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Can Some Gay Men and Lesbians Change Their Sexual Orientation? 200 Participants Reporting a Change from Homosexual to Heterosexual Orientation[1]

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Position statements of the major mental health organizations in the United States state that there is no scientific evidence that a homosexual sexual orientation can be changed by psychotherapy, often referred to as "reparative therapy." This study tested the hypothesis that some individuals whose sexual orientation is predominantly homosexual can, with some form of reparative therapy, become predominantly heterosexual. The participants were 200 self-selected individuals (143 males, 57 females) who reported at least some minimal change from homosexual to heterosexual orientation that lasted at least 5 years. They were interviewed by telephone, using a structured interview that assessed same sex attraction, fantasy, yearning, and overt homosexual behavior. On all measures, the year prior to the therapy was compared to the year before the interview. The majority of participants gave reports of change from a predominantly or exclusively homosexual orientation before therapy to a predominantly or exclusively heterosexual orientation in the past year. Reports of complete change were uncommon. Female participants reported significantly more change than did male participants. Either some gay men and lesbians, following reparative therapy, actually change their predominantly homosexual orientation to a predominantly heterosexual orientation or some gay men and women construct elaborate self-deceptive narratives (or even lie) in which they claim to have changed their sexual orientation, or both. For many reasons, it is concluded that the participants' self-reports were, by-and-large, credible and that few elaborated self-deceptive narratives or lied. Thus, there is evidence that change in sexual orientation following some form of reparative therapy does occur in some gay men and lesbians.

KEY WORDS: homosexuality; sexual orientation; conversion therapy; sexual reorientation; reparative therapy.

INTRODUCTION

In recent years, there has been a marked change about both the desirability and feasibility of attempts to alter a homosexual sexual orientation. In the past, such change was generally considered both desirable and possible (Bieber et al., 1962; Hatterer, 1970; Socarides, 1978). An increasing number of clinicians believe that such change rarely, if ever, occurs and that psychotherapy with this goal often is harmful by increasing self-loathing, lowered self-esteem, hopelessness, and depression (American Psychiatric Association, 2000; Friedman & Downey, 2002; Haldeman, 2001). Several authors have argued that clinicians who attempt to help their clients change their homosexual orientation are violating professional ethical codes by providing a "treatment" that is ineffective, often harmful, and reinforces in their clients the false belief that homosexuality is a disorder and needs treatment (Drescher, 2001; Forstein, 2001; Isay, 1996; Murphy, 1992; Shidlo & Schroeder, 2002).

At the present time, only a very small number of mental health professionals (primarily psychologists, social

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workers, mental health counselors, and pastoral ministers) provide therapy with the goal of helping their clients change their sexual orientation from homosexual to heterosexual. Therapy with this goal is often referred to as "reparative therapy." There are also religious "ex-gay" ministries that offer individual counseling and group support to gay men and lesbians who wish to change their sexual orientation. An example is Exodus International, an interdenominational Christian organization that promotes the message of "Freedom from homosexuality through the power of Jesus Christ" (Exodus International Website, retrieved October 15, 2002, from http://www.exodusinternational.org). Finally, there are a small number of 12-step programs, such as Sexual Addicts Anonymous.

Many individuals receiving reparative therapy from a mental health professional also get support or counseling from an ex-gay ministry. In this article, any help from a mental health professional or an ex-gay ministry for the purpose of changing sexual orientation will be referred to as "reparative therapy" or simply as "therapy." Reparative therapists believe that same-sex attractions reflect a developmental disorder and can be significantly diminished through development of stronger and more confident gender identification. Reparative therapists say that their gay male patients (who comprise the majority of their caseload) suffer from a lifelong feeling of "being on the outside" of male activities and "not feeling like one of the guys." When therapy succeeds in demystifying males and maleness, their romantic and erotic attractions to men diminish and opposite-sex attractions may gradually develop. A prominent reorientation therapist estimates that only about a third of the male clients that pursue a course of reparative therapy actually develop heterosexual attractions, another third diminish their unwanted male attractions and decrease their unwanted same-sex behaviors but do not develop heterosexual attractions; the remaining third remain essentially unchanged (J. Nicolosi, personal communication, November 13, 2000).

"The Surgeon General" (2001), the American Academy of Pediatrics (1983), and all of the major mental health associations in the United States, representing psychiatry (American Psychiatric Association, 2000), psychology (American Psychological Association, 1997), social work (National Association of Social Work, 1997), and counseling (American Counseling Association, 1998) have each issued position statements warning of possible harm from such therapy and asserting that there is no evidence that such therapy can change one's sexual orientation. For example, the 1998 American Psychiatric Association Position Statement on Psychiatric Treatment and Sexual Orientation (see American Psychiatric Association, 1999, p. 1131) states:

> . . . there is no published scientific evidence supporting the efficacy of reparative therapy as a treatment to change one's sexual orientation. . . . The potential risks of reparative therapy are great, including depression, anxiety, and self-destructive behavior.

Is this seemingly authoritative position statement true, that there is "no published scientific evidence" supporting the efficacy of reparative therapy to change sexual orientation? The answer depends on what is meant by "scientific evidence." If scientific evidence requires a study with randomized assignment of individuals to a treatment condition, reliable and valid assessment of target symptoms before treatment, when treatment is concluded, and at follow-up, then it is certainly true that there are no such studies of reparative therapy. However, the same can be said about many widely used types of psychotherapy, including gay affirmative therapy, whose efficacy has never been subjected to a rigorous study (Bieschke, McClanahan, Tozer, Grzegorek, & Park, 2000). There is, however, a large literature relevant to the issue of the possibility of changing sexual orientation. Adams and Sturgis (1977) critically reviewed 37 studies of behavior therapy to change sexual orientation and concluded that, "Although sexual orientation techniques have achieved moderately positive results, research is needed to improve the efficacy of the procedures" (p. 1186). More recently, Goetze (2001) identified 84 articles or books having some relevance to the possibility of sexual orientation change, searching PsychLit and MedLine databases as well as bibliographies of relevant papers or books. Thirty-one of the 84 studies reported some quantitative outcome, not just general discussion and claims about the possibility of changing sexual orientation. Twelve of the 31 studies, however, did not provide enough outcome data to evaluate the effect of the treatment.

Two well-known examples of such studies are Bieber et al. (1962) and Socarides (1978). Bieber et al. (1962) reported a study in which 58 psychoanalysts filled out questionnaires on 106 gay males who had been in psychoanalytic treatment. Bieber and his associates studied the results of these questionnaires which focused on sexual behavior, not attraction and fantasy. Seventy-two of the men were exclusively homosexual before treatment. At a 5-year follow-up, 13% ($n = 14$) of these men exhibited exclusively heterosexual behavior and 13% ($n = 14$) bisexual behavior. Socarides (1978) reported that 44% ($n = 20$) of 45 of his patients who were in long-term psychoanalytic therapy developed "full heterosexual functioning"—a term that he did not define. He did not distinguish between overt sexual behavior and sexual

attraction. Furthermore, he provided no data on sexual history.

