

The Impact of Counselor Self-Disclosure on Clients: A Meta-Analytic Review of Experimental and Quasi-Experimental Research

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In an attempt to make sense of contradictory findings, meta-analysis was used to review 53 studies that examined counselor self-disclosure (CSD) vs. nondisclosure. CSD, *overall*, was found to have a favorable impact on clients/participants, with clients/participants having favorable perceptions of disclosing counselors and rating themselves more likely to disclose to counselors who had self-disclosed. Specifically, CSD that (a) revealed similarity between client and counselor; (b) was of negative content valence; or (c) was related to intra- or, especially, extratherapy experiences, had favorable impacts on clients/participants compared with nondisclosure. These types of disclosure resulted in more favorable perceptions of the counselor, especially in the area of professional attractiveness. CSD that revealed similarity between client and counselor also had a favorable impact on clients'/participants' allegiance—specifically, on their willingness to return—to disclosing counselors. Significant moderators of the impact of CSD on clients included researcher bias for or against CSD, type of "session" (e.g., written transcript, interview, real session), timing of CSD (whether before or after client self-disclosure), verb tense of extratherapy CSD, experimental setting, type of control group, and the number of CSDs in the experiment. Clinical implications include that CSD may be beneficial for building rapport, strengthening alliance, and eliciting client disclosure, with similar CSD being especially beneficial.

Keywords: therapy, therapist, client, disclosure, meta-analysis

Although Sidney Jourard first coined the term "self-disclosure" in 1958 (Gallucci, 2002), the debate about the use of counselor self-disclosure (CSD) in psychotherapy already had been ongoing for decades. Approximately 50 years earlier, Sigmund Freud conceived the first model of the ideal counselor stance, likening the counselor to a blank screen: "The [counselor] should be opaque to his patients and, like a mirror, should show them nothing but what

is shown to him" (Freud, 1912/1958a, p. 118). Freud cited four specific problems as likely to emerge when a counselor self-discloses: (a) Resistance becomes harder to overcome; (b) transference becomes more difficult to resolve; (c) clients find analyzing their analyst more interesting than analyzing themselves; and (d) in severe cases, clients might become insatiable to know more about the counselor (Freud, 1912/1958b). With this understanding in mind, if counselors were to manifest themselves as distinct people with their own thoughts and feelings, therapeutic progress could be slowed if not derailed in some cases. Therefore, any deviation from being a blank screen for the client, especially that of CSD, has been viewed as inherently incorrect and unethical by many counselors (e.g., Langs, 1979; Rothstein, 1997).

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Conversely, the prodisclosure argument was cultivated within a humanistic framework. Rogerians first sanctioned practices of CSD as a helpful aspect of the counseling relationship (Farber, 2006). Since the 1950s, person-centered counselors have continued to argue that by modeling openness, strength, vulnerability, and the sharing of intense feelings cautiously, the counselor who uses therapy-relevant self-disclosure invites the client to follow suit and cultivates trust, perceived similarity, credibility, and empathic understanding (Kottler, 2003; Knox, Hess, Petersen, & Hill, 1997; McConaughy, 1987). Additionally, feminist and multicultural stances cite the importance of CSD as a tool to promote equality in therapy as well (Brown & Walker, 1990; Mahalik, Van Ormer, & Simi, 2000).

Parallel to the lack of consensus in the above theoretical stances, the research base is a myriad of often conflicting or inconclusive results, examining different aspects of CSD and using various means of measuring the impact of the CSD on clients (see Henretty & Levitt, 2010, for a detailed account of inconsistencies). The three distinctions of CSD that have received the most empirical attention are (a) whether disclosure pertains to intratherapy experience (e.g., thoughts and/or feelings for the client or for therapy) or extratherapy experience (e.g., past, present, or hypothetical occurrences in the counselor's personal life), (b) whether self-disclosure is of positive or negative content valence, and (c) whether self-disclosure is of information that reveals similarity to the client or information that reveals dissimilarity. To further complicate the matter, a single CSD often will fit into more than one category; for example, if a counselor shares that she too has struggled with social anxiety, then that disclosure is of extratherapy material, has a negative content valence, and shows similarity to the client. For clarification, *positive content valence* most often has been defined, as it was for the purpose of this meta-analysis, as expressing positive thoughts or feelings for the client or therapy in the case of intratherapy CSD (e.g., "I really admire how brave you are being") and socially desirable personal information in the case of extratherapy CSD (e.g., "I graduated top of my class"). Conversely, *negative content valence* most often has been defined, as it was for the purpose of this meta-analysis, as expressing negative or uncomfortable thoughts or feelings for the client or therapy in the case of intratherapy CSD (e.g., "I feel sad when I hear you being self-critical") and socially undesirable personal information in the case of extratherapy CSD (e.g., "I too have struggled with addiction").

Examining the issue of extratherapy CSD closer, the discussion about CSD regarding events and experiences in counselors' extratherapy personal lives has some theorists advocating for counselors to share their experiences with their clients and others warning against it. For example, the literature on counselors self-disclosing their lesbian, gay, bisexual, or transsexual (LGBT) orientation to LGBT clients proposes that CSD allows counselors to (a) create a safe environment in which clients know they will not be judged negatively (Hanson, 2005); (b) be a model for expressing appropriate actions and appropriate emotions (Cabaj, 1996; Mathy, 2006; Riddle & Sang, 1978); (c) counter internalized hatred and shame (Satterly, 2006); and (d) be viewed as a more credible source of help than counselors without an LGBT identity (Atkinson, Brady, & Casas, 1981; Cass, 1979). However, although many authors have extolled LGBT CSD as a critical part of treatment, some have cautioned that self-disclosure may lead the client or counselor to overidentify or assume sameness with the other, blur professional boundaries, or lead to role reversal (Cole, 2006; Kranzberg, 1998; Pearlman, 1996; Satterly, 2006).

Examining the issue of intratherapy CSD closer, Kiesler and Van Denburg (1993) pointed out that one of the prominent and exciting ways in which the therapeutic relationship differs from all other relationships is that clients have an opportunity to interact with a concerned someone who is in a position to share with them direct and honest feedback on the emotions and thoughts they induce in others. Such self-disclosures of counselors' internal thoughts and feelings pertaining to the client have been labeled as *transparency* (Lietaer, 1993), *countertransference disclosures* (Myers & Hayes, 2006), *self-involving disclosures* (McCarthy,

1979), *impact disclosures* (Kiesler & Van Denburg, 1993), *disclosures of immediacy* (Hill, 2004), and, as it is referred to in this meta-analysis, *intratherapy CSD* (Henretty & Levitt, 2010). These CSDs, compared with the previously discussed extratherapy CSDs, have been found to be distinct responses with differential effects (McCarthy, 1979). Whereas extratherapy CSDs "may detract from the process of client self-exploration . . . [by shifting] the focus of counseling to the counselor and his or her past experiences and problems" (McCarthy & Betz, 1978, p. 255), intratherapy CSDs keep the focus on the client and on the here-and-now, and thus may be more likely to enhance client self-exploration (McCarthy, 1982; McCarthy & Betz, 1978; Reynolds & Fischer, 1983).

