

A SYSTEMATIC REVIEW OF THE RESEARCH BASE ON SEXUAL REORIENTATION THERAPIES

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In the past few years, members of the AAMFT, like members of other professional groups, have engaged in a discourse as to the necessity and effectiveness of sexual reorientation therapies. The purpose of this article is to review, critique, and synthesize the scientific rigor of the literature base underpinning sexual reorientation therapy research. Using a systematic narrative analysis approach, 28 empirically based, peer-reviewed articles meeting eligibility criteria were coded for sample characteristics and demographics as well as numerous methodology descriptors. Results indicate the literature base is full of omissions which threaten the validity of interpreting available data.

Prior to the removal of homosexuality as a mental disorder from the *Diagnostic and Statistical Manual of Mental Disorders* (American Psychological Association, 1987), the clinical literature base was replete with studies of therapies aimed at changing sexual orientation based on behavior modification or aversive conditioning procedures. Gradually, however, such studies were discontinued for ethical and legal reasons. With homosexuality depathologized, therapeutic interventions have been developed that are more affirmative of a same-sex orientation (Zucker, 2003).

In contrast, some researchers and therapists have maintained that sexual orientation can be changed and have described techniques that collectively have been considered “reparative therapy” or “conversion therapy” (Nicolosi, 1991; Socarides & Kaufman, 1994). Based on a psychoanalytic interpretation of homosexual behavior, Nicolosi (1991) suggested that the pathological sexualization was in need of “repairing,” thus the term “reparative” therapy (Morrow & Beckstead, 2004). Reparative therapy, as a program of psychotherapy, attempts to “cure” homosexuals by transforming them into heterosexuals (Hicks, 1999). These therapies can include a myriad of techniques including prayer, religious conversion, and individual or group counseling. In contrast, aversion therapies are techniques which share the same goal but are behavioral in nature, such as shock therapy. Traditional methods of aversion techniques have been termed “cruel” (Haldeman, 2002) and would not pass current Institutional Review Board Standards for acceptable research practices. For the purposes of this article, the term “sexual reorientation” will be utilized as an umbrella term to describe therapies which are either aversive (behavioral) or reparative (psychosocial). Many believe that these therapies should be available (e.g., Rosik, 2003), while others claim they are unnecessary and harmful (e.g., Green, 2003).

Some authors suggest that it is important to consider religious and spiritual orientations while deciding to recommend or not recommend sexual reorientation therapies (Yarhouse & Throckmorton, 2002). This is predicated on the notion that, while sexual orientation may be

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primarily biological, sexual behaviors are volitional and subject to moral evaluation (Stein, 1996). Some researchers and therapists believe that reorientation therapies may be warranted when an individual's sexual orientation is in conflict with his or her religious beliefs. Several guidelines have been suggested for clinicians to help those individuals who express dissatisfaction with their sexual orientation (Throckmorton, 2002; Yarhouse & Throckmorton, 2002).

Other studies have identified negative consequences of sexual reorientation therapies. For example, Shidlo and Schroeder (2002) noted that a majority of those who sought reparative therapies perceived psychological harm in the form of depression, suicidal ideation and attempts, social and interpersonal harm, loss of social support, and spiritual harm as a direct result of these interventions. Haldeman (2002) also noted typical negative outcomes of reparative therapies that include chronic depression, low self-esteem, difficulty sustaining relationships, and sexual dysfunction. Others (e.g., Haldeman, 2002) have noted that the practice of both types of sexual reorientation therapies socially devalues homosexuality and bisexuality.

Professional organizations such as the American Psychological Association, American Psychiatric Association, American Academy of Pediatrics, American Medical Association, American Counseling Association, National Association of School Psychologists, National Association of Social Workers, and the Royal College of Nursing have adopted policies that reject sexual reorientation therapies due to a lack of evidence for the mental illness view of homosexuality and bisexuality. In fact, the American Psychological Association provides clear guidelines for professionals dealing with clients who struggle with their sexual orientation (American Psychological Association, 2000). The emphasis is on identifying and understanding the client's perception of discrimination due to internalized and external homophobia. Thus, the social and psychological context of discomfort assumes more importance than the clinician's theoretical perspective on sexual orientation or either type of sexual reorientation therapy (Haldeman, 2002).

