, and Smith (2002) reported ranges from 7% to 35% depending on the particular disorder.

Interestingly, few of the above-mentioned studies considered the issue of co-occurring disorders. However, as Brems and Johnson (1997) and Sacks and Pearson (2003) have noted, most psychiatric disorders do not exist alone but rather in combination with other disorders. Brems and Johnson (1997); Newman, Moffitt, Caspi, and Silva (1998); and Reis, Mullen, and Cox (1994) have suggested that individuals with co-occurring disorders may differ in significant clinical ways from individuals with a single disorder (e.g., have poorer treatment outcomes and long-term prognoses and greater rates of hospitalization and suicidal behavior).

Prevalence research, such as that cited above, has been problematic in several ways. For example, studies have defined mental illness differently (e.g., current symptoms versus lifetime prevalence) and measured it differently (e.g., self-report, record review, structured interview). Studies have also examined the presence of mental illness using different subject pools (e.g., jail versus prison, male versus female, Black versus White versus Hispanic). Clearly, research is needed to clarify the impact that these various definitional, assessment, and demographic issues have on actual prevalence rates.

Despite variable prevalence rates, most studies agree that the number of incarcerated individuals with mental health problems exceed those found in the community and represent a growing population within prisons and jails, both in the United States (Diamond, Wang, Holzer, Thomas, & Crusier, 2001; Fisher et al., 2002; Jemelka, Trupin, & Chiles, 1989; Lamberti et al., 2001) and in other Western countries (Birmingham, Gray, Mason, & Grubin, 2000; Blaauw, Roesch, & Kerkhof, 2000; Fazel & Danesh, 2002). How responsive have correctional mental health practitioners been to the needs of this growing population? Ditton (1999) reported that about 60% of all federal and state offenders, 41% of all jail detainees, and 56% of all probationers with mental illness receive some type of mental health services while in custody or under supervision. If true, then 40% to 60% of offenders with mental health problems are *not* receiving needed services and, as Manderscheid, Gravesande, and Goldstrom (2004) suggested, access to mental health services in U.S. jails and prisons will become more difficult as the growth in resources fails to keep pace with the rise in incarceration rates. If this trend continues, how will treatment providers respond, what clinical issues will be raised, and what innovative treatment approaches will be developed to address the needs of this population? What follows is a discussion of several assessment and/or treatment issues that the authors believe will be among the more important to consider as this population continues to grow and resources continue to shrink.

CORRECTIONAL ASSESSMENT: ISSUES AND INNOVATIONS

DIMENSIONAL VERSUS CATEGORICAL ASSESSMENT

Consistent with current correctional practice standards published by the American Correctional Association (1990) and the National Commission on Correctional Health Care (2003), most correctional systems use a multi-step screening process to identify offenders with mental health problems. The outcome of this screening process is to identify offenders

with symptoms sufficient to meet the diagnostic criteria of a mental disorder as defined in the American Psychiatric Association's (2000) *Diagnostic and Statistical Manual of Mental Disorders IV-TR (DSM-IV-TR)*—a categorical classification system that divides mental disorders into types based on specific defining criteria. Once identified, these offenders move through the mental-health-delivery system of the facility and are offered psychiatric (i.e., pharmacotherapy) and/or psychosocial (i.e., individual and/or group counseling) interventions targeting symptom alleviation. For offenders with a single diagnosis, this process is relatively straightforward. However, for offenders with comorbidity, this process is more complicated. For example, an offender with a diagnosis of both schizophrenia and substance abuse may be required to address the symptoms of the former successfully before being admitted to a substance abuse program. The substance abuse program is not equipped to address the needs of the schizophrenic individual, and the providers treating schizophrenia do not offer treatment programs for substance abusers.

Finally, offenders who report nondiagnosable or subthreshold mental health concerns often receive either minimal or no mental health services. It may be hypothesized that for some of these individuals, symptoms may intensify, reach *DSM* criteria, and result in referral and treatment. For others, symptoms may persist, resulting in alternative, perhaps self-defeating, coping strategies initiated by the offender (e.g., self-mutilation, self-medicating, acting out, social withdrawal), often resulting in disciplinary actions.

