BRIEF REPORTS

Does the Use of Telemental Health Alter the Treatment Experience?
Inmates’ Perceptions of Telemental Health Versus Face-to-Face
Treatment Modalities

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In corrections, where staffing limitations tax an overburdened mental health system, telemental health is an increasingly common mode of mental health service delivery. Although telemental health presents an efficient treatment modality for a spectrum of mental health services, it is imperative to study how this modality influences key elements of the treatment experience. In this study, the authors compared inmates’ perceptions of the working alliance, postsession mood, and satisfaction with psychiatric and psychological mental health services delivered through 2 different modalities: telemental health and face-to-face. Participants consisted of 186 inmates who received mental health services (36 via telepsychology, 50 via face-to-face psychology, 50 via telepsychiatry, and 50 via face-to-face psychiatry). Results indicate no significant differences in inmates’ perceptions of the work alliance with the mental health professional, postsession mood, or overall satisfaction with services when telemental health and face-to-face modalities were compared within each type of mental health service. Implications of these findings are presented.

Keywords: telemental health, offender, inmate and correctional mental health services

Telemental health is the use of a communication device for a real-time service provision when the client and the provider are physically separated at the time the service is rendered (VandenBos & Williams, 2000). Although there has been increased interest in telemental health (see Swansea, 2006), there remains a paucity of research examining the impact of this service delivery modality on the therapeutic relationship. In fact, no randomized, controlled outcome studies examining the effectiveness of this method of service delivery have been conducted.

Given the significance of the therapeutic relationship to the process of change (Lambert, Shapiro, & Bergin, 1986), the degree to which this relationship is impacted by the service delivery modality must be examined. This necessity is supported by the finding that characteristics of the therapeutic relationship, such as working alliance (Gaston, 1990), positively correlate with treatment gains (see Horvath & Bedi, 2002; Martin, Garske, & Davis, 2000) and treatment satisfaction (Magaletta, Fagan, & Peyrot, 2000). Thus, it is relevant to question the impact of service delivery modality on the therapeutic relationship. In other words, is the traditional face-to-face service delivery modality superior to nontraditional and innovative modalities aimed at increasing access to care?

One setting that provides ample opportunity to study these issues is corrections. Several concerns salient in the correctional setting support the utility and highlight the advantages of delivering mental health services through telemental health. These concerns include service demands that challenge institutional resources (Magaletta, Fagan, & Ax, 1998). Moreover, inmates experience a larger number of psychological problems than the general public (Diamond, Wang, Holzer, Thomas, & Cruser, 2001). Importantly, telemental health offers these inmates increased access to mental health care as well as increased security for psychologists (Hipkins, 1997). Telemental health can also reduce the costs of transporting inmates from correctional to medical facilities, and it offers a broader range of mental health services—an important consideration given the increasing mentally ill population in criminal justice settings without concomitant increases in staff resources or services (Manderscheid, Grave-sande, & Goldstrom, 2004). By using telemental health to link mentally ill inmates with specialty providers on a regular basis, the overall quality of care is improved (Magaletta et al., 1998). A recent review of correctional telemental health services (Ax et al., 2007) revealed essentially two types of studies: program evaluation and client satisfaction. Program evaluations consistently
revealed cost containment as a benefit and staff resistance as a drawback. Evaluations of client satisfaction revealed that most clients are satisfied receiving services through this modality. Nevertheless, little is known about the impact of telemental health as a modality for service delivery. There remains a paucity of research on inmates’ perception of telemental health compared with traditional face-to-face service delivery, and knowledge of how the modality of mental health service delivery impacts key elements of the treatment experience is needed (Krupinski et al., 2006; Tucker, Olsson, Simring, Goodman, & Bienefeld, 2006).

In this study, we examined how telemental health impacts aspects of the therapeutic relationship, namely the working alliance as well as inmates’ mood, satisfaction, and general attitudes and perceptions toward mental health services delivered via telemental health. Given previous findings, we hypothesized that inmates receiving mental health services via telemental health would maintain a comparable working alliance with the treatment provider, with similar postsession responses regarding reactions to the session and satisfaction with their mental health service, compared with a separate group of inmates who received mental health services via a traditional face-to-face modality.