A survey of the literature reveals numerous other attempts to review and synthesize the literature base in this area (Adams & Sturgis, 1977; Bhugra, 2004; Bieber, 1967; Clippinger, 1974; Drescher, 1998; Haldeman, 1994, 2001; Rogers, Roback, McKee, & Calhoun, 1976; Throckmorton, 1998, 2002). Perhaps because of these two contrasting viewpoints, and despite numerous other attempts to distill consensus on sexual reorientation therapies, "The empirical database remains primitive, and any decisive claim about benefits or harms really must be taken with a substantial grain of salt" (Zucker, 2003, p. 6).

In the past few years members of the AAMFT, like members of other professional groups, have engaged in a discourse as to the necessity and effectiveness of reparative therapies in particular. Fundamental questions which have emerged from these discussions include the following: What are sexual reorientation therapies? Do these therapies work to change sexual orientation? Can these therapies be harmful to individuals or families? The purpose of this research is to address a different question, "*What is the scientific rigor of the studies supporting the conclusions claimed by both sides of the debate?*" We addressed these questions by comprehensively critiquing the available literature base on both types of sexual reorientation therapies dating back to 1956 and revealing the strengths and weaknesses of the research underlying this literature.

METHODOLOGY

A systematic review was chosen for the purposes of addressing the preceding research question. This type of review thoroughly identifies, appraises, and synthesizes relevant studies on a given topic (Petticrew & Roberts, 2006). While a meta-analytic systematic review uses statistical techniques to synthesize results of several studies into an effect size, a narrative systematic review explores studies descriptively (Petticrew & Roberts, 2006). A systematic review is particularly appropriate when researchers are looking to inform clinical practice or seek to critically assess a body of literature (Gough & Elbourne, 2002; Petticrew, 2001).

Sample

The process began by identifying relevant studies to be included in the analysis. Each member of the research team independently searched relevant academic databases, including PsycINFO, Social Science Citation Index, Academic Search Premier Database, and Sociological Abstracts, for articles. In addition, the websites of organizations, such as the National Association for Research and Treatment of Homosexuality (NARTH), Exodus International, and Focus on the Family were also searched for citations of academic research. Multiple terms were used to locate relevant research, including “conversion therapy,” “reparative therapy,” “sexual orientation therapy,” and “sexual reorientation therapy.” There was no publication time restriction for the inclusion of articles. In addition, articles, books, and book chapters addressing reparative therapies were carefully reviewed for citations of additional papers. This process resulted in 182 possible candidates for inclusion.

As relevant studies were being acquired, the team developed inclusion criteria. In order for data to be included in the analysis, the research needed to be empirically based and directly address the topic of reparative therapy. Editorials and letters to editors ($n = 3$), commentaries ($n = 26$), and literature reviews ($n = 10$) were excluded. Book chapters and reviews ($n = 23$) as well as case studies ($n = 36$) presented interesting challenges to the inclusion criteria. Book chapters were excluded because they tend not to be peer-reviewed but rather invited. Case studies were deemed problematic and excluded because generalizability is not a goal of such reports. In addition, articles that could not be verified or located within the academic library system ($n = 11$), were not about sexual reorientation therapies ($n = 3$), and only described ethical issues or clinical procedures ($n = 39$) were not included. The final sample of data for this study included 28 empirically based, peer-reviewed full-length articles and brief reports addressing the efficacy of reparative therapies.

A coding sheet was designed by the research team which included issues and variables deemed relevant to the investigation. Items included the research topic, theoretical orientation of the author, sample characteristics, study design, independent and dependent variables, type of analyses, and strengths and weaknesses of the study. Sample characteristics coded included sample size, gender, race, education, income, social class, region of the country, type of sample, dropout or return rate, source of recruitment or sampling, religion, and sexual orientation.

Each of the included articles was coded by a randomly assigned primary and secondary reviewer. The primary reviewer was responsible for the initial written coding of the article which was confirmed, refuted, or accentuated by the second reviewer. After each article was coded, relevant data were entered into a database for analysis.