Is there an alternative strategy that would address all of the treatment needs of a given offender and the treatment needs of all offenders? Widiger and Samuel (2005) suggested a dimensional approach to diagnosis and treatment. In support of this approach, they assert that the presence of co-occurring disorders is the norm rather than the exception (cf. Kessler, 1995). Putting people in one or more individual diagnostic categories—each with its own treatment regimen—may produce a fragmented treatment strategy that treats problems in isolation rather than in their totality. Widiger and Samuel further noted that the presence of multiple diagnoses may indicate an underlying pathology common to all diagnoses. For example, they suggest the dimension of emotional instability or neuroticism as a potential underlying pathology common to the diagnoses of mood, anxiety, and personality disorders.

Watson (2005) offered two advantages to a dimensional versus a categorical approach. First, he suggests that a dimensional approach to examining underlying pathologies may provide more clinically relevant information. It allows the clinician to assess the severity of dysfunction rather than simply its presence or absence, and as research has suggested, severity of dysfunction is a good predictor of treatment outcome (Clark, Watson, & Reynolds, 1995). A dimensional approach also allows the clinician to measure treatment success incrementally rather than dichotomously (i.e., meet the diagnostic criteria or not). Ultimately a dimensional approach may be more helpful in developing individualized, holistic treatment strategies.

If a dimensional approach to assessment and treatment is adopted, then the challenge for correctional researchers and practitioners will be to determine which underlying pathologies are found most frequently in criminal offenders. Once identified, a second challenge will be to determine which treatment strategies are most successful at addressing these pathologies.

SUICIDE RISK ASSESSMENT

Although suicide rates differ between local, state, and federal jurisdictions, it has been generally accepted for many years that suicide is a leading cause of death in prison (Lester, 1987) and jail populations (Hayes & Rowan, 1988). A recent study by the Bureau of Justice

Statistics (BJS; see Mumola, 2005) confirms these long-standing findings, indicating that suicide is the second leading cause of death in jails and the third leading cause of death in prisons. Many offenders are at risk because they possess symptoms associated with mental illness and/or an increased likelihood of suicide.

Before correctional practitioners can make critical life-and-death decisions, they must first have accurate information about at-risk offenders and the extent of the problem. This is far more difficult than it might first appear because correctional systems are fraught with impediments to conducting reliable research. Foremost among these difficulties is the insular nature of correctional systems and the fact that they have a functional rather than a research orientation. As a consequence, most research findings in corrections have come from one of two main sources: relatively narrow system-specific studies (Anno, 1985) or studies using aggregated data from mortality reviews (Lester, 1982). These methodologies are not easily generalized and are not individually predictive. In addition, they do not offer concrete measures to prevent future suicides.

More recent studies (Mumola, 2005; White, Schimmel, & Frickey, 2002) raise questions concerning the basic assumptions that practitioners have about correctional suicide, may significantly alter historical perceptions of the problem, and may provide new directions for experimental investigation. These studies have asked whether inmate populations actually are a high-risk group for suicide. To address this question, most researchers have simply calculated suicide rates in jails and prisons and then compared those findings with suicide rates for the general population. For several decades, researchers have used these comparisons to conclude that suicide rates are 3 to 9 times greater for prison and jail inmates, respectively, than for the general population. Despite its simplicity, the appropriateness of that comparison and the accuracy of those conclusions are open to interpretation, and the reasons differ depending on whether prisons or jails are being referenced.

Starting with prisons, the community comparison is inappropriate because the national suicide rate of approximately 11 per 100,000 (Hoyert, Heron, Murphy, & Kung, 2006) includes rates for both males and females of all ages. However, suicide rates differ considerably by gender and age. For example, the community suicide rate for males is approximately 18 per 100,000 and increases dramatically with age, whereas the rate for females is slightly more than 4 per 100,000 and does not increase appreciably with age. Because males still account for more than 90% of prison inmates, comparing them with the total general population rate, which includes the much lower female rates, inflates the perceived vulnerability of inmates, who are predominately males.

Regardless of the comparisons used, it is clear that prison suicide rates have been steadily declining over the last 25 years. They have dropped from approximately 24 per 100,000 in the 1980's (White & Schimmel, 1995) to about 18 per 100,000 in 1993 (Hayes, 1995) and to about 14 per 100,000 in the early 2000s (state and federal rates combined; Mumola, 2005). Given the most recent prison suicide rate, we can now compare the rate for general population males of the ages most likely to be incarcerated (ages 25 to 55), and in doing so, we find it is actually higher (approximately 20 per 100,000) than their age-mate prison peers. By using a more accurate basis for comparison, it is clear the suicide rates are lower for prison inmates than for comparable males in the community. In addition, if the leading causes of death in the community are grouped as they are in correctional populations (i.e., placing all medical causes into one category), suicide ranks as the third leading cause of death in the general population, as it does in prison (Mumola, 2005). Thus, appropriate analysis indicates suicide rates for community males are

higher than for offenders and cause of death data is equal for both populations, raising questions about the accuracy of the historical assumptions reflected in the opening sentence of this section.