Examining the aspect of positive intratherapy CSD, Andersen and Anderson's (1989) research suggests that counselors may use self-disclosures of positive affect more frequently than any other type of self-disclosure. They theorized that this finding might be due to the fact that CSDs of positive affect can be used for many purposes in therapy, such as relationship, self-esteem, and trust building or reinforcement and shaping of desirable client behavior. Although positive affect disclosures have been found to be the most frequently used CSDs, intratherapy disclosures of negative affect may be a popular counseling intervention as well. According to K. S. Pope, Tabachnick, and Keith-Spiegel's (1987) research, almost 90% of counselors have told their clients when they are angry with them, and over 50% have told their clients when they are disappointed in them and/or cried in the presence of their clients. However, some authors caution against the use of CSDs of negative affect toward the client: "If the therapist's responses are real to the extent that they resemble an ordinary social situation, then the patient may feel afraid of the therapist's reactions and inhibit him or herself from saying whatever comes to mind" (Bishop & Lane, 2001, p. 251). Weiner (1983) believes that it is "almost always a mistake" for counselors to self-disclose negative feelings because it is "most often felt as criticism by the patient and a betrayal of the very openness that one has encouraged" (p. 587). Hanson (2005) echoed the fear that such disclosures can leave vulnerable clients feeling worse about themselves.

In Watkins' (1990) qualitative review of CSD, he concluded that the literature on the differential effects of positive versus negative information in general was inconclusive but that clients/participants regarded positive intratherapy disclosures more favorably than negative intratherapy disclosures, positive extratherapy disclosures, or negative extratherapy disclosures. In another narrative review on CSD (Henretty & Levitt, 2010), it was similarly concluded that results across studies were inconsistent regarding the positive or negative content valence of CSD and that intratherapy disclosures yielded more favorable responses from clients/participants than did extratherapy disclosures. However, it also was noted that much ambiguity remained and additional analysis seemed warranted.

The manner in which researchers assess the impact of CSD on clients also may play a crucial role in the conclusions that can be drawn from a study. If that is the case, then combining various means of measurement may conceal and confound the impact of CSD. The types of measurement that have received the most empirical attention can be clustered into four broad groups—(a) clients'/participants' perceptions, (b) clients'/participants' disclosure, (c) clients'/participants' allegiance to counselor/therapy, and

(d) therapeutic outcome—each of which comprise a variety of more specific subtypes of measures to capture dimensions of these domains.

The impact of CSD most often has been assessed broadly through clients'/participants' perceptions of the counselor via ratings on counselor variable scales. With a few notable exceptions (e.g., Barrett & Berman, 2001; Fried, 1984), experimental research on CSD has not gauged the outcome of therapy in a traditional sense, such as assessing the levels of distress symptoms over the course of the intervention and in comparison to a control group. It has been argued that, due to the difficulty of appraising the impact of any single statement—spoken weeks or months past—on measurable client changes at therapy termination, distal outcome measures are not the best way to assess CSD (Knox & Hill, 2003). Accordingly, immediate client responses, such as clients' perceptions of their counselor and other measures related to the relationship between the client and counselor, are regularly used in CSD studies. In indirect support of the use of such immediate process measures, other clinical research data has revealed that the client–counselor relationship is crucial to therapy outcome (e.g., Gaston, 1990; Gelso & Carter, 1985; Orlinsky & Howard, 1986; Truax & Mitchell, 1971; Wolfe & Goldfried, 1988). Specific subcategories of the broad category of client perception often include counselor expertness, trustworthiness, attractiveness, empathy, congruence, and warmth. Such interpersonal variables have been positively linked to clients' satisfaction with therapy (Heppner & Heesacker, 1983; McNeill, May, & Lee, 1987; Zamostny, Corrigan, & Eggert, 1981), changes in clients' self-concept (Dorn & Day, 1985), achievement of pretherapy goals (LaCrosse, 1980), decreases in clients' distress symptoms (Grimes & Murdock, 1989), and to other measures of therapy outcome (Carkhuff & Berenson, 1967; Grimes & Murdock, 1989; Heppner & Claiborn, 1989; Rochlin, 1982; Truax & Carkhuff, 1965).

The second broad way in which researchers have assessed the impact of CSD is through clients'/participants' own levels of disclosure to the counselor. The broad category of client/participant disclosure has been measured through the specific subcategories of observer ratings of the information disclosed by participants—verbally and/or in writing—to the counselor (i.e., actual client/participant disclosure) in the context of the experiments. As an alternative subcategory of the broad category of client disclosure, researchers also have asked clients/participants to rate their willingness to disclose about certain topics to the counselor (i.e., *predicted* client/participant disclosure). The correlation between predicted willingness to disclose and actual disclosure has been found to be high (Simonson & Bahr, 1974), which is important because *client* disclosure also has been found to have a direct positive relationship to therapy outcome (Carkhuff & Pierce, 1967; Jourard, 1964; Kiesler, 1971; Rogers, 1961; Strassberg, Anchor, Gabel, & Cohen, 1978; Truax, 1968; Truax & Carkhuff, 1965).

In addition to the oft-examined broad categories of client/participant perception and client/participant disclosure, two other broad categories of measurement have been used, although less frequently, in research on CSD. The third broad category is client/participant allegiance to the counselor, operationalized through the specific subcategories of clients'/participants' willingness to return to the counselor or to see the same/similar counselor themselves, and/or by clients'/participants' willingness to recommend a friend or family member to the same/similar counselor. The fourth broad

category of assessment is that of therapy outcome, specifically measured through the subcategories that include skill development, reduced symptomology, and general improvement. As mentioned, experimental and quasi-experimental studies that gauged the impact of CSD through therapy outcome measures are limited at this point. Nonetheless, as the other broad categories—client/participant perception, client/participant disclosure, and client/participant allegiance—are extolled as important measures primarily through their correlation to therapy outcome, this small base of studies in which direct measures of therapy outcome is used is quite valuable and was included in this review as well.

Study Aims

Although the ever-changing zeitgeist and debate continue, we know that counselors are self-disclosing. Although CSD is one of the rarest interventions, comprising an estimated average of 3.5% of counselor techniques used (Hill & Knox, 2002), over 90% of counselors endorse having self-disclosed in therapy at some point (Edwards & Murdock, 1994; Mathews, 1989; K. S. Pope et al., 1987). However, contradictory theoretical conceptualizations and empirical findings using a variety of methods and measurement strategies, teamed with ambiguous ethical guidelines (Domenici, 2006) and little to no training as to the nature and use of CSD (Beutler, Crago, & Arizmendi, 1986), may leave many counselors feeling uncertain and even fearful about self-disclosing (Hill & Knox, 2002; Knox & Hill, 2003). As such, clinicians need a more coherent understanding of the impact of CSD on their clients so that they can use this technique, if and when therapeutically appropriate, with greater confidence. Unfortunately, very few published reviews of the literature on CSD exist; those that have explored CSD are narrative reviews (e.g., Cozby, 1973; Hendrick, 1987; Henretty & Levitt, 2010; Hill & Knox, 2001; Watkins, 1990), most of which offer support for the use of CSD while acknowledging the lack of a coherent understanding of its effects.