Of the 84 studies cited by Goetze (2001), the remaining 19 provided some data suggesting that in some participants a homosexual orientation can be changed to varying degrees by a variety of interventions (Barlow & Agras, 1973; Berger, 1994; Callahan, 1976; Ellis, 1959; Freeman & Meyer, 1975; Golwyn & Sevlie, 1993; Hadden, 1966; Hadfield, 1958; Hatterer, 1970; Liss & Welner, 1973; MacIntosh, 1994; Masters & Johnson, 1979; McCrady, 1973; Mintz, 1966; Pattison & Pattison, 1980; Poe, 1952; Shechter, 1992; van den Aardweg, 1986; Wolpe, 1969).

Of these 19 studies, the one by van den Aardweg (1986) is perhaps the most informative regarding change from a homosexual or bisexual orientation to an exclusively heterosexual orientation. His study comprised a follow-up of 101 of his former clients, several years after having been treated in a form of psychoanalysis that he called "anticomplaining therapy." Eleven (11%) of the patients had experienced a "radical change," defined as "no homosexual interests except for occasional and weak homosexual 'flashes' at most and the restoration of full heterosexuality."

Although providing some evidence for the efficacy of reparative therapy, all of these 19 studies have one or more serious methodological shortcomings, including no assessment of specific changes in sexual orientation (e.g., changes in masturbatory fantasies), no detailed sexual history, no follow-up assessment, no informants, no consecutive series, no objective measures, and possible bias in that the researcher conducted the therapy.

The 2000 American Psychiatric Association "Position Statement on Therapies Focused on Attempts to Change Sexual Orientation" (American Psychiatric Association, 2000) noted that "there have been no scientifically rigorous outcome studies to determine either the actual efficacy or harm of 'reparative' treatments. . . . APA encourages and supports research . . . to further determine 'reparative' therapy's risks versus its benefits" (p. 1719). This study attempts to contribute to that research by studying whether some individuals receiving reparative therapy do, in fact, change their sexual orientation from homosexual to heterosexual.

Critics of reparative therapy acknowledge that the therapy can change homosexual behavior by the individual resisting acting on homosexual feelings and can also succeed in getting the individual to relabel his or her homosexual orientation as heterosexual. They claim, however, that homosexual orientation itself remains unchanged. For the purposes of this study, homosexual orientation is operationalized by multiple measures of same sex attraction, arousal, fantasy, and yearning as well as overt behavior.

This study tests the following hypothesis: Some individuals whose sexual orientation is predominantly homosexual can become predominantly heterosexual following some form of reparative therapy (which can take the form of psychotherapy, counseling, or participation in an ex-gay ministry program).

This study involves systematically interviewing a large group of individuals who report that their sexual orientation had been predominantly homosexual, but who now report that because of some kind of therapy they have sustained for at least 5 years some change to a heterosexual orientation. If such individuals are found, the specific changes in components of sexual orientation and their magnitude are examined as well as changes in overt homosexual behavior, self-identity, and how bothered the indivisuals are by homosexual feelings. In addition, because sexuality in gay men and lesbians may be experienced and expressed differently, as is the case with heterosexual individuals, gender differences in the reported changes are also examined.

METHOD

Participant Recruitment and Entry Criteria

Announcements aimed at recruiting participants requested individuals who had sustained some change in homosexual orientation for at least 5 years. To be accepted into the study, however, it was necessary for an individuals to satisfy two criteria: (1) predominantly homosexual attraction for many years, and in the year before starting therapy, at least 60 on a scale of sexual attraction (where 0 = *exclusively heterosexual* and 100 = *exclusively homosexual*); (2) after therapy, a change of at least 10 points, lasting at least 5 years, toward the heterosexual end of the scale of sexual attraction. These criteria were designed to identify individuals who reported at least some minimal change in sexual attraction, not merely a change in overt homosexual behavior or self-identity as "gay" or "straight." It should be noted that individuals who satisfied these criteria were not excluded from the study if they had had homosexual sex during or following therapy.

Over a 16-month period (January 2000 to April 2001), 274 individuals were recruited who wanted to participate in the study. Of these, 200 (143 males, 57 females) satisfied the entry criteria and constitute the study sample. The 74 excluded individuals did not meet the entry criteria for a variety of reasons: the change was for less than 5 years ($n = 27$), there was a change in behavior

and self-identity but no change in sexual attraction ($n = 18$), the individual had never been predominantly homosexual ($n = 12$), and other, miscellaneous reasons ($n = 17$; e.g., three priests who did not want to function heterosexually).

Forty-three percent of the 200 participants learned about the study from ex-gay religious ministries and 23% from the National Association for Research and Therapy of Homosexuality, a group of mental health professionals and lay people who defend the right of gay men and lesbians to receive sexual reorientation therapy. In all but a few cases, these individuals were not chosen by these organizations; the individuals decided on their own to participate after reading repeated notices of the study that these two organizations had sent to their members. Nine percent of the participants were recruited from their former therapists who had heard about the study. The remaining 25% of the participants were largely referred by therapists who provide sexual reorientation therapy or by other individuals that were participating in the study. All of the participants, not the referral source, called the author to arrange for an interview.

The New York State Psychiatric Institute Institutional Review Board approved the study protocol and waived the requirement of written informed consent.

Sample Description

The mean age of the 143 male participants was 42 years ($SD = 8.0$) and for the 57 females it was 44 years ($SD = 8.5$). Seventy-six percent of the men and 47% of the women were married at the time of the interview ($\chi^2(1) = 14.2$, $p < .001$). Twenty-one percent of the males and 18% of the females were married before beginning therapy. Almost all were Caucasian (95%). Most had completed college (76%). Participants lived mainly in the United States (East 14%, West 35%, Midwest 15%, South 25%), with the remaining 16% mostly in Europe.

Most pariticipants were Christian (Protestant 81%, Catholic 8%, Mormon 7%). Three percent were Jewish. The vast majority (93%) of the participants reported that religion was "extremely" or "very" important in their lives. Nineteen percent of the participants were mental health professionals or directors of ex-gay ministries.

Almost half of the participants (41%) reported that they had at some time prior to the therapy been "openly gay." Over a third of the participants (males 37%, females 35%) reported that they had had serious thoughts of suicide, related to their homosexuality. The majority of participants (78%) had publicly spoken in favor of efforts to change homosexual orientation, often at their church.