RESULTS

Frequencies were calculated on the sample demographics for all studies. It is noteworthy that 61% of studies did not report dropout or return rates; 64% did not report age of participants so that a mean could be calculated; 68% did not report educational level of participants; 79% did not report race of participants; 79% did not report region of the country in which the study was conducted; 82% did not report religion of participants; 86% did not report social class, and 100% did not report income.

Type of Studies Conducted

Type of sexual reorientation therapy under investigation was examined and it was noted that 28% ($n = 8$) were “reparative” while 72% ($n = 20$) were “aversion.” Reparative therapy included studies of individual psychotherapy or peer support (Beckstead, 2001; Beckstead & Morrow, 2004; Jones, Botsko, & Gorman, 2003; Nicolosi, Byrd, & Potts, 2000; Schaeffer, Hyde, Kroencke, McCormick, & Nottebaum, 2000; Schaeffer, Nottebaum, Smith, Dech, & Krawczyk, 1999; Spitzer, 2003); group psychotherapy or support group (Beckstead, 2001;

Beckstead & Morrow, 2004; Ellis, 1956; Jones et al., 2003; Nicolosi et al., 2000; Schaeffer et al., 1999, 2000; Spitzer, 2003); or prayer/pastoral counseling (Jones et al., 2003; Nicolosi et al., 2000; Schaeffer et al., 1999, 2000; Spitzer, 2003).

Aversion therapy included the use of electroconvulsive shock treatments (Bancroft & Marks, 1968; Conrad & Wincze, 1976; Fookes, 1968; Freeman & Meyer, 1975; Hallam & Rachman, 1972; McConaghy, 1975; McConaghy, Armstrong, & Blaszczyński, 1981; Solyom & Miller, 1965; Tanner, 1973, 1975); injections of drugs to induce nausea or vomiting (McConaghy, 1969, 1975; McConaghy & Barr, 1973); use of noxious stimuli (Maletzky & George, 1973); hypnotic suggestions (Barlow, Agras, Leitenberg, Callahan, & Moore, 1972; Conrad & Wincze, 1976; Hallam & Rachman, 1972; James, 1978; Maletzky & George, 1973; McConaghy et al., 1981); or Orgasmic Reconditioning (ORC) using visual stimuli (Bancroft & Marks, 1968; Barlow & Agras, 1973; Conrad & Wincze, 1976; Freeman & Meyer, 1975; Hallam & Rachman, 1972; Herman, Barlow, & Agras, 1974a, 1974b; McConaghy, 1969, 1975; McConaghy & Barr, 1973; McConaghy et al., 1981; Solyom & Miller, 1965; Tanner, 1973, 1975). Some included the use of a combination of these treatments (Bancroft & Marks, 1968; Conrad & Wincze, 1976; Freeman & Meyer, 1975; Hallam & Rachman, 1972; Maletzky & George, 1973; McConaghy, 1969, 1975, 1976; McConaghy & Barr, 1973; McConaghy et al., 1981; Schmidt, Castell, & Brown, 1965; Solyom & Miller, 1965; Tanner, 1973, 1975). Because of the significant differences between reparative and aversion therapy, and the fact that aversion practices are no longer performed in research environments, type of therapy was treated separately in further analyses.

Results for Reparative Therapy

Reparative therapy studies were published between 1956 and 2004 with 88% in print since 1999. Only one of these studies reported a theoretical foundation for their work (Beckstead & Morrow, 2004), which was grounded theory. The age of participants ranged from 19 to 81 years but as mentioned earlier a mean could not be calculated. None of these studies reported income or social class and only 25% ($n = 2$) reported a dropout rate. These were reported as 32.7% dropout (Schaeffer et al., 1999) and 28% nonresponse rate (Spitzer, 2003). Six of the eight studies (61%) included data on religious affiliation of participants. Of these, four included members of the church of Latter Day Saints (Beckstead, 2001; Beckstead & Morrow, 2004; Nicolosi et al., 2000; Spitzer, 2003); two included samples identifying as Protestant, Catholic, Jewish, and "other" (Nicolosi et al., 2000; Spitzer, 2003) or reported a generic "Christian" sample (Schaeffer et al., 2000).