Although researchers and practitioners increasingly have esteemed meta-analysis as an ideal way to amalgamate and understand results across empirical studies (Smith, Glass, & Miller, 1980), there exists only one unpublished quantitative meta-analysis on CSD (i.e., Priester, 2002), which included nonverbal, pretherapy information (e.g., a written biographical description of the counselor) in its review and did not assess several of the key concerns for research on this topic. Therefore, our study utilized meta-analysis to examine whether the impact of CSD on clients/participants was moderated by the three aspects of verbal CSD (i.e., negative/positive, intra-/extratherapy, similar/dissimilar). Furthermore, as it was hypothesized that inconsistencies in research findings may be in part due to the variety of assessment means used for gauging the impact of CSD, in addition to the overall impact, the impact of CSD at both broad categories (i.e., clients'/participants' perception, clients'/participants' allegiance to the counselor, clients'/participants' self-disclosure, and therapy outcome) and specific subcategories (e.g., perception of counselor's trustworthiness, willingness to refer counselor, intimacy of clients'/participants' disclosure, and increase of skills) were examined. Additionally, many studies attempted to unpack inconsistencies in the research base by examining potential moderators, such as client expectancy of CSD, relevancy of CSD, and timing of CSD. Therefore, we also examined in this meta-analysis poten-

tial moderators, explored by at least three individual studies, in addition to design factors such as setting of experiment and type of session. By accounting for some of the ambiguity, the ultimate aim of this study was to provide clinicians and researchers a fuller understanding of CSD.

Method

Studies Reviewed

Studies were identified through late 2013 using two different search methods. First, comprehensive searches of PsycINFO and PsycArticles were performed using groupings of relevant search terms, such as *disclos**, *therap**, and *counsel** (the * denotes a wild card, which allows for any ending of the preceding letters). Second, the reference lists of the articles from individual studies and of the relevant narrative reviews were used to identify other studies. All relevant studies available in published form were considered for the analysis. In addition, when abstracts conveyed the potential for a study's meeting of eligibility criteria (see below), an attempt was made to collect unpublished dissertations on CSD, so as to reduce the potential bias from editorial preferences toward particular or statistically significant findings (Glass, McGaw, & Smith, 1981). When studies were reported in multiple forms (i.e., two published papers or a published paper and an unpublished dissertation), information from the study was included only once in each of the analyses to which it was relevant.

To be eligible for inclusion in this review, studies had to meet the following eligibility criteria. First, studies were required to represent an interaction analogous to that of a client and a counselor in that the two parties had to be of unequal power. Studies that examined peer counseling or interviews where the client/participant thought the interviewer was also a client/participant were not included in review. The second criterion was that studies must have *experimentally* compared one or more CSD conditions with a control condition during which the counselor did not self-disclose; therefore, correlational studies were excluded from this review. Third, studies must have examined verbal CSD rather than nonverbal self-disclosure (e.g., the counselor's wearing of a wedding ring). An important caveat here is that, although only verbal self-disclosure during therapy was under examination, studies in which a written transcript of counselors' verbal self-disclosure was used were eligible for inclusion in this review. Fourth, studies included in this review were limited to adult populations. Those investigations that did not specify an inclusion criteria of clients/participants being of age 18 years or older were assumed to have had such a criteria if they used a college student population. Although studies that conducted the experiment with groups of clients/participants (e.g., transcripts and questionnaires distributed to a college class) were included, a fifth criterion was that studies must have explored the phenomenon of CSD within the context of individual therapy. Lastly, as meta-analysis requires the derivation of effect sizes, all studies needed to report sufficient statistics to estimate effect sizes for the disclosure group as compared with the nondisclosure group or have discussed nonsignificant findings. To this end, eight studies that reported results of multivariate analyses of variance, regression analyses, or repeated measures designs that failed to provide the necessary statistical information were excluded.

In total, 184 studies were initially identified as relevant to CSD in the literature searches; however, per abstracts, most were found to not meet the inclusion criteria (i.e., 94 studies met the preliminary review). Of these studies, 92 were collected; two unpublished dissertations (i.e., Dziokonski, 1977; Mattei, 2008) that were candidates for this study (although it is unclear whether they ultimately would have met all eligibility requirements) were unable to be procured. Of the 92 studies, 53 ultimately met all eligibility requirements and were coded by the first author, who at the time was an advanced doctoral student with considerable clinical and research experience in psychotherapy and with familiarity with the CSD literature base. Studies were coded as to the percentage of intratherapy CSDs, positive CSDs, negative CSDs, similar CSDs, and dissimilar CSDs. Additionally, the means of measuring the impact of CSD on clients/participants was coded into four broad categories (i.e., client/participant perception of the counselor/therapy, client/participant self-disclosure, client/participant allegiance to the counselor, and therapy outcome) and into a number of specific subcategories (e.g., trustworthiness, intimacy of client/participant disclosure, return rate for a second interview, and increase in skills). These codes—that of broad category and specific subcategories—were examined as subgroups of the overall impact of CSD on clients/participants. In this way, it was possible to begin to unpack and explore the ambiguities in the overall impact of CSD in this literature. Finally, studies also were coded for a number of clinically and theoretically relevant variables (see the Appendix) to assess for moderating effects. An attempt was made to code every study for these variables; however, not every variable had enough coded studies to be examined in each analysis.

Analyses

To be able to standardize and compare the differential impact across the relevant studies, this review used Cohen's (1977) d^1 as the measure of effect size. Hedges' (1984, Formula 4) correction formula was applied to all effect sizes, so as to account for the possible over- or underestimation of CSD effects in studies with smaller sample sizes. Thus, the reader may assume that in all references to effect size in this review, the data are presented as adjusted Cohen's d s.

For studies that did not report means and standard deviations, an attempt was made to estimate d from other commonly used statistics. For example, d was estimated from F statistics for main effects (with df numerator = 1), and F statistics from interactions when corresponding cell means and sample sizes were provided. The formulas for estimating effects in these instances are detailed elsewhere (for descriptions of these procedures, see Glass et al., 1981, chap. 5; Miller & Berman, 1983; Smith et al., 1980, Appendix 7). In the studies that reported that findings failed to achieve statistical significance but did not present statistical information, the corresponding effect sizes were estimated to be zero (Rosenthal, 1984).

¹

Cohen's (1977) $d = \frac{m_1 - m_2}{s}$ —is calculated from m_1 and m_2 —which represent the mean of the disclosure and of the control group respectively—and s —which is the pooled standard deviation across the two groups.

From the 53 studies that contributed to the analyses, 805 effect sizes were calculated. Of these effect sizes, approximately 80% were calculated directly from means and standard deviations or from an *F* ratio with 1 degree of freedom in the numerator. For approximately 4% of the effect sizes, studies had discussed statistically nonsignificant findings or had implied nonsignificant findings; so as to minimize bias by not excluding findings that possibly disconfirmed the researcher's hypothesis, these effect sizes were estimated to be zero in this review. For the remaining 16% of effect sizes, other estimation procedures were used (see Glass et al., 1981; Lipsey & Wilson, 2001; Miller & Berman, 1983; Smith et al., 1980, for a description).