Description of Structured Interview and Interview Measures

A structured telephone interview was developed with 114 closed-ended questions. The responses were either dichotomous ("yes" or "no") or a number on a defined numeric scale (e.g., 0–100 or 1–10). Sixty of these questions addressed sexual feelings, fantasy, and behavior. There were also several open-ended questions (e.g., "What were the most important things you talked about in your therapy?"). Almost all questions focused on two time periods: the year before starting therapy (called PRE) and the year before the interview (called POST).

There were 10 self-report measures used to assess different aspects of sexual orientation: (1) Sexual Attraction Scale that ranged from 0 (*only to opposite sex*) to 100 (*only to same sex*); (2) Sexual Orientation Self-Identity Scale that ranged from 0 (*views own sexual orientation as exclusively heterosexual*) to 100 (*views own sexual orientation as exclusively homosexual*); (3) severity of being bothered by homosexual feelings on a response scale of 1 (*not at all*) to 5 (*extremely*); (4) frequency of homosexual sex on a scale that ranged from 1 (*never*) to 5 (*nearly every day*); (5) frequency of yearning for romantic emotional intimacy with a person of the same sex on a response scale that ranged from 1 (*never*) to 5 (*nearly every day*); (6) frequency of looking with lust or daydreaming about having sex with a person of the same sex (as earlier); (7) percentage of masturbation occasions with homosexual fantasies on a response scale that ranged from 0 to 100; (8) percentage of masturbation occasions with heterosexual fantasies (as earlier); (9) percentage of heterosexual sex occasions with homosexual fantasies (as earlier); (10) use of gay pornography on a response scale that ranged from 1 (*never*) to 5 (*nearly every day*).

There were three measures for participants having heterosexual sex: (1) frequency of sex on a response scale of 1 (*never*) to 5 (*nearly every day*); (2) emotional satisfaction with heterosexual relationship on a response scale of 1 = *about as bad as it can be* and 10 = *about as good as it can be*; (3) physical satisfaction with heterosexual sex (as earlier). See the Appendix for exact wording of the questions for the 13 measures.

Participants wanted to not only change their sexual orientation, but to function well heterosexually. For the purpose of this study, a variable called "Good Heterosexual Functioning" was created, defined as requiring all five of the following criteria: (1) during the past year, the participant was in a heterosexual relationship and regarded it as "loving"; (2) overall satisfaction in the emotional relationship with their partner (at least 7 on a 1–10 scale where 10 is *as good as it can be* and 1 is *as bad as it can*

be); (3) heterosexual sex with partner at least a few times a month; (4) physical satisfaction from heterosexual sex at least 7 (the same 1–10 scale); (5) during no more than 15% of heterosexual sex occasions thinks of homosexual sex.

Participants were asked about 11 possible reasons they had for wanting to change their sexual orientation (list of possible reasons developed during a pilot study). For each reason, participants in the study were asked how important the reason was for them with response categories of "not at all" to "extremely important."

The interview, which the author administered by telephone, took about 45 min. A research assistant independently rated audio recordings of the interviews of a sample of 43 participants (chosen on the basis of when the research assistant was available). Complete agreement between the author's coding and the independent coding of variables was calculated as 1; less than complete agreement as 0. The mean agreement across 50 key variables for the 43 participants was .98, indicating very high interrater reliability for the coding of the subject's answers. The audio recordings and the entire study data set are available on request.

Assessment of Marital Relationship

To assess the quality of marital relationships, after the interview the participants were mailed two copies of the Dyadic Adjustment Scale (Spanier, 1976), a validated instrument. Participants and their spouses were instructed to complete the forms independently and mail them to the author.

RESULTS

Motivation to Change

Most participants noted more than one of the 11 reasons asked about. The most commonly reported reasons were that the individual did not find life as a gay man or lesbian emotionally satisfying (males, 85%; females, 70%; $\chi^2(1) = 4.5$, $p < .05$), conflict between their same sex feelings and behavior and the tenets of their religion (79%), and desire to get married or stay married (males, 67%; females, 35%; $\chi^2(1) = 15.8$, $p < .001$).

Brief Description of Therapy

The great majority (90%) of the participants reported using more than one type of therapy. Almost half (47%) reported that seeing a mental health professional was the only or most helpful kind of therapy. Most commonly, this was a psychologist (48%) or a pastoral counselor (25%). Only rarely (5%) was it a psychiatrist. About a third (34%) of the participants reported that the only or most helpful type of therapy involved attending an ex-gay or other religious support group. The remainder of the participants (19%) reported that the only or most helpful type of therapy included such things as repeated meetings with a heterosexual role model, bibliotherapy, or rarely, on their own, changing their relationship to God.

To learn something about the focus of the therapy, individuals were asked, "What were the most important things you talked about in your (therapy)?" Topics often mentioned were dysfunctional family relationships and traumatic childhood experiences, and a variety of other psychological issues (e.g., underlying motivations for same sex attraction). Only 5% of the participants mentioned a topic with a religious content (e.g., relationship with God, what God expects).

Participants were also asked, "How did you translate what you learned into actually changing your feelings?" Often mentioned were linking childhood or family experiences to the development of their sexual feelings, having nonsexual relationships with individuals of the same sex (often in the context of an ex-gay support group), thought stopping (e.g.,"When I got such thoughts, I didn't go down that route"), avoiding "tempting" situations, and gradually falling in love with a member of the opposite sex.

Temporal Sequence of Sexual Arousal

The mean age at onset of sexual arousal to the same sex was 12 years ($SD = 2.9$). About 18 years ($SD = 7.8$) later, at age 30, was the beginning of the therapy that they found helpful. The mean duration from the onset of the therapy to the participant beginning to feel a change in their sexual orientation was 1.9 ($SD = 1.9$) years. At the time of the interview, 21% ($n = 42$) reported that they were still involved in some form of reparative therapy, usually referring to continuing to attend an ex-gay support group or, on their own, having a life-long struggle with the underlying issues that they believed were related to their becoming homosexual. For these participants, the mean duration of therapy up until the interview was 15.0 ($SD = 7.7$) years. For the 79% ($n = 158$) of the participants who were no longer involved in any type of reparative therapy, the mean duration of the therapy was 4.7 ($SD = 3.5$) years.