These studies were conducted with rather large samples ($R = 20-882$; $M = 272$). Male samples ($R = 18-689$; $M = 175$) were notably larger than female samples ($R = 20-400$; $M = 96$). Two of the largest studies included samples of 882 (Nicolosi et al., 2000) and 600 (Jones et al., 2003). Nicolosi and colleagues (2000) recruited participants using a snowball technique. Surveys were distributed to reparative therapists and their identifiable clients and through the National Association for Research and Therapy of Homosexuality (NARTH). These therapists and clients were also asked to provide surveys to current and previous clients. In addition, surveys were distributed to members of ex-gay ministry groups, and information about the study was placed in their newsletters or announced at associated conferences. Data for the Jones study came from a preexisting data set of lesbians, gay men, and bisexuals "who had been in psychotherapy at some time in their lives" (Jones & Gabriel, 1999, p. 211).

Of those who reported source of referral or sampling ($n = 7$), 43% used self-referral methods (Beckstead, 2001; Jones et al., 2003; Nicolosi et al., 2000) and 85% used professional referral sources (Beckstead, 2001; Ellis, 1956; Nicolosi et al., 2000; Schaeffer et al., 1999, 2000; Spitzer, 2003) or both. Professional referral sources were typically psychologists (Ellis, 1956; Nicolosi et al., 2000; Spitzer, 2003) or ministers (Nicolosi et al., 2000; Schaeffer et al., 1999, 2000; Spitzer, 2003).

Race of participants was reported in 62% of the studies, and the majority included only Caucasians ($R = 86\text{--}100\%$; $M = 93\%$). Percent of African Americans included in samples ranged from 1% to 2% ($M = 1.7\%$). Hispanics were included at a slightly higher rate ($R = 1\text{--}7\%$; $M = 4.2\%$), as were Asians (2–3%; $M = 2.5\%$); however, no study reported including Native Americans.

Region of the country in which samples were selected was reported in 75% of the studies, and results varied. California was mentioned in three studies (Jones et al., 2003; Nicolosi et al., 2000; Schaeffer et al., 1999). Two studies included residents of Utah (Beckstead, 2001; Beckstead & Morrow, 2004) or New York (Jones et al., 2003; Nicolosi et al., 2000) while the states of Texas (Nicolosi et al., 2000), Washington (Nicolosi et al., 2000), Florida (Nicolosi et al., 2000), Kentucky (Schaeffer et al., 1999), and Colorado (Schaeffer et al., 1999) were each mentioned once. One study reported, "Participants lived mainly in the United States (East 14%, West 35%, Midwest 15%, South 25%), with the remaining 16% mostly in Europe" (Spitzer, 2003, p. 406).

Level of education was reported in 75% of the studies; however, wide differences emerged on how education was reported such that a concise summary is difficult. Two studies reported a mean for the overall sample of 12 years of education (Schaeffer et al., 1999, 2000). Two studies reported mean years of education by gender and the results were virtually identical. In one study, the mean education level for males was 15.70 and for females 14.79 (Schaeffer et al., 1999) and for the other the mean education level for males and females was 15.69 and 14.72, respectively (Schaeffer et al., 2000). One study reported the percent completing college (76%) (Spitzer, 2003), while another reported those participants completing college (90%) or graduate degrees (62%; Jones et al., 2003). The remaining studies reported much greater detail on educational background of participants. In one study, 27% had graduate degrees, 11% had some graduate training, 30% had a bachelor's degree, 21% had some college education (Nicolosi et al., 2000), and in the other one person completed grade school; 10 were high school graduates; 23 had some college training; 6 had graduate work (Ellis, 1956).