Of the studies in this review, 42 (79%) used random assignment, and 11 (21%) either did not use random assignment or did not specify assignment procedures. As studies that do not randomly assign clients/participants (i.e., quasi-experiments) have been found to yield more variable results and smaller effect sizes than studies that adhere to the gold standard of random assignment (Shadish & Ragsdale, 1996), Hedges' (1982) analogue to the analysis of variance (ANOVA) was used to check for differences between the overall effect sizes of the two groups. A statistically reliable difference between the mean effect size of the studies that used random assignment ($MES = 0.09$, $SE = 0.07$) and those that did not specify having used random assignment ($MES = 0.32$, $SE = 0.13$) was not found, $Q_{\text{Between}}(1, 52) = 2.25$, $p = .13$.² Thus, quasi-experiments were included in this review.

Of special note, six studies were coded as having a misplaced CSD. These studies, usually examining the impact of extratherapy self-disclosure, often included a small intratherapy CSD in all of the conditions (e.g., "I think you can do it"). Whether a deliberate design decision or not, these studies did not fit into the analyses of this review. Nevertheless, in the spirit of comprehensiveness, and in order to avoid truncating the body of research unnecessarily, these studies were included but were coded as distinct. This coding would have allowed for these studies to be separated from the rest of the research body if they had presented significantly different results. However, again using Hedges' (1982) analogue to the ANOVA, these studies were not found to have significantly different effect sizes from the main body of studies (studies with a misplaced CSD: $MES = 0.17$, $SE = 0.17$; studies without a misplaced CSD: $MES = 0.13$, $SE = 0.06$; $Q_{\text{Between}}[1, 52] = 0.05$, $p = .82$). Thus, all analyses were run with the studies with a misplaced CSD included.

In this study, we used a random-effects model for the analyses included in this review (see Hedges & Vevea, 1998; Shadish & Haddock, 1994, for a full description).³ Drawing on statistical macros provided by Lipsey and Wilson (1996), we computed mean effect sizes and confidence intervals, and assessed homogeneity of study-level effect sizes, for the various types of CSD (i.e., positive, negative, intratherapy, extratherapy, similar, and dissimilar) and levels of assessment (e.g., broad categories and specific subcategories) when compared with their respective nondisclosure control groups. In addition, when a statistically significant mean effect size yielded evidence of a heterogeneous distribution of study-level effect sizes, potential moderators were explored using Hedges' (1982) analogues to ANOVA for categorical variables and weighted least squares regression for continuous and ordinal variables in the review. As a way of limiting the chance of violating the assumption of statistical independence, all of the

analyses were conducted on effect sizes that were aggregated to the study level, so that each study contributed only one effect size to any particular analysis.⁴ Thus, for each analysis, steps were taken to ensure that effect sizes were statistically independent of one another.

Study Characteristics

The dates of the 53 studies ranged from 1968 to 2011, with the mean year of 1984. A little over half (53%) of these studies were published in peer-reviewed journals; 47% of the studies were unpublished dissertations. The average total sample size across these studies was 118 clients/participants. In total, 81% of the clients/participants were students (4% of which were clinical, student samples); the remaining 19% were composed of community samples (4% nonclinical; 7% clinical), in-patient populations (2%), and populations consisting of more than one sample type (6%). Thirteen of the 53 studies reported client/participant ethnicity; of these studies, 72% of the clients/participants were Caucasian. Five studies reported ethnicity of the counselor(s); all five were 100% Caucasian. Of the 20 studies that reported client/participant age, mean ages ranged from 19 to 40 years old, with an average age of 25. For the 10 studies that reported counselor age, ages ranged from 22 to 42 years old, with an average age of 30. Fifty-two and 46 studies reported client/participant and counselor gender, respectively. Of those studies, approximately 58% of clients/participants and 42% of counselors were female. Six percent of the 53 studies examined real sessions, whereas the vast majority of studies used a type of analogue "session" (34% transcript, 23% video, 17% audio, and 20% interview). Thirty-eight percent of the studies administered the experiment to individual participants; 47% to groups of participants; and 15% did not specify the format. As to the setting of the experiments, 21% of studies

² The *Q* statistic is a test of homogeneity. A statistically nonsignificant *Q* statistic (i.e., $p \geq .05$) suggests a homogenous distribution of effect sizes; that is, that the dispersion of effect sizes around the mean effect size is no greater than is expected by chance. When a significant *Q* statistic (i.e., $p < .05$) is found, the assumption of homogeneity is rejected and the variability of the effect sizes is larger than would be expected by sampling error alone, distribution of effect sizes does not estimate a common population, and further analyses may be statistically warranted to explore systemic sources of variability (e.g., moderators). Here, the statistically nonsignificant Q_{Between} suggests that the mean scores across the groups are not significantly different, whereas the nonsignificant Q_{Within} suggests the variability remaining within each group does not exceed that which would be expected by chance. For a more detailed description of the *Q* statistic's use in meta-analysis, please see Lipsey and Wilson (1996).

³ In contrast to a fixed-effects model that assumes each effect size differs from the population effect size only by sampling error, a random-effects approach assumes that, because the utilized set of studies represents only a sample of a larger existing and hypothetical/future population of studies, the effect size differs from the "true" population effect size by an unknown, theoretical sampling error. Therefore, the error term in a random-effects model represents the *conditional variance*—the sum of the within-study variability used in the fixed-effects approach and a theoretical estimate of the between-study variability. Weighting each study by the inverse of the conditional variance makes significance tests of combined effects more conservative than those of fixed-effects models.

⁴ As each study only contributed one effect size to any particular analysis, it can be assumed that in this article *n* is indicative of both the number of studies and the number of effect sizes.

administered the experiment in a clinical setting, 17% in a classroom setting (i.e., administered to students during or immediately following a scheduled class, usually offered for course credit), 8% in a research/laboratory setting, 2% in more than one setting, and 52% did not specify the particular setting.

Results

Effect Sizes

As presented in Table 1, the overall mean effect size for the impact of CSD on clients/participants was small but statistically different from zero ($d = 0.14$). As we had hypothesized that whether the impact of the CSD was favorable or not might depend on the type of impact assessed (e.g., client/participant perception, client/participant disclosure, therapy outcome), subgroups of the effect sizes also were examined on the basis of broad categories and specific subcategories of assessment when used by at least three studies. Results suggested that CSD had a small but favorable impact on clients'/participants' perception of the counselor/therapy ($d = 0.15$). None of the other broad categories' effect sizes reached statistical significance in these analyses. Examining the mean effect sizes related to the specific subcategories, results suggested that CSD had a small, favorable impact on clients'/participants' perception of the realness of counselor ($d = 0.24$) and of the counselor as similar to the client ($d = 0.27$); a small, favorable impact on clients'/participants' self-reported willingness to disclose to the counselor ($d = 0.14$); and a medium, favorable impact on clients'/participants' ratings of the counselor's attractiveness ($d = 0.34$), of the counselor's level of regard for the client ($d = 0.33$), and of the counselor as a person ($d = 0.34$).