Method

Participants

Participants consisted of 186 adult male inmates who received mental health services (either psychology or psychiatry) in an adult correctional institution. Of the 186 participants, 50 received face-to-face psychological services in a general population correctional facility, 36 received telemental health psychological services in a general population correctional facility, 50 received face-to-face psychiatric services in a psychiatric prison, and 50 inmates received telemental health psychiatric services in a general population correctional facility.1 50 received face-to-face psychiatric services in a psychiatric prison, and 50 inmates received telemental health psychiatric services in a general population correctional facility. Note that participants represented independent samples such that they were not receiving duplicate services (i.e., psychology and psychiatry, or telemental health and face-to-face). The psychiatric prison housed mentally or physically ill inmates unable to function effectively in a general population facility. The general population facilities housed mentally ill and nonmentally ill offenders alike.

Although inmates reportedly suffered from a range of psychiatric disorders, the majority suffered from mood disorders (e.g., bipolar disorder, major depressive disorder; 74%) and schizophrenia or other psychotic disorders (19%). Notably, inmates receiving telemental health services versus face-to-face services did not differ diagnostically for those receiving psychological services, $\chi^2(2, N = 34) = 1.677, p = .43$, or psychiatric services, $\chi^2(2, N = 61) = 2.73, p = .255$.

The mean age of participants was 31.8 years ($SD = 9.4$). The sample was composed of primarily Caucasian (50%), African American (22.6%), and Hispanic (21.5%) participants. Participants reported an average of 10.89 years of education ($SD = 1.9$). Whereas 19.9% of participants were reportedly married/partnered, the majority of inmates (80.1%) denied current involvement in a romantic relationship (single/nonpartnered, separated, or divorced). Participants were convicted of a variety of crimes (e.g., drug or alcohol offenses, murder, assault/battery, or robbery/theft), with 36% of inmates convicted of a violent crime and 58.6% convicted of a nonviolent crime. Participants were serving a median sentence of 60 months, with 4 years being the modal sentence. At the time of this study, the inmate participants had served a median of 48 months and mode of 36 months of their adult life in prison and/or jail.

Materials

The Client Satisfaction Questionnaire (CSQ-8; Larsen, Attkisson, Hargreaves, & Nguyen, 1979) is an eight-item, self-report measure, utilizing a 4-point Likert-type response scale to assess client satisfaction with mental health services. Initial measures of the CSQ-8 by Larsen et al. (1979) resulted in an alpha coefficient of .93, indicating good internal consistency. Furthermore, Larsen (1977) found an alpha coefficient of .92, again indicating high internal consistency. In addition, only one factor has consistently been yielded during factor analysis of the CSQ-8 (Gaston & Sabourin, 1992).

The Working Alliance Inventory (WAI; Horvath & Greenberg, 1989, 1994) is a 36-item questionnaire with three subscales used to assess different aspects of the working alliance. The three subscales assess the following: (a) client and therapist agreement on the goals of therapy; (b) client and therapist agreement on how to reach the goals of therapy; and (c) the degree of confidence, trust, comfort, and acceptance between the therapist and client. The WAI has both client and therapist versions; however, only the client version was utilized in this study. On the WAI the client is asked—using a 7-point Likert-type scale ranging from 1 (never) to 7 (always)—to indicate which statements best describe his or her experience of the therapeutic alliance. The WAI has high internal consistency, with Cronbach’s alpha ranging from .89 to .92 for the global measure and the three subscales (Horvath & Greenberg, 1989). In addition, the WAI has good convergent validity (see Horvath & Greenberg, 1989; Safran & Wallner, 1991).