Of those who reported a measure of sexual orientation ($n = 6$), 33% (Schaeffer et al., 1999, 2000) used the Kinsey Scale (Kinsey, Pomeroy, & Martin, 1948), 50% used self-identification (Beckstead, 2001; Jones et al., 2003; Spitzer, 2003), and 17% used a behavioral measure (Ellis, 1956). A variety of dependent measures was used. Three studies utilized subjective report of experience or outcome (Beckstead & Morrow, 2004; Ellis, 1956; Jones et al., 2003). For example, Beckstead and Morrow (2004) asked participants to describe how therapy helped them. Ellis (1956) subjectively determined improvement "by the judgment of the investigator" (p. 193). Five studies included subjective report of change in identity or orientation (Beckstead, 2001; Nicolosi et al., 2000; Schaeffer et al., 1999, 2000; Spitzer, 2003). Beckstead (2001) asked participants whether they had become "exclusively heterosexual" (p. 93) and Schaeffer et al. (2000) "included both closed and open-ended questions about sexual orientation" (p. 63). Two studies included measures of psychological functioning, including depression and self-esteem (Nicolosi et al., 2000) and tension, paranoia, and guilt (Schaeffer et al., 1999). Finally, three studies included measures of behavioral functioning (Nicolosi et al., 2000; Schaeffer et al., 1999; Spitzer, 2003). Examples included asking the participant to rate his or her current sexual functioning on a 7-point Likert scale (Nicolosi et al., 2000) and "How often did you have homosexual sex" (Spitzer, 2003, p. 415).

Results for Aversion Therapy

Aversion therapy studies were published between 1965 and 1981 with 90% in print before 1976. A primary theoretical orientation was clearly present in seven (35%) of the studies (Freeman & Meyer, 1975; Hallam & Rachman, 1972; Herman et al., 1974b; McConaghy & Barr, 1973; McConaghy et al., 1981; Schmidt et al., 1965; Solyom & Miller, 1965). Orientations included classical conditioning (Freeman & Meyer, 1975; Herman et al., 1974b), behavioral

(McConaghy et al., 1981; Solyom & Miller, 1965), aversion (Hallam & Rachman, 1972; McConaghy & Barr, 1973; Solyom & Miller, 1965), and learning theory (Schmidt et al., 1965).

Age of participants ranged from 15 to 62 years, but in 70% of the cases a mean could not be determined. Only 15% of studies reported details on education level of participants. Education was reported as describing two subjects as college students (Conrad & Wincze, 1976), having average intelligence (Hallam & Rachman, 1972), and a description of one subject as having been in college (Herman et al., 1974b). Remarkably, no study reported race, income, region of the country, or religion.

Of those who reported a measure of sexual orientation ($n = 12$), 92% used self-identification (Barlow & Agras, 1973; Freeman & Meyer, 1975; Hallam & Rachman, 1972; Herman et al., 1974a, 1974b; McConaghy, 1975, 1976; McConaghy et al., 1981; McConaghy & Barr, 1973; Schmidt et al., 1965; Solyom & Miller, 1965; Tanner, 1973), and one used a behavioral measure (Conrad & Wincze, 1976). Dependent measures used in aversion therapy articles also varied widely. Three studies utilized subjective report of experience or outcome (Fookes, 1968; McConaghy et al., 1981; Schmidt et al., 1965). Examples included "the unrefuted claim of the patient to have lost the desire for the perversion" (Fookes, 1968, p. 340) and "the patient's awareness of the amount of sexual interest in men and women and the amount and nature of sexual fantasy, including masturbatory fantasy" (McConaghy et al., 1981, p. 430). Three studies included subjective report of change in identity or orientation (Freeman & Meyer, 1975; Herman et al., 1974b; James, 1978). Examples included self-report using the Kinsey Scale and an estimation of the subject's percent of sexual attraction toward males (Freeman & Meyer, 1975) and self-report on the Sexual Orientation Method questionnaire designed to assess the relative levels of homo- and heteroerotic orientation (Herman et al., 1974b). Three studies included measures of psychological functioning, including a mood scale (Hallam & Rachman, 1972), a social anxiety rating questionnaire to assess the degree of social and heterosexual phobia (James, 1978), and scores from Scale 5 "masculinity-femininity" of the MMPI (Tanner, 1975). Nine studies included measures of behavioral functioning (Bancroft & Marks, 1968; Barlow & Agras, 1973; Conrad & Wincze, 1976; Freeman & Meyer, 1975; Herman et al., 1974a, 1974b; Maletzky & George, 1973; McConaghy, 1969; Tanner, 1975). Examples included the use of the Kinsey Scale (Freeman & Meyer, 1975; James, 1978; Maletzky & George, 1973), the subject recording the daily frequency of sexual urges, sexual fantasies, and sexual contacts of any nature (Conrad & Wincze, 1976), and a temptation test where a same-sex confederate employed by the therapist would approach the subject and solicit sex. If the subject turned down the approach, he passed (Maletzky & George, 1973). Finally, physiological arousal was measured in 12 studies and these included penile circumference (Barlow & Agras, 1973; Barlow et al., 1972; Conrad & Wincze, 1976; Freeman & Meyer, 1975; Herman et al., 1974a, 1974b; McConaghy, 1969, 1975, 1976; Tanner, 1973), heart rate (Hallam & Rachman, 1972), and skin resistance or response (Hallam & Rachman, 1972; Solyom & Miller, 1965).