Homosexual–Heterosexual Measures Prior to Therapy

Most of the participants reported that they "often" or "very often" had same sex attraction as teenagers (males,

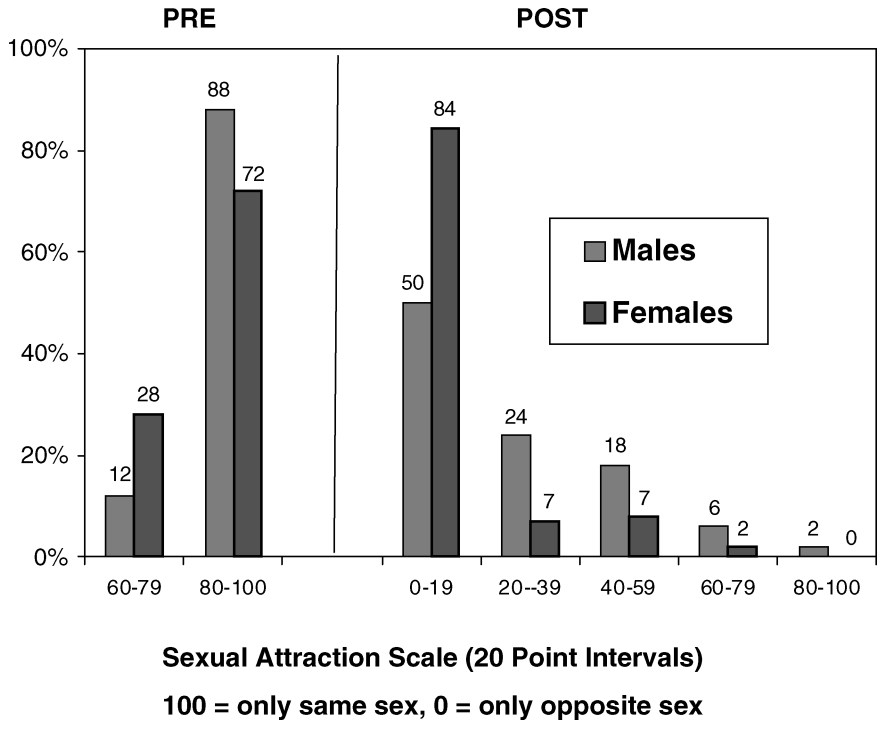

Fig. 1. PRE and POST frequency of 20-point intervals of the Sexual Attraction Scale.

85%; females, 61%; $\chi^2(1) = 11.5$, $p < .001$). In contrast, many participants as teenagers "never" or "only rarely" had opposite sex attraction (males, 62%; females, 42%; $\chi^2(1) = 5.9$, $p < .025$).

Although all of the participants had been sexually attracted to members of the same sex, a small proportion had never engaged in consensual homosexual sex (males, 13%; females, 4%; $\chi^2(1) = 3.2$, $p < .10$). Significantly more males than females had engaged in consensual homosexual sex with more than 50 different sexual partners during their lifetime (males, 34%; females, 2%; $\chi^2(1) = 20.6$, $p < .001$). Significantly more males than females had not experienced consensual heterosexual sex before the therapy effort (males, 53%; females, 33%; $\chi^2(1) = 5.6$, $p < .025$).

Measures at PRE and POST

The mean of the Sexual Attraction Scale for both males and females at PRE was in the very high homosexual range: males, 91 ($SD = 19.8$); females, 88 ($SD = 13.8$), $t(198) = 1.3$, *ns*. The mean of the Sexual Orientation Self-Identity Scale for both males and females at PRE was also in the very high homosexual range: males, 77 ($SD = 24.5$); females, 76.5 ($SD = 26.7$), $t(183) < 1$.[5] The mean of the Sexual Attraction Scale for both males and females at POST was in the very high heterosexual range, with females significantly more heterosexual than the males: males, 23 ($SD = 21.4$); females, 8; ($SD = 14.5$); $t(198) = 4.82$, $p < .001$. The mean of the Sexual Orientation Self-Identity Scale for females ($n = 57$) and males ($n = 139$) at POST was also in the high heterosexual range, with the females significantly more heterosexual than the males: males, 8.5 ($SD = 14.5$); females, 3.0 ($SD = 8.1$); $t(194) = 3.0$, $p < .005$.[6]

To compare the amount of change from PRE to POST, the PRE values were subtracted from the POST values. On the Sexual Attraction Scale, the mean change in females was 80 ($n = 57$; $SD = 20$), significantly more than that in males, 67.8 ($n = 143$; $SD = 20$; $t(198) = -3.6$, $p < .001$). On the Sexual Orientation Self-Identity Scale, the mean change in males was 68.1 ($n = 131$; $SD = 28.3$), not significantly different from the change in females, 73.4, ($n = 52$; $SD = 29.3$; $t(181) = -1.1$.

Figure 1 shows the percentage of participants falling within five 20-point intervals on the Sexual Attraction

[5]Data were missing for 15 participants who could not answer this question.

[6]Data were missing for 4 subjects who could not answer this question.

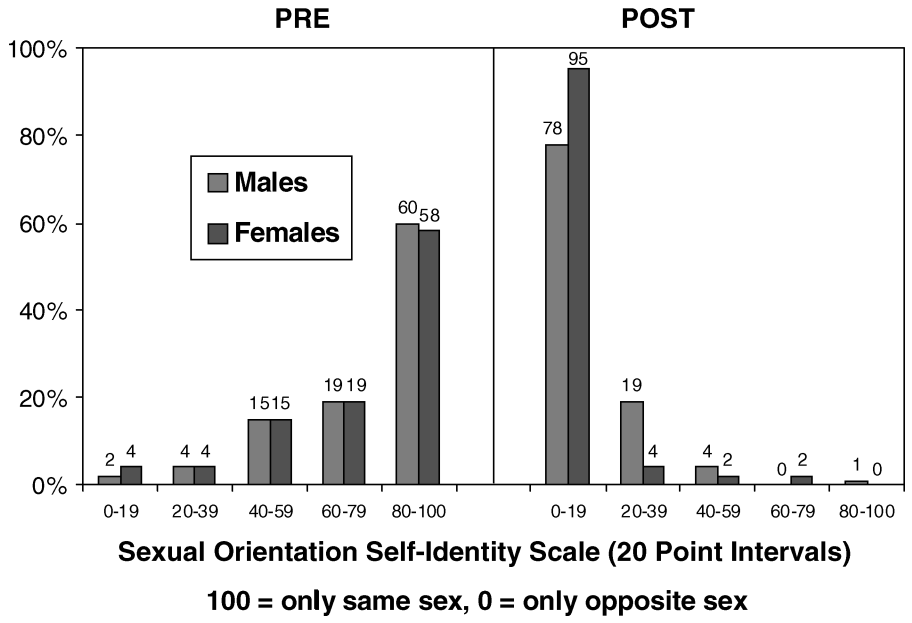

Fig. 2. PRE and POST frequency of 20-point intervals of the Sexual Orientation Self-Identity Scale.