The Session Evaluation Questionnaire (SEQ; Stiles, 1980; Stiles & Snow, 1984a, 1984b) was also used in this study. The SEQ measures two basic dimensions of participants’ postsession mood: positivity and arousal (Stiles & Snow, 1984b), which account for most of the mood variability in a variety of circumstances (Russell, 1978, 1979). The SEQ consists of 21 opposite adjective scales presented in a 7-point semantic differential format. The items are divided into two sections: session evaluation and postsession mood. The stem “This session was” precedes the first 11 items for session evaluation; sample items include bad—good and safe—dangerous. The stem “Right now I feel” precedes the second 10 items for postsession mood; sample items include happy—sad and angry—pleased. Factor analyses have supported the four-subscale structure of the SEQ, with good internal consistency for the four dimensions, with coefficient alphas ranging from .78 to .91 (Stiles & Snow, 1984a, 1984b).

Procedure

Inmates were scheduled for a telemental health or face-to-face psychological or psychiatric mental health service session through

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1 The targeted number of participants in the telemental health psychology group was 50 inmates; however, because of an injury sustained by the participating therapist, the recruitment for this group was terminated prematurely.
regular institutional operational procedures, and they were recruited for participation in this study at the conclusion of one of their sessions (i.e., inmates were recruited following one of their regularly scheduled follow-up sessions). Inmates were assigned to the modality (telemental health vs. face-to-face) available at their prison and for the service (psychology or psychiatry) that was considered clinically necessary. For purposes of this study, telemental health referred to videoconferencing via secure satellite connection. Each psychological services session lasted approximately 30 min and generally focused on issues of adjustment and mental health stability (e.g., issues of institutional adjustment, symptom management, coping skills). Each psychiatric services session lasted approximately 20 min and focused generally on issues of symptom management (e.g., psychotropic medication reviews). One psychologist with a master’s of arts degree and one psychiatrist facilitated all psychological and psychiatric sessions, respectively. Sessions were randomly attended; thus, participants were evaluated at different phases in their treatment.

After completion of their mental health session (regardless of treatment modality), inmates were asked to volunteer their participation in a study that evaluated the quality of mental health services. The only selection criterion, other than participating in a mental health session, was that the inmate had to be able to read and write in English. No incentives were offered, and participants were recruited only once. If they declined, there was no subsequent chance to participate. Inmates who declined participation returned to their housing unit or work assignment. Inmates who agreed to participate were provided a standard consent form and questionnaire packet. Participants were informed of the purpose and procedures of the study, were provided an opportunity to ask questions, and were then instructed to complete the consent form and all questionnaires. Participation was limited to one session (i.e., inmates completed the instruments on one occasion). All procedures were approved through the Institution Review Boards at the Texas Tech University, the Texas Tech University Health Sciences Center, and the research branch of the Texas Department of Criminal Justice.

Results

Psychology Services (Telemental Health vs. Face-to-Face)

Preliminary analyses. Preliminary analyses assessed the demographic equivalence of inmates in the telemental health and face-to-face psychology services conditions. A series of independent \( t \) tests and chi-square procedures resulted in no significant differences between groups on demographic variables \( (p > .05) \).

Primary analyses. A one-way multivariate analysis of variance procedure resulted in no significant differences between inmates receiving telemental health or face-to-face psychology services for working alliance (development of goals, reaching goals, or quality of relationship), \( \Lambda(3, 82) = 0.59, p = .62 \). There was no significant difference between inmates’ evaluation of their psychology session (i.e., session depth, smoothness, positivity, or arousal) as measured by the SEQ, \( \Lambda(4, 81) = 0.97, p = .43 \), regardless of the mechanism of service delivery. Finally, inmates receiving psychology services via telemental health were similarly satisfied with the service they received (e.g., quality, met needs, would recommend, general satisfaction) when compared with inmates receiving psychology services via a traditional face-to-face delivery method, \( \Lambda(8, 77) = 1.42, p = .20 \). See Table 1 for descriptive statistics.