Nine (45%) studies reported dropout rates (Bancroft & Marks, 1968; Freeman & Meyer, 1975; Herman et al., 1974b; McConaghy, 1969; McConaghy & Barr, 1973; McConaghy et al., 1981; Schmidt et al., 1965; Solyom & Miller, 1965; Tanner, 1973). These were reported differently across studies. For example, Schmidt et al. (1965) reported a 24% dropout rate, Solyom and Miller (1965) reported that two out of six participants discontinued treatment, and McConaghy and Barr (1973) reported that "only 20 of 46 patients completed all booster treatments" (p. 159).

The samples utilized in these studies were not as large as those in the talk therapy literature. Overall samples ranged from 3 to 157 with 95% of the studies having a sample of 47 participants or less ($M = 26$). As might be expected, male samples ($R = 3-157$; $M = 25$) were notably larger than female samples. Only one study included females ($n = 11$; Schmidt et al., 1965). Of those who reported source of referral or sampling ($n = 17$), 53% used self-referral and 65% used professional referral sources.

DISCUSSION

The primary aim of this project was to examine the manner in which research on the topic of reparative therapy has been conducted and subsequently reported. Of primary interest was the rigor in which the science supporting each study had been conducted. Most notable in these results was the degree to which important omissions in the data occurred. These omissions were most pronounced in terms of describing the demographic characteristics of the available samples. While it is impossible to assess whether the missing data were not gathered or just not reported, it is likely that some omissions are an artifact of publishing in the 1960s and 1970s. That is, inclusion of religious orientation, income, or race may have been perceived as unimportant to researchers, reviewers, and editors of that generation. Furthermore, researchers rooted in behavior modification principles would find little theoretical value in providing these descriptors.

Regardless of why the data are missing, the aforementioned methodological oversights are problematic because without adequate information, generalization of study data is limited. For example, 79% of studies did not report the race of their samples and thus conclusions cannot be drawn about the outcomes of these approaches for Caucasians or minorities. Similarly, 64% of studies did not report age of participants such that a mean could be calculated or meaningful age distributions developed. Thus, any differential influence of these approaches on individuals of varying ages or generations cannot be assessed. Most notable, however, is that 61% of studies did not report dropout or return rates. This makes drawing conclusions about treatment effectiveness extremely difficult, if not impossible. Finally, only one aversion therapy study included women, so nothing can be concluded about the use of aversion therapy with women.

One strength of some studies was ample sample sizes. The aversion studies were based on a total sample of just over 400 cases while the reparative samples totaled over 2,100 cases. These studies, however, did not provide explicit inclusion or exclusion criteria or information on respondent tracking (Nicolosi et al., 2000; Spitzer, 2003). Typical sampling strategies included advertising or recruiting at large conferences, soliciting support group attendees, therapist referrals, print and web-based media advertising, and word of mouth (Nicolosi et al., 2000; Schaeffer et al., 2000; Shidlo & Schroeder, 2002; Spitzer, 2003). Limited information regarding inclusion criteria and respondent tracking, however, created difficulty in determining how many men and women would have been eligible to participate in these studies or how many were approached/recruited more than once. For example, when data were collected over multiple years at conferences (e.g., Schaeffer et al., 2000) or multiple organizations (e.g., Nicolosi et al., 2000), it was unclear what strategies were in place to reduce individuals from repeatedly completing questionnaires. Informed consent procedures were rarely mentioned, and often there was no mention of maintaining a list of individuals who had been approached and completed the study in order to limit duplicate sampling.