Scale at PRE and at POST. Figure 2 shows the same for the Sexual Orientation Self-Identity Scale. At PRE, 46% of the males and 42% of the females reported exclusively same sex attraction. At POST, 17% of the males and significantly more of the females, 54%, reported exclusively opposite sex attraction ($\chi^2(1) = 27.0$, $p < .001$).

How successful was the therapy in decreasing overt homosexual behavior? Figure 3 shows the frequency of

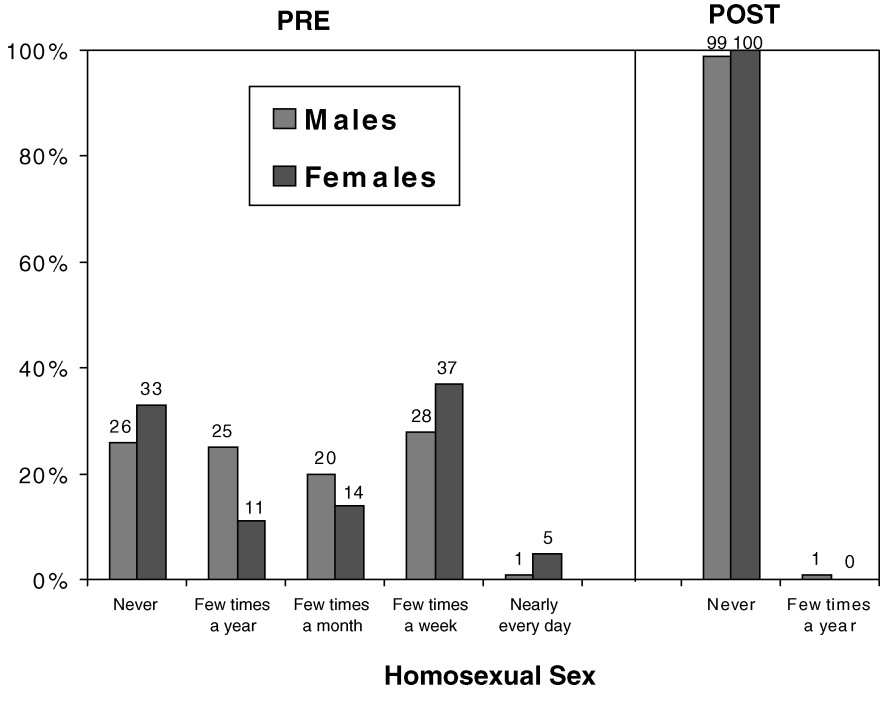

Fig. 3. PRE and POST frequency of homosexual sex.

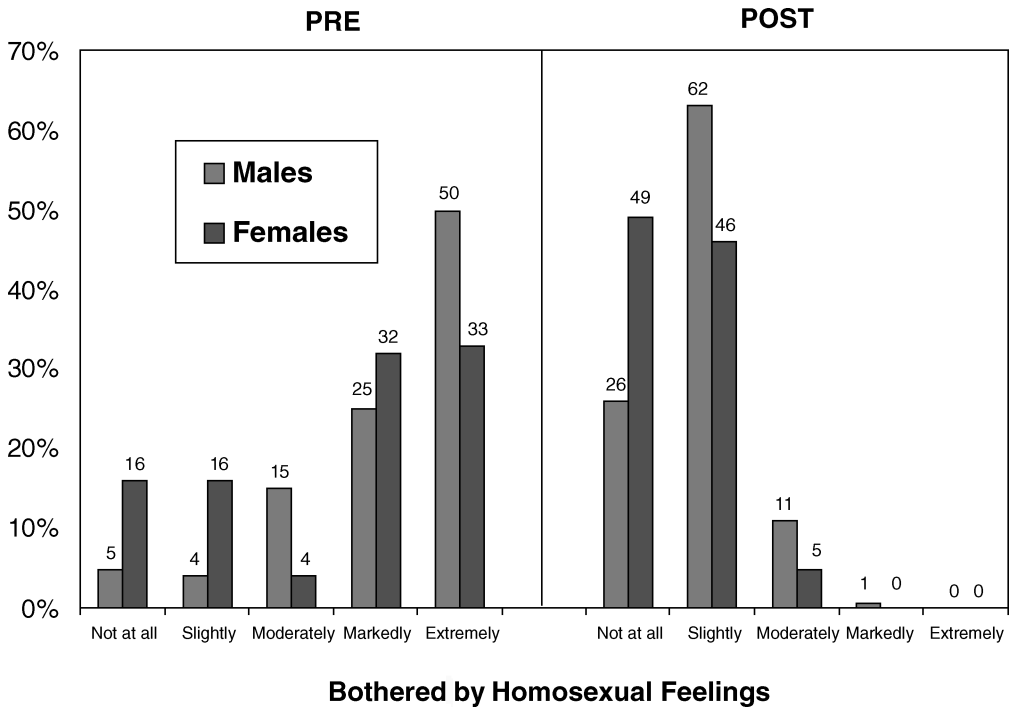

Fig. 4. PRE and POST severity of being bothered by homosexual feelings.

overt homosexual behavior at PRE and at POST. Of the 158 participants who were no longer in therapy at the time of the interview, 13% of the males and 10% of the females reported a brief recurrence (usually just a few days) of overt homosexual behavior since last being in therapy. Only two participants (both males) reported any overt homosexual behavior at POST.

What percentage of participants at POST reported virtually complete change in all of the nine key measures (sexual orientation, sexual orientation identity, and severity of being bothered by unwanted homosexual feelings)? This was defined as follows: "0" on Sexual Attraction Scale, "0%" on the same sex fantasies scale during masturbation, and "never" on the scales assessing lustful thoughts, yearning for romantic emotional intimacy, gay pornography, bothered by homosexual feelings, and overt homosexual behavior with excitement. (Note: Defined this way, it would even exclude a man who reported that once or twice a year, when he sees the kind of man he was previously attracted to, he had a mild and fleeting lustful thought). Defined this way, complete change was the case for only 11% of the males but a larger percentage of the females, 37% ($\chi^2(1) = 17.4$, $p < .001$).

A slightly less stringent criterion identified participants who at POST had no more than very low values on measures of homosexual orientation, defined as scores of 0–10 on 0–100 scales or a frequency not greater than "a few times a year" on frequency scales. Twenty-nine percent of the males and 63% of the females (χ^2 (1) = 18.1, $p < .001$) met this criterion at POST.

Figure 4 shows how much the individual was bothered by unwanted homosexual feelings. At PRE, 76% ($n = 108$) of the males and 65% ($n = 37$) of the females reported being "markedly" or "extremely" bothered by unwanted homosexual feelings. At POST, only 1 male and no female reported being "markedly" or "extremely" bothered by unwanted homosexual feelings. At POST, 26% ($n = 37$) of the males and 49% ($n = 28$) of the females reported being bothered "not at all" by unwanted homosexual feelings, ($\chi^2(1) = 9.0$, $p < .01$).