Moderation Tests

In an effort to explore possible variability across the study-level effect size in these broad categories and subcategories, a series of homogeneity tests were performed (Lipsey & Wilson, 1996). As an initial test, we detected variability across the overall effect sizes from each of the studies ($Q = 189.72, p < .001$) and thus explored possible moderators. Four nominal moderators yielded significant links with the overall mean effects of CSD and are presented in Table 2: type of session, experimental setting, type of control group, and timing of CSD. These results suggested that CSD had the most favorable impact when (a) the experiment used an interview rather than a real session or audio recording of an analogue session; (b) the experiment was administered in a research setting rather than a classroom or clinical setting; (c) the counselor in the control group simply omitted the CSD rather than used a reflecting technique; and (d) the CSD came before the client disclosed on the same topic rather than after. Additionally, we detected a single significant continuous moderator—that is, CSD bias. These results suggested that when the researcher favored CSD, as coded on a 5-point Likert scale (i.e., explicitly hypothesized that CSD would have a more favorable impact than nondisclosure [$n = 17$], implicitly suggested a pro-CSD stance [$n = 15$], no indication of bias for disclosure or nondisclosure [$n = 16$], implicitly suggested a pro-nondisclosure stance [$n = 1$], and

explicitly hypothesized that nondisclosure would have a more favorable impact than CSD [$n = 4$]), CSD groups yielded more favorable effect sizes for the study participants ($r = .47, p < .001, k = 53$).⁵

Additional homogeneity tests revealed systematic variation in the study-level effect sizes for the broad category of perception as well ($Q = 178.63, p < .001$). In subsequent exploration of possible moderators, five nominal variables were linked with the effects of CSD on clients'/participants' perception (see Table 3): type of session; directness of CSD; timing of CSD; verb tense of extratherapy CSD; and, in the analogue experiments, whether the participants were asked explicitly to put themselves in the role or "shoes" of the client. These results suggested that CSD had the most favorable impact on clients'/participants' perception when (a) the experiment used an interview rather than a real session, written transcript, or audio or video recording of a session; (b) the CSD was spoken directly to the client/participant; (c) the CSD came before the client disclosed on the same topic rather than after; (d) the extratherapy CSD was stated in a present verb tense rather than past verb tense; and (e) the participants had been given the instructions to place themselves in the role of the client. Examining ordinal moderators, researchers' biases for or against CSD again was positively linked to the impact of CSD ($r = .52, p < .001, k = 48$) (coded by explicitly pro-CSD [$n = 15$], implicitly pro-CSD [$n = 14$], no indication of bias [$n = 14$], implicitly pro-nondisclosure [$n = 1$], and explicitly pro-nondisclosure [$n = 4$]).

Significant heterogeneity also was found for CSD effects in the subcategories of counselor's professional attractiveness ($Q = 110.48, p < .001$) and perceived realness ($Q = 20.96, p = .021$). Although we failed to find evidence of significant moderators for the impact of CSD on clients'/participants' perceived realness of their counselor,⁶ one factor was found to moderate the effects of CSD on clients'/participants' perception of the counselor's profes-

⁵ In a regression equation with a single independent variable, the standardized beta (β) is equivalent to the Pearson's correlation coefficient (r); thus, for ease of understanding, we used a weighted r to present the results of continuous moderator analyses when statistically significant.

⁶ The following list of factors failed to reach statistical significance when examining the impact CSD has on clients'/participants' perception of the counselor's realness: year ($n = 11$), publication status ($n = 11$), professional discipline of first author ($n = 10$), total sample size ($n = 11$), sample type ($n = 11$), specific sample population ($n = 11$), volunteer/compensated ($n = 9$), client/participant gender ($n = 11$), counselor gender ($n = 11$), gender pairing ($n = 8$), client/participant age ($n = 4$), counselor age ($n = 3$), transcript versus "counselor" ($n = 9$), counselor blindness ($n = 7$), therapeutic issue of therapy ($n = 4$), type of session ($n = 7$; interview and transcript only), session number ($n = 8$), session length in minutes ($n = 8$), transcript length in pages ($n = 3$), number of CSDs ($n = 11$), frequency of CSDs per minute ($n = 8$), frequency of CSDs per page ($n = 3$), % of relevant CSDs ($n = 11$), % of intratherapy CSDs ($n = 8$), % of similar CSDs ($n = 7$), % of dissimilar CSDs ($n = 8$), % of positive CSDs ($n = 6$), % of negative CSDs ($n = 6$), administered in group or individually ($n = 10$), type of control ($n = 10$), CSD bias ($n = 11$; none against CSD), whether CSD was said directly to client/participant ($n = 11$), counselor professional status ($n = 8$), doctoral level ($n = 6$), % of participants with past therapy experience ($n = 3$), specific issue ($n = 11$), timing of CSD ($n = 6$), whether analogue participants were asked to put themselves in the role of the client ($n = 4$), and whether the CSD included a solution ($n = 5$).

sional attractiveness.⁷ Namely, these results suggested that CSD had the most favorable impact on clients'/participants' perception of the counselor's professional attractiveness when the counselor made more disclosures (ranging from one to three disclosures) during the experiment ($r = .51$, $p = .026$, $k = 19$).

Table 4 presents results for the impact of CSD (vs. nondisclosure) when the disclosure was of intratherapy (e.g., thoughts and feelings related to the client or to therapy) or of extratherapy (e.g., past, present, or hypothetical occurrences in the counselor's personal life) experiences. Although neither type of CSD had a significant overall effect when compared with nondisclosure conditions, intratherapy self-disclosures favorably affected the subcategory of clients'/participants' perception of the counselor as being professionally attractive ($d = 0.26$), and extratherapy self-disclosures favorably affected clients'/participants' perception of the counselor as being professionally attractive ($d = 0.31$), congruent ($d = 0.30$), and likable ($d = 0.31$), and as caring of the client ($d = 0.22$). Examining more closely the impact of extratherapy CSD, homogeneity test results suggested that the systematic variation in the mean effect size of the subcategory of counselor's professional attractiveness ($Q = 54.24$, $p < .001$) remained to be accounted for across studies. However, no significant variables were found to have a moderating effect in our exploratory analyses.⁸

Table 5 outlines analyses for the impact of positive and negative CSD when compared with nondisclosure. Negative CSD, though having no overall significant effect in the omnibus test, was found to have a homogeneous, medium, favorable effect on clients'/participants' perception of counselor's attractiveness ($d = 0.35$). Positive CSD was not found to have a significant impact when compared with nondisclosure. As can be seen in Table 6, the effect of dissimilar CSD was not shown to be significantly different from the nondisclosure conditions. Conversely, CSD that presented information showing similarity to the client/participant yielded several favorable impacts: broadly on clients'/participants' allegiance to ($d = 0.29$) the disclosing counselor, and specifically on clients'/participants' professional attraction ($d = 0.33$) and willingness to return ($d = 0.31$) to the disclosing counselor. Homogeneity tests of significant effects of similar CSD suggested significant variation in the mean effect size for the domain of professional attractiveness. However, in the subsequent analyses, no salient moderators were found.⁹