A major limitation of the studies was that they did not include control groups nor were longitudinal follow-up designs employed. Control group designs are important as they allow for a stronger test of intervention effects and an ability to control for confounding variables. When assessing the impact of an intervention, solid research designs also include clearly timed follow-up assessments. Repetitive post-intervention evaluations allow for test of the intervention's impact and sustainability. In addition, articles describing the aversion therapies provided adequate detail of the procedures utilized to ensure replication. In contrast, many of the reparative therapies have not been manualized or contain various techniques that prohibit comparing the interventions for meta-analytic purposes.

Further, only seven articles on aversion therapy and one reparative therapy article articulated a theoretical approach to their work. Of those reporting a theoretical framework, most were behavioral in nature. This lack of a theoretical rationale in a majority of the reported

studies was disturbing. A solid theoretical justification for using a specific intervention not only provides a framework for future replication, but it also ensures the ethical treatment of participants. Furthermore, the application of theory allows phenomena under investigation to be placed in a context versus sorted and classified.

It is also notable that 75% of the reparative therapy studies and 60% of the aversion therapy studies reported a measure of sexual orientation. Of those that did utilize a measure of sexual orientation, these measures varied considerably in quality. The Kinsey Scale (1948), one of the premier measures of sexual orientation, was used in only three studies. It is interesting that researchers seemed to prefer participants' self-identification as gay or not gay as a measure of sexual orientation. Given the complexities of sexual identity (Klein, Sepekoff, & Wolf, 1985), this minimizes the usefulness of the research base. In studies which allowed participants to self-identify as gay or not, the definition was primarily behaviorally oriented. That is, questions were more likely to probe sexual activity versus any dimension of identity. In addition, the outcomes of the therapies often focused only on the decrease or elimination of "homosexual" thoughts and behaviors. This is problematic because persons may not engage or wish to engage in same-sex behaviors, but they may still identify as not heterosexual based on their partner preferences or emotional attraction. Klein and colleagues (1985) theorized that a person's sexual orientation can change remarkably through the lifetime, and that no one set of sexual behaviors is sufficient to identify a person's sexual orientation. Sexual behaviors are therefore only one component in measuring sexual orientation, along with thoughts, fantasies, and affective responses.

Numerous other options regarding the measuring of sexual orientation exist based on the above assumption. One of the more popular and robust was developed by Klein and colleagues (1985). The Klein Sexual Orientation Grid (KSOG) is composed of seven dimensions of sexual orientation. These dimensions include sexual attraction, behavior, and fantasies, emotional and social preferences, self-identification, and heterosexual/homosexual lifestyle. The KSOG consists of a seven-point response scale, which ranges from "*exclusively heterosexual*" to "*exclusively homosexual*." Respondents are asked to answer each dimension from their past, present, and ideal experiences.

There are numerous benefits of using the Kinsey or Klein measures versus just asking one's sexual orientation; however, these measures were not used. First, Kinsey's instrument allows for a continuum between "*exclusive heterosexuality*" and "*exclusive homosexuality*." Second, the KSOG takes into consideration that one's self-identification may differ from sexual attraction or sexual fantasies. This measure also recognizes that sexual attraction is not synonymous with sexual behavior and that individuals can be attracted to one gender while engaging in sexual behaviors with the other. Third, the KSOG examines each dimension at different times in one's life. Klein's instrument emphasizes that individuals can undergo a significant change in sexual fantasies during their lifetime and this measure is able to collect data at three different points.

ETHICAL ISSUES

For proponents of reorientation therapies a natural question would be "How can we do better research on reparative therapies?" The results of the present study would offer clear directives to those who seek to conduct more sophisticated studies. This includes the assessment of pertinent demographic variables; clearly defined methods of recruitment, retention, and data collection; manualizing of procedures, as well as the use of longitudinal research designs. It would be remiss, however, if the ethics behind such decisions were not explored. First, prior research testing the effectiveness of reparative therapy seems to be methodologically flawed, so application of these results may be misinterpreted. The important question to be pondered is should we be conducting a type of therapy that is not clinically sanctioned by professional