To summarize the results on all 10 measures assessing homosexuality, they have been dichotomized at a point that the author regarded as indicating more than a slight level of homosexuality. Table I shows the percentage of male and female participants at PRE and POST for the 10 dichotomized variables. It can be seen that there was a marked reduction on all change measures. This was not only on the three measures of overt behavior and sexual orientation self-identity, as critics of reparative therapy might expect, but also on the seven variables assessing sexual orientation itself. On 5 of the 10 measures at PRE and at POST, females showed significantly less homosexuality and more heterosexuality than males.

Table I. Percentage of Male and Female Participants at PRE and POST on 10 Dichotomized Homosexual Measures[a]

Homosexual measure	Males (%)		Females (%)	
	PRE	POST	PRE	POST
20 or higher on the Sexual Attraction Scale (0 = *exclusively heterosexual*, 100 = *exclusively homosexual*)	100 ($n = 143$)	53 ($n = 143$)*	100 ($n = 57$)	16 ($n = 57$)*
20 or higher on the Sexual Orientation Self-Identity Scale (0 = *exclusively heterosexual*, 100 = *exclusively homosexual*)	98 ($n = 133$)	22 ($n = 139$)*	96 ($n = 52$)	5 ($n = 57$)*
Homosexual sex at least a few times a month	50 ($n = 143$)	1 ($n = 143$)	56 ($n = 57$)	0 ($n = 57$)
At least moderately bothered by homosexual feelings	91 ($n = 143$)*	11 ($n = 143$)	68 ($n = 57$)*	5 ($n = 57$)
Yearning for romantic emotional involvement with same sex at least a few times a month	78 ($n = 143$)	8 ($n = 143$)	88 ($n = 57$)	4 ($n = 57$)
Looking with lust at same sex or daydreaming about having sex with same sex at least a few times a month	99 ($n = 143$)	31 ($n = 143$)*	98 ($n = 57$)	5 ($n = 57$)*
Same sex fantasies on 20% or more masturbatory occasions among participants who masturbated	94 ($n = 138$)	45 ($n = 112$)	92 ($n = 50$)	18 ($n = 39$)
Opposite sex fantasies (without trying) on 20% or more of masturbatory occasions among participants who masturbated	9 ($n = 138$)*	69 ($n = 112$)	26 ($n = 50$)*	72 ($n = 39$)
Same sex fantasies during 20% or more of heterosexual sex occasions among participants who had heterosexual sex	51 ($n = 51$)	6 ($n = 111$)	54 ($n = 24$)	13 ($n = 31$)
Use of gay pornography at least a few times a month	38 ($n = 143$)*	1 ($n = 143$)	11 ($n = 57$)*	2 ($n = 57$)

[a] All measures have been dichotomized at a point that the author would regard as indicating more than a slight level of homosexuality.
*Male versus female rates that are significantly different, two-tailed, at $p < .01$.

Good Heterosexual Functioning

At PRE, none of the females and only 2.1% ($n = 3$) of the males satisfied the criteria for Good Heterosexual Functioning. Sixty-six percent ($n = 94$) of the males and 44% ($n = 25$) of the females ($\chi^2(1) = 6.7$, $p = .01$) satisfied the criteria for Good Heterosexual Functioning at POST.

Was Good Heterosexual Functioning at POST less frequent, as one would expect, in those individuals who had been extreme on homosexual measures? A small proportion of the participants (16%, 27 males and 6 females) before therapy were extreme on reported homosexual measures in that they had no heterosexual attraction as a teenager or in the year before the change effort, never had heterosexual sex with excitement, and in the year before the change effort had no opposite sex fantasies during masturbation. The expected result was not obtained: 20 of these 33 participants (61%, 17 males and 3 females) satisfied these criteria for Good Heterosexual Functioning at POST, a prevalence similar to that of the entire sample.

Fifty-six participants (28%) had regular heterosexual sex both at PRE and at POST (in all but one case with the same person, their spouse). As would be expected, very few of these 56 participants reported Good Heterosexual Functioning at PRE (5%, $n = 3$). In contrast, 84% ($n = 47$) of these participants reported Good Heterosexual Functioning at POST.

Table II shows at POST a marked increase in the frequency of heterosexual sex, more satisfaction in the emotional relationship with their spouse, and more physical satisfaction with heterosexual sex.

Table II. Heterosexual Sex and Relationship PRE and POST for 56 Participants Who Had Heterosexual Sex both at PRE and at POST

Measure	PRE (%)	POST (%)
Heterosexual sex at least a few times a month	52	95
Emotional satisfaction with heterosexual relationship at least 8 on a 1–10 scale (1 = *about as bad as it can be*, 10 = *about as good as it can be*).	14	80
Physical satisfaction with heterosexual sex at least 8 on a 1–10 scale (same as above)	25	89

Note. To summarize the results, the three measures have been dichotomized.

Ninety-four (72%) of the 130 couples sent the Dyadic Adjustment Scale returned completed forms. Mean scores for the instrument's Overall Adjustment Scale for the 94 participants or their spouses were not significantly different from the instrument's normative group of 218 married couples (power = .81 to detect an effect size of .35 or larger with $p < .05$). Thus, on average, participants reported the same degree of marital adjustment as the instrument's normative reference group.

Depression has been reported to be a common side effect of unsuccessful attempts to change sexual orientation. This was not the case for our participants, who often reported that they were "markedly" or "extremely" depressed at PRE (males 43%, females 47%), but rarely that depressed at POST (males 1%, females 4%). To the contrary, at POST the vast majority reported that they were "not at all" or only "slightly" depressed (males 91%, females 88%).

Participants were presented with a list of several ways that the therapy might have been "very helpful" (apart from change in sexual orientation). Notable were feeling more masculine (males) or more feminine (females) (87%) and developing intimate nonsexual relations with the same sex (93%).

DISCUSSION

This study had a number of advantages over previous studies of attempts to measure change in sexual orientation. The assessment of the participants was far more detailed than the assessment in previous studies, which were usually limited to one or two global measures of sexual orientation. The sample size was larger than any previous study of sexual orientation change in which the participant himself or herself was directly assessed. The use of a structured interview makes it possible for others to know exactly how the participants were evaluated. The near perfect interrater reliability of the coding of the participants' responses indicates no bias in interviewer coding of the participant responses. An important feature of the study is that the entire data set and the audiotapes are available for review.

There are several limitations to the study. Ideally, the research interviewer in a study is blind to the research hypothesis and has no vested interest in the results. Because the author conducted the interviews, this was not the case in this study. Although initially skeptical, in the course of the study, the author became convinced of the possibility of change in some gay men and lesbians. The fact that the study results are based on a structured interview reduces, but does not eliminate, the possibility that interviewer bias influenced the participants responses.