Discussion

The results of this review suggested that CSD, *overall*, had a small but favorable impact on participants. Upon closer examination, we found that clients/participants had favorable perceptions of disclosing counselors and believed themselves more likely to disclose to a disclosing counselor. When examining particular types of CSD, results suggested that CSD that (a) reveals similarity between the client and counselor; (b) is of negative content valence; or (c) is related to either intra- or extratherapy experiences, but especially extratherapy experiences, has favorable impacts on clients when compared with nondisclosure. All of these types of disclosure resulted in more favorable perceptions of the counselors, especially in the area of professional attractiveness. In fact, each type of CSD that showed significant findings yielded a notable finding in the area of attractiveness. Similar CSD also had

a favorable impact on clients'/participants' allegiance—specifically, their willingness to return—to the counselor.

When considering the paucity of significant findings for intratherapy CSD (i.e., only in the area of professional attractiveness), it is noteworthy that in the body of research examined in this meta-analysis, extratherapy CSD was almost 5 times more prevalent than intratherapy CSD. Therefore, the power to detect intratherapy CSD effects may not have been sufficient. Additionally, it was not possible to examine whether the content valence had an impact on the effect of intratherapy CSD. As such, we were not able to provide quantitative support for or against Watkins' (1990) qualitative review findings that positive intratherapy disclosures more favorably affect clients/participants than negative intratherapy disclosures.

Significant moderators were found for the impact of CSD on clients when examining the overall effect, the broad category of client/participant perception, and the specific subcategory of cli-

⁷ The following list of factors failed to reach statistical significance when examining the effect CSD has on clients'/participants' perception of the counselor's professional attractiveness: year ($n = 23$), publication status ($n = 23$), professional discipline of first author ($n = 19$), total sample size ($n = 23$), sample type ($n = 22$), specific sample population ($n = 22$), volunteer/compensated ($n = 14$), client/participant ethnicity ($n = 8$), client/participant gender ($n = 23$), counselor gender ($n = 23$), gender pairing ($n = 8$), client/participant age ($n = 10$), counselor age ($n = 4$), who played the counselor ($n = 13$), transcript versus "counselor" ($n = 11$), counselor blindness ($n = 6$), therapeutic issue of therapy ($n = 9$), type of session ($n = 21$; no real session or interview), session number ($n = 13$), session length in minutes ($n = 13$), transcript length in pages ($n = 11$), frequency of CSDs per minute ($n = 11$), frequency of CSDs per page ($n = 10$), % of personal CSDs ($n = 22$), % of relevant CSDs ($n = 21$), % of intratherapy CSDs ($n = 22$), % of similar CSDs ($n = 17$), % of dissimilar CSDs ($n = 16$), % of positive CSDs ($n = 15$), % of negative CSDs ($n = 17$), experimental setting ($n = 11$; no research setting), administered in group or individually ($n = 18$), type of control ($n = 15$), CSD bias ($n = 23$), was CSD the result of a client question ($n = 17$), whether CSD was said directly to client/participant ($n = 23$), counselor professional status ($n = 17$), doctoral level ($n = 12$), % of participants with past therapy experience ($n = 9$), specific issue ($n = 23$), timing of CSD ($n = 15$), extratherapy CSD verb tense ($n = 10$; no hypothetical), whether the CSD included emotion words ($n = 17$), whether analogue participants were asked to put themselves in the role of the client ($n = 15$), and whether the CSD included a solution ($n = 13$).

⁸ The following list of factors were found to be nonsignificant when examining the impact extratherapy CSD has on clients'/participants' perception of the counselor's attractiveness: year ($n = 15$), publication status ($n = 15$), professional discipline of first author ($n = 13$), total sample size ($n = 15$), specific sample population ($n = 15$), volunteer/compensated ($n = 10$), client/participant ethnicity ($n = 5$), client/participant gender ($n = 10$), counselor gender ($n = 14$), client/participant age ($n = 7$), counselor age ($n = 4$), who played the counselor ($n = 6$), transcript versus "counselor" ($n = 13$), type of session ($n = 11$; video and transcript only), % of relevant CSDs ($n = 14$), % of similar CSDs ($n = 14$), % of dissimilar CSDs ($n = 13$), % of positive CSDs ($n = 13$), % of negative CSDs ($n = 14$), experimental setting ($n = 7$; no research setting), administered in group or individually ($n = 11$), CSD bias ($n = 16$), was CSD the result of a client question ($n = 14$), doctoral level ($n = 8$), % of participants with past therapy experience ($n = 5$), specific issue ($n = 15$), whether the CSD included emotion words ($n = 14$), and whether analogue participants were asked to put themselves in the role of the client ($n = 9$).

⁹ The following list of factors were found to be nonsignificant when examining the impact similar CSD has on clients'/participants' perception of the counselor's attractiveness: year ($n = 4$), total sample size ($n = 4$), client/participant gender ($n = 4$), counselor gender ($n = 4$), CSD bias ($n = 4$), and % of participants with past therapy experience ($n = 3$).

Table 1
The Significant Mean Effects of Counselor Self-Disclosure (CSD)

	<i>n</i>	Mean ES	SE	95% CI		<i>Q</i> _{Within}
				LL	UL	
Overall	53	0.14*	.05	0.03	0.24	189.72***
Perception	48	0.15*	.06	0.04	0.27	178.63***
Realness of counselor	11	0.24**	.11	0.02	0.04	20.96*
Similarity	4	0.27*	.13	0.02	0.52	0.20
Attractiveness	22	0.34***	.09	0.16	0.52	110.48***
Level of regard	9	0.33**	.12	0.10	0.56	15.49
Positive perceptions as person	3	0.34**	.10	0.14	0.54	0.44
Predicted client/participant self-disclosure	8	0.14*	.07	0.01	0.27	4.99

Note. The following list of factors failed to reach statistical significance when examining the broad categories (outcome, client/participant self-disclosure, and allegiance) and their specific subcategories (which follow each broad category name) of CSD compared with nondisclosure: expertise (*n* = 26), trustworthiness (*n* = 25), empathy (*n* = 14), congruence (*n* = 9), warmth (*n* = 3), unconditionality (*n* = 9), counselor competence (*n* = 3), counselor likability (*n* = 4), counselor as emotionally healthy (*n* = 3), counselor in professional role (*n* = 29), counselor as honest (*n* = 24), counselor as understanding (*n* = 18), counselor as caring for client (*n* = 16), positive attitude toward therapy (*n* = 4), general positive stance toward therapy/counselor (*n* = 4). Outcome (*n* = 9), decrease in symptoms/improvement (*n* = 3), predicted outcome (*n* = 3). Client/participant self-disclosure (*n* = 20), willingness of client/participant to self-disclose about personal information (*n* = 6), intimacy of client/participant self-disclosure (*n* = 4), predicted client self-disclosure (*n* = 14), actual client self-disclosure (*n* = 8). Allegiance (*n* = 16), willingness to return (*n* = 13), willingness to recommend (*n* = 4).