Suicide rates for jail populations, however, are quite different and somewhat more complicated to calculate accurately. The most recent jail-suicide data show that, although jail-suicide rates have also declined since the 1980s when they were as high as 129 per 100,000, today's jail-suicide rate is still quite high, at approximately 47 per 100,000 (Mumola, 2005). This is more than 3 times the prison rate, but far less than 9 times greater than the general population rate. However, Mumola (2005) makes the point that, like prison rates, the jail-suicide rate is also artificially inflated but for different reasons.

Typically, suicide rates in both jails and prisons have been calculated based on the average daily population (ADP). In the case of prisons, the ADP changes little from day to day because inmates may stay in one facility for many years. Conversely, the ADP in jails reflects a constant turnover of inmates in and out of the facility on a daily basis. Thus, on a yearly basis, a daily population of 500 jail inmates may actually be based on thousands of inmates who have come and gone during the course of a year. Consequently, the nation's ADP of about 700,000 jail inmates is actually based on more than 13 million admissions during the course of the year. Analyzing data from the country's largest 50 jails (where 85% of all suicides occur), Mumola (2005) concluded that, if calculations were based on the actual daily suicide risk (i.e., all those admitted), the jail-suicide rate would be approximately 2 per 100,000 rather than 47 per 100,000.

Taken collectively, these data clearly suggest that it may be necessary to rethink earlier assumptions about the generally high-risk nature of both correctional populations. For jail populations, it may be more realistic for researchers to think of suicide risk in terms of volume and resource allocation rather than the more typical focus on offender characteristics or the jail environment.

For many of the logistical reasons discussed earlier, most researchers are unable to gain access to national demographic data about the diagnostic, contextual, or environmental factors related to inmate suicide. However, a few studies with access to national suicide data (Mumola, 2005; White et al., 2002) have been able to shed some light on these variables. Recent population trends clearly show a dramatic increase in the number of mentally ill offenders entering the criminal justice system. This demographic shift might explain the finding that seriously mentally ill inmates who evidenced delusional and paranoid thinking were responsible for many federal prison suicides (White et al., 2002). This is quite different from community suicides that are diagnosed more often with mood disorders such as major depression.

One of the serious high-risk populations that these researchers discovered was high-security inmates serving long sentences who were unable to enter or remain in general population. This finding was echoed in the Mumola (2005) study that found long-term inmates with more than 5 years in custody accounted for about 32% of all prison suicides. Some similarities to high-security prison inmates were seen for jail populations as well. For example, violent jail inmates were 3 times more likely than nonviolent inmates to commit suicide, but in contrast to prison inmates, nearly half of all suicides in jails (49%) occurred within the first week of custody (Mumola, 2005). Mumola (2005) and White et al. (2002) found that the majority of prison suicides occurred in individual inmates' cells, with many prison suicides occurring in special housing units where mentally ill inmates are sometimes confined when they are unable to function in general population. Specifically, White et al. found that about 60% all suicides were committed in segregated housing, and 40% of those deaths (one third of all suicides) occurred within 3 days of being placed in the unit.

Taken collectively, these data offer researchers promising avenues for future investigation. They suggest that although overall suicide rates for correctional populations may not significantly exceed general population data (depending on how they are calculated), suicide is still a fertile area for investigation because it accounts for a disproportionately high number of correctional deaths and is always a high-profile event. Furthermore, it seems clear from this review that jail- and prison-suicide deaths occur in clearly identifiable high-risk subgroups that merit greater attention from researchers and clinicians.

If continued declines in overall correctional suicide rates are to be achieved, research should begin targeting the known high-risk subgroups (e.g., mentally ill offenders, high-security and/or violent offenders, newly admitted inmates to segregated housing units). There is a need to develop predictive tools to differentiate the characteristics of specific mentally ill offenders that put them at high risk for suicide attempts or death. Because many suicides occur in segregated housing, it seems beneficial to evaluate the effectiveness of screening programs for newly admitted inmates as well as nontraditional housing environments for disruptive mentally ill offenders. For example, diverting selected inmates to a designated treatment or "step-up" observation unit within the general population might be a viable alternative to segregation placement (Magaletta, Ax, Patry, & Dietz, 2005). Similar efforts should be directed toward identifying the unique factors in violent and long-term inmates that increase their likelihood of suicide. Along those lines, Conner, Duberstein, Conwell, and Caine (2003) have suggested a strong link between serotonin levels, impulsivity, and suicide. Application-oriented research that addresses these critical needs by providing practical solutions will make a significant contribution in any correctional setting.