The study relied exclusively on self-report, as is almost always the case in psychotherapy treatment efficacy studies. The study would have greatly benefited by also using objective measures of sexual orientation, such as penile or vaginal photoplethysmography. This was judged to be not feasible as funds were not available for the high cost of regional testing and of having a large number of individuals travel long distances to the testing sites.

Given the fallibility of memory for past events, it is impossible to be sure how accurate individuals were in answering questions about how they felt during the year before starting the therapy, which on average was about 12 years before the interview. Using a prospective design, in which participants were evaluated before entering therapy and then many years later, would provide much more information than the design that was used. However, such a study was not feasible. It would be extremely expensive, would require outside funding, and the results would not be available for at least 6 years (assuming a year to enter participants and a follow-up period of 5 years).

Are the participants' self-reports of change, by-and-large, credible or are they biased because of self-deception, exaggeration, or even lying? This critical issue deserves careful examination in light of the participants' and their spouses' high motivation to provide data supporting the value of efforts to change sexual orientation. Again, it is impossible to be sure, but comparing the actual results to the results that might be expected if such systematic bias were present suggests (at least to the author) that, by-and-large, this is not the case. Several such comparisons follow.

If there was significant bias, one might expect that many participants would report complete or near complete change in all sexual orientation measures at POST. Only 11% of the males and 37% of the females did so. One might also expect that many participants would report a rapid onset of change in sexual feelings after starting therapy. In fact, participants reported that it took, on average, a full 2 years before they noticed a change in sexual feelings. If there was bias, one would expect that participants would be reluctant to admit any use of gay pornography. In fact, 24% of the males and 4% of the females acknowledged that at POST they had used gay pornography.

If systematic bias was present, one would expect that the magnitude of the bias for females would be similar to that for males. However, marked gender differences were found. On the 10 change measures, females at PRE and at POST never had values closer to the homosexual end

of the respective scale than did the males. In 4 of the 10 measures at either PRE or POST, females reported values significantly closer to the heterosexual end of the respective scale than did the males. These gender differences are consistent with the literature suggesting greater female plasticity in sexual orientation (Baumeister, 2000; Diamond, 2003; Friedman & Downey, 2002; Kitzinger & Wilkinson, 1995).

The married participants, as were all participants, were motivated to provide evidence for the benefits of reparative therapy. If their reports of marital adjustment were biased to show how helpful the therapy was for their marriage, one would expect that the married participants would report a level of marital adjustment higher than that of the normative reference group of the Dyadic Adjustment Scale. Most participants who were married before starting therapy did report significant improvement in marital adjustment. However, they did not report a current level of adjustment higher than that of the normative reference group for this instrument.

Finally, real change in sexual orientation seems plausible (again, at least to the author) as the participants used change strategies commonly effective in psychotherapy (Mahoney, 1991). For example, participants often developed a narrative linking childhood or family experiences to current problems, received support from a group or individual, used thought stopping, and avoided situations that triggered homosexual feelings.

It is unclear how many gays and lesbians in the general population would want to change their sexual orientation or how representative the study sample is of those who would be interested in therapy with that goal. Obviously, this study cannot address the question of how often sexual reorientation therapy actually results in the substantial changes reported by most of the participants in this study. To recruit the 200 participants, it was necessary to repeatedly send notices of the study over a 16-month period to a large number of participants who had undergone some form of reparative therapy. This suggests that the marked change in sexual orientation reported by almost all of the study subjects may be a rare or uncommon outcome of reparative therapy. However, there may be other reasons for the difficulty in recruiting subjects, such as reluctance of ex-gays to be interviewed and reluctance of therapists to contact former clients.

The participants in the study all believed that the changes they experienced were due primarily to their therapy. However, the lack of a control group leaves the issue of causality open. It is logically possible that a small proportion of gay men and lesbians change their sexual orientation without therapy and that the changes experienced by the participants were causally unrelated to their therapy. The issue of causality can only be answered by a study with random assignment of gay men and lesbians wishing to change their sexual orientation to either a treatment group (some form of reparative therapy) or a control group. The difficulties in conducting such a study are almost certainly insurmountable. For example, potential participants wishing to change their sexual orientation are unlikely to agree to being assigned to the control group, which would not provide therapy for several years.

This study indicates that some gay men and lesbians, following reparative therapy, report that they have made major changes from a predominantly homosexual orientation to a predominantly heterosexual orientation. The changes following reparative therapy were not limited to sexual behavior and sexual orientation self-identity. The changes encompassed sexual attraction, arousal, fantasy, yearning, and being bothered by homosexual feelings. The changes encompassed the core aspects of sexual orientation. Even participants who only made a limited change nevertheless regarded the therapy as extremely beneficial. Participants reported benefit from nonsexual changes, such as decreased depression, a greater sense of masculinity in males, and femininity in females, and developing intimate nonsexual relations with members of the same sex.

There is no doubt about what the participants in the study reported. The key question is judging the credibility of their self-reports. One possibility is that some of the participants actually changed their predominantly homosexual orientation to a predominantly heterosexual orientation. Another possibility is that all of the individuals constructed elaborate self-deceptive narratives (or even lied) when they claimed to have changed, at least to some extent, their sexual orientation. For the reasons already noted, the author believes that the participants' self-reports in this study are by-and-large credible and that probably few, if any, elaborated self-deceptive narratives or lied. If this is the case, it supports the study hypothesis that change in sexual orientation following some kind of therapy does occur in some gay men and lesbians. This is contrary to the conventional view that homosexual behavior can be resisted or relabeled, but that true change in well established sexual orientation (arousal, fantasy, feelings of lust) does not occur.

The findings in this study are in marked contrast to the conclusions of another study (Beckstead, 2002). Beckstead studied 18 men and 2 women who claimed to have benefited from sexual reorientation therapy. A major motivation to change sexual orientation, as in many of the participants in this study, was conflict between their

same sex feelings and behavior and the tenets of their religion. Beckstead did not report exactly how he applied his "qualitative" methodology to assess change in sexual orientation; he did not use a structured interview. His conclusion:

> Participants reported that their sense of peace and contentment did not indicate a change in sexual orientation but a change in self-acceptance, self-identity, focus, and behavioral patterns. No substantial or generalized heterosexual arousal was reported, and participants were not able to modify their tendency to be attracted to their same sex. (p. 103)

Because Beckstead's sample and the sample in this study appear to be quite similar, the contrasting findings of the two studies regarding change in sexual orientation from reparative therapy are puzzling, to say the least.