ES = effect size; CI = confidence interval; LL = lower limit; UL = upper limit.

p* < .05. *p* < .01. ****p* < .001.

ent/participant perception of the counselor's attractiveness. The overall effect and broad category of perception had three significant moderators in common, with CSD outperforming nondisclosure (a) in an interview, (b) when the CSD came before the client/participant disclosed, and (c) when researcher bias was in favor of CSD. Other significant moderators of the overall effect indicated that when a research setting was used and when the CSD simply was omitted in the control group rather than interchanged with a reflecting technique, CSD had a more favorable impact than nondisclosure. Examining the broad category of perception, other significant moderators indicated that when the CSD was stated directly to the clients/participants, when the extratherapy CSD was stated in the present verb tense, and when the analogue participants explicitly were asked to put themselves in the role of the client, CSD had a more favorable impact than nondisclosure. For the specific category of perceived counselor attractiveness, number of CSDs in the experiment was the only factor to show significant moderating effects, with up to three CSDs having a greater effect (when compared with nondisclosure) than fewer CSDs.

Clinical Considerations

Whereas some clinicians have hypothesized that CSD may derail therapy and, therefore, have a negative impact on the therapy outcome (Freud, 1912/1958b; Langs, 1979; Rothstein, 1997), others have hypothesized that CSD frequently cultivates trust, perceived similarity, empathic understanding, and client disclosure (Kottler, 2003; Knox et al., 1997; McConaughy, 1987). The findings from this review suggest the latter camp's stance may be more accurate; however, the picture still remains cloudy. Although all significant effects favored the use of CSD over nondisclosure, moderation analyses suggest that researcher bias may play a role in these findings, possibly skewing the results to favor CSD more than if such bias did not exist. Nevertheless, similar to general

findings in the psychotherapy research literature (Smith et al., 1980), counselors who have confidence and comfort about disclosing to their clients may have a greater likelihood of incorporating these interventions appropriately. Additionally, results call into question whether the favorable findings of the majority of the studies included in this review are generalizable to actual therapy settings, as type of session (i.e., real session, interview, audio recording, video recording, or transcript) was found to be a significant moderator (see Research Considerations). Furthermore, only two studies (Chessen, 1982; Gibson, 1996) used both a clinical population and a real session. Although this was too few studies to be able to analyze, neither of these studies had significant findings. Interestingly, these results are in contradiction to those of Barrett and Berman (2001), who found that in real therapy, clients in the increased CSD condition reported less symptom distress and more liking for their therapist than those clients in the limited CSD condition. Regardless, what is apparent, and has been posited in previous work as well (see Henretty & Levitt's, 2010, qualitative review, which included nonexperimental designs), is that nondisclosure is no longer the easy answer to the question of whether or not a counselor should self-disclose. Although findings of this review clearly do not suggest that CSD has deleterious effects on clients, it seems that CSD may have a favorable impact only in certain situations. Therefore, counselors may want to consider the issue before faced with having to make a decision regarding their disclosing. To aid in that consideration the following findings are offered as thought points:

Rapport/alliance. Hill and colleagues (1988) esteem the use of immediate measures of counselor disclosure, noting, "the impact of response modes [such as CSD] may be obscured if they are examined in relation to session or treatment outcome rather than to immediate outcome" (p. 222). In accord with this understanding, a significant positive relationship between CSD and clients'/partic-

Table 2
Nominal Moderators of the Overall Effect of Counselor Self-Disclosure (CSD) on Clients/Participants

Moderator	<i>n</i>	Mean ES	SE	95% CI		Ω_{within}
				LL	UL	
Type of session						
Real session	4	-0.09 _a	.22	-0.51	0.34	0.98
Interview	10	0.49 _b ***	.14	0.22	0.75	34.84***
Written transcript	18	0.14 _{a,b}	.09	-0.03	0.32	16.55
Video	12	0.11 _{a,b}	.11	-0.09	0.32	6.61
Audio	9	-0.07 _a	.12	-0.32	0.17	4.76
Experimental setting						
Classroom	9	-0.06 _a	.10	-0.22	0.11	7.40
Research	4	0.38 _b **	.14	0.11	0.64	1.56
Clinical	11	-0.04 _a	.10	-0.22	0.15	12.96
Type of control						
CSD omitted	20	0.35 _a ***	.09	0.17	0.53	32.36*
Non-CSD filler	12	0.18 _{a,b}	.12	-0.06	0.43	8.40
Reflecting	8	-0.08 _b	.14	-0.35	0.19	13.21
Timing of CSD						
Before client self-disclosure	6	0.51**	.17	0.17	0.85	28.192***
After client self-disclosure	29	0.07	.07	-0.08	0.21	17.74

Note. Mean effect sizes that do not share the same subscript differ at $p < .05$ in the Fisher's least significant difference comparison. The following list of factors failed to reach statistical significance when examining the overall effect of CSD: year ($n = 53$), publication status ($n = 53$), professional discipline of first author ($n = 42$), total sample size ($n = 53$), sample type ($n = 45$), specific sample population ($n = 53$), volunteer/compensated ($n = 29$), client/participant ethnicity ($n = 13$), client/participant gender ($n = 52$), counselor gender ($n = 46$), client/participant age ($n = 23$), counselor age ($n = 10$), who played the counselor ($n = 29$), transcript versus "counselor" ($n = 48$), counselor blindness ($n = 19$), therapeutic issue of therapy ($n = 23$), session number ($n = 30$), session length in minutes ($n = 30$), transcript length in pages ($n = 19$), number of CSDs ($n = 45$), frequency of CSDs per minute ($n = 26$), frequency of CSDs per page ($n = 18$), % of personal CSDs ($n = 48$), % of relevant CSDs ($n = 46$), % of intratherapy CSDs ($n = 43$), % of similar CSDs ($n = 29$), % of dissimilar CSDs ($n = 29$), % of positive CSDs ($n = 25$), % of negative CSDs ($n = 27$), administered in group or individually ($n = 45$), was CSD the result of a client question ($n = 33$), whether CSD was said directly to client/participant ($n = 53$), counselor professional status ($n = 33$), doctoral level ($n = 25$), % of participants with past therapy experience ($n = 21$), specific issue ($n = 51$), extratherapy CSD verb tense ($n = 19$; no future/hypothetical tense), whether the CSD included emotion words ($n = 30$), whether analogue participants were asked to put themselves in the role of the client ($n = 28$), and whether the CSD included a solution ($n = 22$). ES = effect size; CI = confidence interval; LL = lower limit; UL = upper limit.

* $p < .05$. ** $p < .01$. *** $p < .001$.

ipants' favorable perception of the disclosing counselor—including that of counselor as caring, as a real person, and as having positive human qualities—was found. Thus, CSD may be a technique useful for rapport building and alliance strengthening with some clients.