ASSESSMENT AND TREATMENT OF NEUROLOGICAL CORRELATES OF MALADAPTIVE BEHAVIOR

Prisons typically have the twin goals of maintaining a safe and orderly environment and helping inmates make prosocial changes to minimize risk on re-entry to society. To ensure continued progress in both regards, correctional and forensic psychologists must appreciate the neurobiological bases of behavior as they pertain to forensic issues. This section provides several illustrations of this process and suggestions for future research that can transform psychologists' level of understanding and scope of practice in this vital area of public service.

Three different types of aggression identified in the animal aggression literature most significantly impact the criminal justice system (Nussbaum, Saint-Cyr, & Bell, 1997). *Predatory aggression* is marked by a tangible reinforcing goal, lack of emotionality and empathy, and a severity and degree of violence limited only by goal attainment. *Irritable aggression* occurs in response to frustration or insult, it is accompanied by angry affect, it does not have a tangible goal, and the severity is out of proportion to the eliciting stimulus. *Defensive aggression* is a response to threat: Its goal is to permit escape, and it is accompanied by intense fear. Defensive aggression becomes a problem for the criminal justice system when individuals with impaired reality testing perceive a threat where none exists and launch an often-serious preemptive attack. Each type of aggression has been shown to have distinct anatomical pathways with different principle neurotransmitters (Nussbaum et al., 1997). For reasons of space, the discussion here will be limited to predatory and irritable aggression.

Given the distinct environmental triggers for irritable aggression, it is likely that the portion of the neural pathway that initiates this behavioral sequence is different from the corresponding ventral tegmental accumbens (VTA) circuit that initiates predatory aggression, although

they may share similar and inefficient regulatory circuits (Levi, 2004). Research conducted in a correctional sample has shown that personality and neuropsychological variables can effectively discriminate between inmates with violent and nonviolent histories and between predatory and irritable aggressive types (Levi, 2004; Nussbaum, Watson, Levi, & Ax, 2005). Bechara, Damasio, and Damasio (2001) reported that the acquisition phase of the Iowa Gambling Task (IGT) is under dopaminergic influence, whereas the maintenance phase is susceptible to serotonergic manipulation. Vogel-Sprott, Eadson, Fillmore, and Justus (2001); McLure, Laibson, Loewenstein, and Cohen (2004); and van Honk et al. (2004) provide additional support for this dopamine-serotonin balance, reflecting decision making that is biased in favor of immediate rather than longer term optimization of reinforcement. In addition, it has been shown that immediate reward focus is directly associated with testosterone levels (van Honk et al., 2004) and inversely related to the stress hormone cortisol (van Honk, Schutter, Hermans, & Putnam, 2003). Schutter and van Honk (2005) have demonstrated that resting electroencephalograph (EEG) ratios favoring lower rather than higher frequencies are associated with disadvantageous (immediate-biased) decision making on the IGT.

These findings suggest an information-processing phenomenon (immediate versus long-term focus) that can readily be evaluated by psychologists (IGT), that is detectable objectively (EEG), and that is reflective of pharmacological specificity (dopamine-serotonin "balance") and endocrine function (testosterone and cortisol). This is clinically relevant because impulsive decision making in the face of an immediate reward is characteristic of much predatory behavior often seen in correctional populations and keeps the most intransigent within the revolving doors. Medications, including specific serotonin reuptake inhibitors (SSRIs), are available that, at low doses, shift the balance in favor of serotonin at the expense of dopamine and testosterone (e.g., Bradford, 2006; A. A. Harrison, Everitt, & Robbins, 1997). These medications have the ability to assist impulsive individuals to make more sound decisions. Their effectiveness can be monitored by periodic IGT performance, especially if supplemented with objective EEG analyses. Empirical research is necessary to demonstrate the effectiveness of this assessment and risk management approach with predatory offenders.