Psychiatry Services (Telemental Health vs. Face-to-Face)

Preliminary analysis. A series of independent \( t \) tests and chi-square procedures examined group differences in the psychiatric

| Table 1 | Means (and Standard Deviations) for the WAI, SEQ, and CSQ-8 for Inmates Receiving Telehealth or Face-to-Face Mental Health Services |
|-----------------|-----------------|-----------------|-----------------|-----------------|
| Questionnaire   | Psychological services | Psychiatric services |
|                 | Telehealth \( (n = 36) \) | Face-to-face \( (n = 50) \) | Telehealth \( (n = 50) \) | Face-to-face \( (n = 50) \) |
| WAI: Total score | 61.61 (16.3) | 63.98 (16.73) | 55.5 (13.45) | 59.02 (14.52) |
| WAI: Development of goals | 21.67 (5.24) | 21.98 (5.6) | 18.96 (3.85) | 19.7 (4.48) |
| WAI: Reaching goals | 20.47 (5.71) | 21.54 (5.69) | 18.33 (5.3) | 20.2 (5.58) |
| WAI: Quality of relationship | 19.47 (6.2) | 20.46 (6.2) | 18.18 (5.54) | 19.08 (5.78) |
| SEQ: Session depth | 18.83 (5.42) | 20.78 (5.48) | 18.71 (5.31) | 20.69 (6.39) |
| SEQ: Session smoothness | 20.74 (6.08) | 21.16 (6.24) | 19.39 (6.26) | 21.75 (6.3) |
| SEQ: Positivity | 20.52 (6.52) | 20.62 (5.78) | 18.14 (6.26) | 19.37 (7.01) |
| SEQ: Arousal | 14.87 (2.75) | 15.59 (3.53) | 15.01 (4.08) | 14.68 (4.49) |
| CSQ-1: Quality of services? | 2.94 (0.8) | 3.24 (0.87) | 2.78 (1.02) | 2.65 (0.97) |
| CSQ-2: Receive services you wanted? | 2.94 (0.8) | 3.04 (0.83) | 2.71 (0.94) | 2.80 (0.81) |
| CSQ-3: Program met your needs? | 2.64 (0.96) | 2.74 (1.01) | 2.65 (0.88) | 2.74 (0.88) |
| CSQ-4: Recommend our program? | 3.14 (0.72) | 3.28 (0.78) | 2.88 (0.9) | 2.96 (0.95) |
| CSQ-5: Satisfied with amount of help you received? | 2.81 (0.89) | 3.04 (0.9) | 2.76 (0.86) | 2.68 (0.84) |
| CSQ-6: Services helped you deal with problems? | 3.06 (0.83) | 3.18 (0.87) | 2.76 (0.86) | 3.04 (0.81) |
| CSQ-7: Satisfied with services you received? | 2.94 (0.83) | 3.08 (0.94) | 2.84 (0.8) | 2.82 (0.85) |
| CSQ-8: Seek help again from our program? | 3.28 (0.78) | 3.24 (0.9) | 2.92 (0.86) | 3.04 (0.78) |

Note. WAI = Working Alliance Inventory; SEQ = Session Evaluation Questionnaire; CSQ = Client Satisfaction Questionnaire.
conditions. Results indicate significant differences for age ($t = 2.786, p = .006$), educational history ($t = -2.156, p = .034$), years incarcerated ($t = 4.767, p < .001$), and months of mental health treatment ($t = 3.665, p < .001$). However, as age was the only variable to be significantly correlated ($p < .05$) with the dependent variables, it was the only demographic variable held as a covariate in subsequent analyses.

**Primary analysis.** A one-way multivariate analysis of covariance procedure resulted in no significant differences between inmates receiving telemental health or face-to-face psychiatric services for working alliance (development of goals, reaching goals, or quality of relationship), $\Lambda(3, 94) = 1.01, p = .39$. Similarly, there was no significant difference between inmates’ evaluation of their psychiatry session (i.e., session depth, smoothness, positivity, or arousal), $\Lambda(4, 93) = 0.666, p = .61$, regardless of the mechanism of service delivery. Finally, inmates receiving psychiatric services via telemental health were similarly satisfied with the service they received (e.g., quality, met needs, would recommend, general satisfaction) when compared with inmates receiving psychiatric services via a traditional face-to-face delivery method, $\Lambda(8, 89) = 0.944, p = .49$. See Table I for descriptive statistics.

Power analyses were conducted for each of the primary analyses. Using Stevens’s (2002, p. 200) table for power of Hotelling’s $T^2$, we found that power for the primary analysis was between .48 and .54, except for the psychology services satisfaction analysis, which approximated .80. Stevens interprets power below .50 as inadequate and .80 as adequate power.