organizations and whose underpinning research base is not clinically sound? According to Tozer and McClanahan (1999), "many proponents of conversion therapy themselves admit that it is not possible to reorient someone to heterosexuality" (p. 729). Men and women who seek to change incongruent or problematic sexual behaviors should be informed that the efficacy of these therapies has not been proven, and that the research regarding such therapies is methodologically flawed. Moreover, the theory and practice of conversion therapy violates principles of competence, integrity, respect for individual rights and dignity, and social responsibility (Tozer & McClanahan, 1999). Second, many proponents of reparative therapy cite older aversion therapy studies as proof of effectiveness. Aversion therapy is easily replicated and use of the plethysmograph which assesses penile engorgement has long been considered the "gold standard" outcome measure. However, while sexual arousal may be extinguishable, at least for short periods of time and under clinical conditions, equating arousal with sexual orientation is erroneous. Furthermore, aversion therapy has been found to be unethical by most professional therapeutic organizations; thus conclusions based on this work may be harmful to clients.

Supporters of reparative therapy have argued that a lack of clinical options when clients seek support for unwanted homoerotic attractions places professionals in a precarious position (Rosick, 2003). Persons with "unwanted" same-sex attractions do present in therapy and couple and family therapists are frequently not trained regarding a course of therapy for these persons. Under these conditions clients should be referred to more experienced clinicians. It would be difficult, and possibly unethical, to deter those clients seeking to resolve a conflict in their sexual orientation through reparative therapy (Haldeman, 2002). Options, however, do exist as the American Psychological Association (2000), National Association of Social Workers, National Committee on Lesbian and Gay Issues (1992), and the American Counseling Association (Whitman, Glosoff, Kocet, & Tarvydas, 2006) have all detailed specific guidelines for working with sexual minorities that include an understanding of how social stigmatization (i.e., prejudice, discrimination, and violence) poses risks to the mental health and well-being of lesbian, gay, and bisexual clients. The understanding of social stigmatization must also include a meaningful understanding of sexual orientation, and such an understanding is critical for therapists if they are to address the psychological issues and multiple stressors that sexual minorities may face.

There are numerous other ethical issues to consider when working with gay, lesbian, and bisexual (GLB) men and women. A few of these concerns are the delivery of services, clinician's competence in treating this population, the diversity of the clientele, and the ethics of sexual reorientation therapies (Greene, 2006). Brown (1996) argues that long-standing discrimination against sexual minorities in the mental health field continues to complicate the delivery of services to this population. It is important that therapists can identify and understand the unique stressors that GLB men and women encounter. Rosario, Shrimshaw, Hunter, and Gwadz (2002) define gay-related stress as the stigmatization of being, or being perceived to be, GLB in a society in which homosexuality is negatively sanctioned. These stressors can include discrimination (Ross, 1990) and experiences of violence (Comstock, 1991) leading to poor mental health outcomes (Meyer, 1995). Shidlo and Schroeder (2002) provide detailed suggestions for clinicians who work with individuals who are considering sexual reorientation therapies. They specifically describe the ethical imperatives for the clinician who pursues sexual reorientation therapy.

CONCLUSIONS

In this critical appraisal of the literature underpinning the research on reparative therapy, a number of methodological problems were identified, which suggests that the scientific rigor in these studies is lacking. The limitations include a lack of theory, inconsistent definition and measurement of sexual orientation, restricted samples, lack of longitudinal designs, and sex disparity. In order for sexual orientation research to progress, the research must be based on a theoretical

framework, must include a standardized definition and measure of sexual orientation, and must include a more gender-balanced sample of heterosexuals, homosexuals, and bisexuals.

Finally, if sexual reorientation therapies are to be fully accepted and embraced as valid, two other important issues need to be addressed. First, studies should be designed to test not only the long-term effect of intervention but also clinicians' ability to demonstrate reversibility of reorientation therapies. That is, can individuals who are reportedly converted to a heterosexual identity and not satisfied be reoriented back to a homosexual identity? Second, the methodological flaws identified here lead to several questions for researchers and clinicians to consider. The main one among them is regarding the validity of interventions based on a flawed empirical database. Future researchers are also challenged with contemplating whether reorientation therapy can be or should be equally applied, available, and shown to be effective with those claiming a heterosexual identity. These questions could also serve as a platform from which clinicians examine the ethical underpinnings of their work in the area.

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APPENDIX

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