The answer to the puzzle (at least to the author's satisfaction) has been provided by Beckstead (L. Beckstead, personal communication, October 21, 2002). Apparently, many of his participants did report increased heterosexual attraction following reparative therapy. However, after listening to how they described their heterosexual arousal, Beckstead concluded that it was not "generalized heterosexual arousal" for two main reasons: either because the arousal was limited to one person (e.g., only the subject's spouse), whereas typically heterosexuals are attracted to more than one person of the opposite sex; or because the opposite sex arousal in his participants didn't have the "intensity" that is typically present in heterosexuals. In the article itself, Beckstead does not explain to the reader the justification for his arbitrary definition of what constitutes a significant increase in heterosexual arousal.

It is true that many of the participants in this study did report that their heterosexual arousal was limited to one person, but most reported that it was not (males, 72%; females, 76%). Beckstead would apparently consider reparative therapy as a failure for the many participants in this study who, prior to reparative therapy, had been unable to become sexually aroused by the opposite sex, but following the therapy were, but only to their spouse.

What about Beckstead's reporting that his participants "were not able to modify their tendency to be attracted to their same sex?" Consider the many cases in this study who made substantial changes in sexual attraction and fantasy, and were now for the first time enjoying heterosexual sex but the change in sexual attraction was not complete. For example, there may occasionally be lustful fantasies of low intensity seeing someone of the same sex who reminded the participant of a previous same sex partner. Because such a change is not complete, strictly speaking such a participant continues to have a "tendency to same sex attraction." It makes no clinical sense to ignore such a change and this would never be done in the case of evaluating the efficacy of any psychosocial or pharmacological therapy.

It probably is the case that reparative therapy rarely, if ever, results in heterosexual arousal that is as intense as a person who never had same sex attractions. However, advocates of reparative therapy do not make that claim. One would not judge a psychosocial treatment for a sexual dysfunction as a failure if it did not result in sexual function indistinguishable from that of individuals who never had experienced such a disorder.

Critics of reparative therapy assert that the claims of success in changing sexual orientation are limited to anecdotal reports of individuals who have had the reparative therapy, or of therapists who provide such therapy. This study, with the database available to other researchers, clearly goes beyond anecdotal information and provides evidence that reparative therapy is sometimes successful. For the participants in our study, there was no evidence of harm. To the contrary, they reported that it was helpful in a variety of ways beyond changing sexual orientation itself.

The findings of this study have implications for clinical practice. First, it questions the current conventional view that desire for therapy to change sexual orientation is always succumbing to societal pressure and irrational internalized homophobia. For some individuals, changing sexual orientation can be a rational, self-directed goal. Second, it suggests that the mental health professionals should stop moving in the direction of banning therapy that has as a goal a change in sexual orientation. Many patients, provided with informed consent about the possibility that they will be disappointed if the therapy does not succeed, can make a rational choice to work toward developing their heterosexual potential and minimizing their unwanted homosexual attractions. In fact, the ability to make such a choice should be considered fundamental to client autonomy and self-determination.

These findings of considerable benefits and no obvious harms in the study sample suggest that the current recommendation by the American Psychiatric Association (2000) that "ethical practitioners refrain from attempts to change individuals sexual orientation" is based on a double standard: It implies that it is unethical for a clinician to provide reparative therapy because there is inadequate scientific evidence of effectiveness, whereas it assumes

that it is ethical to provide gay affirmative therapy for which there is also no rigorous scientific evidence of effectiveness and for which, like reparative therapy, there are reports and testimonials of harm (Gonsiorek, 1982; Throckmorton, 2002).

The author concurs with the American Psychiatric Association Position Statement on Therapies Focused on Attempts to Change Sexual Orientation (American Psychiatric Association, 2000) that "encourages and supports research by the National Institute of Mental Health and the academic research community to further determine 'reparative' therapy's risks versus its benefits." Clearly, it is only this kind of research that can provide the information that both clinicians and potential patients need to have to make informed decisions about reparative therapy. What is needed is a prospective outcome study of reparative therapy in which a consecutive series of volunteer individuals are evaluated before starting therapy and after several years. Such a study could provide data as to how often significant change in sexual orientation is reported. It could also examine how often individuals who are unsuccessful in the therapy are harmed in some way and the magnitude of the harm. Unfortunately, given the cost of conducting such a complex study, its necessarily long duration, and the current consensus of the mental health professions that reparative therapy is both ineffective and harmful, it is extremely unlikely that such a useful study will be conducted in the near future.

In this self-selected sample, almost all of the participants reported substantial changes in the core aspects sexual orientation, not merely overt behavior. Even individuals who made a less substantial change in sexual orientation reported that the therapy was extremely beneficial in a variety of ways. Change in sexual orientation should be seen as complex and on a continuum. Some people appear able to change only sexual orientation self-identity. Others appear also able to change overt sexual behavior. This study provides evidence that some gay men and lesbians are able to also change the core features of sexual orientation.

APPENDIX

Interview questions for the 10 change measures.

1. "We have a sexual attraction scale with 100 only to a man/woman [same sex] and 0 being only to a woman/man [opposite sex]. In the year (before you started therapy/last year), how would you rate yourself?"

   If a subject had difficulty answering the question an additional question was asked: "Suppose each time you saw someone that you were sexually attracted to, you noted whether they were a man or a woman. After you did this 100 times, how many times would it be a man and how many times a woman?"
2. "In the (year before you started therapy/last year) how often did you yearn for romantic emotional intimacy with a [same sex]?"
3. "In the (year before you started therapy/last year) how often did you look with lust at a [same sex] or daydream about having sex with a [same sex], which could include your partner?"
4. "In the (year before you started therapy/last year) on what percent of these occasions [masturbating] were you, without trying, fantasizing a sexual experience with a [opposite sex]?"
5. "In the (year before you started therapy/last year) on what percent of these occasions [masturbating] were you fantasizing a sexual experience with a [same sex]?"
6. "In the (year before you started therapy/last year) on what percent of the occasions, when you were having this sex with a [opposite sex], did you at some time think with lust of a [same sex]?"
7. "In the (year before you started therapy/last year), how often did you have homosexual sex?"
8. "The next scale also goes from 100 to 0 but is a global scale of homosexual-heterosexual that takes into account not only sexual attraction but also how you think about yourself - your identity. On this scale, in the (year before you started therapy/the last year), how would you rate yourself?"
9. "In the (year before you started therapy/last year) how much were you bothered by unwanted homosexual feelings?"

Interview questions about three marital variables.

1. "In the (year before you started therapy/last year) how often did you have sex with your (wife, husband)?"
2. "In the (year before you started therapy/last year) how emotionally satisfying was your relationship with your (wife, husband)?"
3. "In the (year before you started therapy/last year) how physically satisfying was sex with your wife?

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