Brain dysfunction, principally of the frontal lobes, appears to be associated with impulsive (as opposed to purposeful predatory) aggression (Filley et al., 2001). This is eminently sensible in light of the above discussion. Indeed, Brewer-Smyth, Wolbert-Burgess, and Shults (2004) recently compared violent and nonviolent female offenders and found that the violent group had greater numbers of previous traumatic brain injuries with loss of consciousness, atypically low morning cortisol levels, and more previous suicide attempts (itself likely a function of similar neural dyscontrol).

The animal aggression typology is but one approach to classifying human aggression, representing perhaps the most challenging issue in correctional work. Nevertheless, there is much to be gained by adopting a psychobiological perspective to classify, understand, and intervene with the myriad human problems indigenous to modern prison populations and their stressful environments. Insofar as legally and ethically possible, multilevel research studies are needed utilizing a broad array of clinical populations within the same study. This will permit researchers to observe the relationships between "real-world" behavior, psychological and neuropsychological testing, EEG, and evoked potential reflections of "real-time" brain processes. To further clarify these research issues, selected cases could be examined using more costly but informative cortical functional magnetic resonance imaging (fMRI) and subcortical positron emission tomography (PET) protocols, which would allow researchers to more precisely define the relationships between specific pharmacological and behavioral interventions

and related neural pathways. This may ultimately provide a seamless understanding of relationships flowing between different psychobiological levels, in sharp contrast to the current conceptually fragmented and empirically disjointed state of affairs.

CORRECTIONAL TREATMENT: ISSUES AND INNOVATIONS

Correctional mental health researchers must not only keep pace with scientific advancements in the public sector but also must anticipate the changing structure of service delivery and develop research programs that investigate the impact, benefit, and potential costs of innovative intervention strategies. Two innovative treatment strategies are discussed in this section.

PSYCHOPHARMACOLOGY IN CORRECTIONAL SETTINGS

Treating a range of mental health problems with psychotropic medications is common in correctional settings. For example, Beck and Maruschak (2001) reported that nearly 10% of inmates in America's state prisons were taking psychotropic medications. Such demand, coupled with scarce resources (Manderscheid et al., 2004), makes it clear that whether by design or default, nonphysician mental health professionals working in corrections will have fairly regular contact with inmates who are taking or may benefit from psychotropic medication during their incarcerations.

One way in which psychologists might respond to the demand for mental health services in correctional settings is by adding prescriptive authority to their scope of practice. In 1995, the American Psychological Association officially endorsed the right of properly trained psychologists to seek prescriptive authority (Martin, 1995). With the subsequent passage of practice bills in Louisiana, New Mexico, and Guam, the initiative appears generally viable, and data indicate strong support among correctional psychologists for the prescriptive authority initiative (Fagan et al., 2004). Such authority would enable correctional psychologists to provide combined pharmacological and psychotherapeutic interventions where appropriate (Sammons & Schmitt, 2001) and could facilitate psychologists' involvement in outcome research with this understudied and clinically complex population. Prescriptive authority for correctional psychologists could therefore be highly cost-effective for the agencies that employ them.

CORRECTIONAL TELEHEALTH

Telehealth is a general term for data transmission systems used by health care professionals to deliver health care services over a distance (Bashur & Armstrong, 1976). Within corrections, this often takes the form of "real-time" audiovisual communications that connect agencies with service need populations (*the remote site*) to agencies that have specialist or generalist service providers (*the hub site*). The remote sites are usually mainline, nonspecialty corrections facilities, and the hub sites are resource-diverse facilities that can provide specialty services through external contracts or internal agreements.

Since their inception as pilot programs in the early 1990s (Magaletta, Fagan, & Ax, 1998; McCue et al., 1997; National Institute of Justice [NIJ], 1999, 2002; Raimer & Stobo, 2004; Vitucci, 1999; Zincone, Doty, & Balch, 1997; Zollo, Kienzle, Loeffelholz, & Sebille, 1999), corrections-based telehealth networks and applications have flourished. By the turn of the

century, telehealth had won wide acceptance by correctional clinicians and administrators (Krizner, 2002), and correctional telehealth applications accounted for one fifth of all telehealth services offered (Lowe, 2001). In 2001, more than half of the correctional systems in America were delivering services to offenders via telehealth, with mental health services being one of the most frequently used applications (Larsen, Stamm, Davis, & Magaletta, 2004). The technology is used to evaluate offenders and prescribe psychotropic medications to patients where appropriate (Magaletta, Dennery, & Ax, 2005).