**Discussion**

The purpose of this study was to assess and compare inmates’ perceptions of the therapeutic relationship, inmates’ postsession mood, and their satisfaction with mental health services delivered through two different modalities: telemental health and face-to-face. As hypothesized, there were no significant differences between telemental health and face-to-face delivery modalities for perceptions of the therapeutic relationship, postsession mood, or general satisfaction with services. Furthermore, this lack of a statistically significant difference held regardless of the type of mental health service received (i.e., psychological or psychiatric).

Findings preliminarily suggest that the modality of treatment does not influence key elements of the treatment experience, positively or negatively, and is congruent with emerging literature of telemental health outcomes research (Nelson & Palsbo, 2006; O’Reilly et al., 2007). Interestingly, the neutral relationship of treatment modality was found regardless of the role of the relationship for each type of service delivered. Whether the relationship focused upon general mental health and coping (i.e., relationship as the change agent) or medication management (i.e., a biological change agent), the neutral effect was seen.

These results are encouraging, as telemental health appears to offer an efficient means of service delivery without a loss in the quality of the therapeutic relationship. Given the demand for mental health services in criminal justice settings (Beck, & Marschak, 2001; Manderscheid et al., 2004; Mears, 2004) and other underserved areas, such as rural locations (Holzer, Goldsmith, & Cirollo, 2000), telemental health affords opportunities to reach more clients without relocating service providers geographically or importing them physically into the service setting. Thus, the option of developing these staff resources without paying for relocation costs (both monetary and personal for the provider) is a benefit for administrators, service providers, and the inmates in need of the services.

Results of this study are particularly encouraging for criminal justice systems. Telehealth transports information and data, not inmates. As such, it offers increased safety for service providers as well as increased security and decreased transportation costs for the criminal justice system. The use of telemental health, without negative impact on the therapeutic relationship, may also broaden the range of mental health services available to inmates. Additionally, the use of telemental health offers continuity of care for releasing inmates and represents a significant contribution from a public health perspective.

As with any naturalistic study, limitations of this study should be noted. With statistically nonsignificant results, issues of statistical power are a concern, and power for this study was limited by the small sample size and number of variables. Additionally, inmates were not randomly assigned to conditions, which may have introduced selection bias into the study. Among the bias suspected, inmates housed in the psychiatric prison likely suffered greater mental health impairment than did inmates housed in the general population facilities. Among the unknown bias, variance in sample characteristics, such as prior exposure to mental health services and problem severity, all remain possible.

Future studies should employ random assignment to ensure stability of these results across inmate samples as well as to offer generalizability of these results to other correctional populations (Krupinski et al., 2006). Future studies should also investigate the utility of telemental health with other female offenders, jail populations, youthful inmates, and federally incarcerated inmates. Future studies of this nature should also obtain data from clinicians, including their perceptions regarding the impact of telemental health on the therapeutic relationship.

Future research should also begin investigating outcome effectiveness of mental health services delivered via telemental health compared with face-to-face services. From a correctional perspective, administrators would want to know whether telemental health services resulted in reduced inmate disciplinary actions, decreased incidence of harm to self or others, and/or improved mental health functioning and symptom management compared with face-to-face services. Additionally, issues of service utilization should be examined. That is, does the availability of telemental health improve inmate service use, or does it create additional barriers? If there are barriers, are these differentially related to the inmates, the correctional system, and/or the treatment providers themselves?

This study represented an empirical investigation from the field and clearly indicated that the modality used for providing mental health services (i.e., telemental health vs. face-to-face) did not negatively impact key elements of the treatment experience. Specifically, the therapeutic relationship with the mental health professional, postsession mood, or overall satisfaction with services received were not different between telemental health and face-to-face treatment modalities. Importantly for administrators, mental health service providers, and inmates alike, this neutral effect was observed across two different types of mental health services. Thus, these results highlight efficient and economical service delivery options for underserved populations (inmates) and possi-
bly to other underserved areas (rural geographic regions) without compromise to treatment integrity from the consumer’s perspective.

References


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