In terms of research and evaluation on corrections-based mental health services offered through telehealth, the field has been dominated by cost-benefit evaluations (Brunnicardi, 1998; Larsen et al., 2004; Leonard, 2004; Magaletta, Ax, Bartizal, & Pratsinak, 1998; Magaletta, Fagan, et al., 1998; Manfredi, Shupe, & Batki, 2005; McCue et al., 1997; NIJ, 2002; Schopp, Johnstone, & Merrell, 2000; Zincone et al., 1997). In terms of costs, the studies consistently found resistance from the professional services staff and high initial start-up costs. In terms of benefits, studies consistently pointed to improved security for the community in which the correctional institution is located (via a reduction in the number of times that offenders are escorted into the community or transferred to hospitals to receive services). Other benefits included improved safety for correctional staff within the institution, a reduction in overall cost of services, and quality-care indicators such as expanded access to types of care specialists who are familiar with correctional populations and/or formularies.

A smaller group of studies examined the clinical effectiveness and utility of telehealth. Within this group, several studies examined the reliability of assessments made through telehealth networks and found it to be acceptable (e.g., Brody, Claypoole, & Motto, 2000; Nelson, Zaylor, & Cook, 2004). In an exploration of how diagnosis interacts with telehealth technologies, Magaletta, Fagan, and Peyrot (2000) surveyed offenders with different diagnoses to assess their satisfaction with telehealth technology compared to the live services that they had received prior to their incarceration. They found that offenders with thought disorders had higher satisfaction with telehealth services than those with affective disorders and that those offenders with personality disorders were the most resistant to the technology. Finally, Morgan, Patrick, and Magaletta (2006) reported no significant differences among mentally ill offenders receiving psychiatric and/or psychological services in terms of their postsession mood, satisfaction with services, and perceptions of the therapeutic relationship regardless of the method of service delivery (i.e., telehealth or face-to-face).

Overall, the field is still in its infancy, and many of the studies require replication and methodological extension. In extending earlier studies, greater attention should be focused on measuring the clinical efficacy, utility, and outcomes of telehealth services (Jerome et al., 2000). The mechanism of telehealth and how it interfaces with different diagnostic groups should also be studied further. From the perspective of the professional services staff, empirical questions remain as to whether training can ameliorate professional resistance. Research in the telehealth area would also benefit from further empirical study incorporating well-defined comparison groups, larger sample sizes, and richer descriptions of relevant historical and demographic variables. Because all of the current research in this area has focused on male offenders, research exploring the impact of telehealth services with female offenders is still needed.

Other telehealth innovations that correctional mental health researchers may also wish to quantify and evaluate are currently being developed. Perhaps the greatest of these innovations is the use of telehealth technology to enhance the continuity of care for releasing

mental health offenders. Other areas include expanding the use of specialized mental health assessments, including competency assessments (Herrick, 1999; Merideth, 1999) and neurological evaluations (Magaletta, Fagan, et al., 1998; Schopp et al., 2000) as well as individual therapy, group therapy, and clinical supervision.

Finally, it remains an open question whether technology itself can indeed provide the treatment as well as be the modality. In this scenario, offenders with the neurocognitive deficits often seen in schizophrenia or the neurological limitations resulting from a traumatic brain injury could be offered computer-assisted cognitive remediation or psychosocial treatments and programs (Bellack, Dickinson, Morris, & Tenhula, 2005; Rotondi et al., 2005). In general, there remains potential for research to determine how computer technology could be developed to provide lifelike scenarios or interactive role-plays that could be used by offenders to develop or demonstrate mastery of core, clinical-change concepts such as empathy building or social skills (Paschall, Fishbein, Hubal, & Eldreth, 2005).

CONCLUSION

With so many seriously mentally ill individuals now incarcerated, the need for innovative and cost-effective assessment and treatment has never been greater. If it is true that change takes place at the margins, then corrections is where clinical psychology may expect to see new and cost-effective ideas implemented. Correctional psychology is moving toward a biopsychosocial understanding of human behavior. Accordingly, psychologists working in these environments should continue to refine and expand the assessment approaches and treatment methodologies discussed here, as is consistent with a holistic conceptualization of the patient.

However, this will be difficult in light of the scarce resources, the obstacles to conducting research, and the eclipse of the rehabilitation mission that characterize the current state of affairs in corrections. To realize this ambitious agenda, psychologists must be mindful of the need to demonstrate that these and other assessment and treatment innovations “add value” to their respective agencies by improving patient care and lowering costs.

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