Client disclosure. As client disclosure has been found to have a direct positive relationship to therapy outcome (Carkhuff & Pierce, 1967; Jourard, 1964; Kiesler, 1971; Rogers, 1961; Strassberg et al., 1978; Truax, 1968; Truax & Carkhuff, 1965), clients' reticence to disclose is likely to impede therapeutic progress. Thus, counselors may be anxious to get their quiet clients talking. One means of increasing client disclosure, according to the results of this review, may be CSD, as clients/participants rated themselves as more likely to disclose to a self-disclosing counselor. Additionally, clients/participants had more favorable perceptions of the counselor when counselors disclosed before the client/participant disclosed and used a present verb tense. These findings, which are in contradiction to Barrett and Berman's (2001) nonsignificant findings related to client disclosure, suggest that self-disclosing counselors might set the tone for their clients and serve as role models for how to engage in the therapeutic relationship/process in an open and thoughtful manner.

Similarity. Two noteworthy results related to similarity were found:

1. Counselors who used self-disclosures were rated by the clients/participants as being more similar to themselves than were counselors who did not disclose, even though half of the studies that used this measurement had dissimilar CSD conditions aggregated into the study-level effect size. Thus, it may be that any CSD makes the counselor appear more similar to the client.

2. Counselors who revealed similarity to the client in their CSD had a more favorable impact on clients'/participants' perception of the counselor's professional attractiveness and on clients'/participants' willingness to return than did counselors who did not disclose. This finding is interesting in light of related research that suggests no significant differences (a) in clients' perception of satisfaction based on similarity to their counselor's race (Murphy, Faulkner, & Behrens, 2004), (b) in clients' perceptions of counselor or expectations for therapy based on marital status similarity (Campbell & Johnson, 1991), (c) in client improvement based on attitude similarity (Beutler, Johnson, Neville, Workman, & Elkins, 1973), (d) in alliance based on similarity of personal characteristics (Hersoug, Høglend, Monsen, & Havik, 2001), and (e) in client assessments of the therapy process and progress based on per-

Table 3
Nominal Moderators of the Effect of Counselor Self-Disclosure (CSD) on Clients'/Participants' Perception

Moderator	<i>n</i>	Mean ES	SE	95% CI		<i>Q</i> _{within}
				LL	UL	
Type of session						
Real session	4	0.02 _a	.22	-0.40	0.45	3.79
Interview	7	0.68 _b ***	.16	0.36	1.00	25.02***
Written transcript	15	0.18 _a	.10	-0.02	0.37	18.19
Video	12	0.15 _a	.10	-0.05	0.36	4.78
Audio	7	-0.17 _a	.14	-0.44	0.10	2.81
CSD directly to the client/participant						
No	34	0.09	.07	-0.04	0.23	26.13
Yes	11	0.45**	.14	0.17	0.72	30.99***
Timing of CSD						
Before client self-disclosure	4	0.60**	.22	0.15	1.04	19.81***
After client self-disclosure	24	0.12	.09	-0.06	0.29	15.12
Verb tense of extratherapy CSD						
Past tense	14	0.05	.06	-0.06	0.16	10.48
Present tense	5	0.25*	.08	0.10	0.41	1.00
Participants explicitly asked to put themselves in the role of the client						
No	12	-0.02	.08	-0.18	0.14	14.34
Yes	14	0.22**	.08	0.06	0.38	12.54

Note. Mean effect sizes that do not share the same subscript differ at $p < .05$ in the Fisher's least significant difference comparison. The following factors failed to reach statistical significance when examining the effect CSD has on clients'/participants' perception: year ($n = 48$), publication status ($n = 48$), professional discipline of first author ($n = 38$), total sample size ($n = 48$), sample type ($n = 40$), specific sample population ($n = 48$), volunteer/compensated ($n = 26$), client/participant ethnicity ($n = 13$), client/participant gender ($n = 47$), counselor gender ($n = 42$), client/participant age ($n = 22$), counselor age ($n = 9$), who played the counselor ($n = 25$), transcript versus "counselor" ($n = 42$), counselor blindness ($n = 16$), therapeutic issue of therapy ($n = 30$), session number ($n = 25$), session length in minutes ($n = 26$), transcript length in pages ($n = 19$), number of CSDs ($n = 41$), frequency of CSDs per minute ($n = 23$), frequency of CSDs per page ($n = 18$), % of intratherapy CSDs ($n = 40$), % of similar CSDs ($n = 29$), % of dissimilar CSDs ($n = 29$), % of positive CSDs ($n = 23$), % of negative CSDs ($n = 25$), experimental setting ($n = 21$), administered in group or individually ($n = 40$), type of control ($n = 38$), was CSD the result of a client question ($n = 31$), counselor professional status ($n = 31$), doctoral level ($n = 25$), % of participants with past therapy experience ($n = 19$), specific issue ($n = 46$), whether the CSD included emotion words ($n = 28$), and whether the CSD included a solution ($n = 11$). ES = effect size; CI = confidence interval; LL = lower limit; UL = upper limit.

* $p < .05$. ** $p < .01$. *** $p < .001$.

ceived similarity of personal characteristics (Dolinsky, Vaughan, Luber, Mellman, & Roose, 1998). However, research on value similarity between counselor and client suggests that clients find therapy more negative and less engaging when counselors hold dissimilar values (Herman, 2004). Inconsistencies in research noted, if a counselor chooses to disclose, disclosure that highlights similarity may be more likely to have a favorable impact than disclosure that reveals dissimilarity.

Research Considerations

As other authors (e.g., Farber, 2006; Henretty & Levitt, 2010; Knox et al., 1997) have argued, one of the major problems of the experimental research on CSD is the reliance on analogue methodology. With only two studies using both a clinical population and a real session of the 53 studies that comprised the analysis, this review did not have enough power to examine actual therapy experiences. Thus, in accord with Hill and Knox's (2001) critique, it may be fair to say that all that is deducible from this review is the impact CSD has on *nonclients*. Especially as several design factors emerged as being significant moderators (e.g., experimen-

tal setting, depiction of session, type of control group, verb tense of CSD), future researchers are encouraged to design CSD experiments that are as experience-near to actual therapy as possible.

As noted elsewhere as well (e.g., Henretty & Levitt, 2010; Hill & Knox, 2002), another problem of the research concerning this topic is that the majority of studies are not driven by a clear theoretical understanding of the role and possible benefit of CSD. At present, many of the prominent theoretical positions on CSD have not received adequate attention in the empirical literature. For example, although many position pieces advocate for counselor disclosure of LGBT orientation to LGBT clients (see Ball, 1996; Cabaj, 1996; Cole, 2006; Domenici, 2006; Frommer, 1999; Frost, 1998; Herlands, 2006; Isay, 1996; Liddle, 1996; Satterly, 2006), only three studies (i.e., Carroll, Gauler, Relph, & Hutchinson, 2011; Loughran, 1993; Taylor, 1993) explored the issue, all yielding mixed results. To enable comprehensible synthesis of the theoretical and empirical literature, future researchers must place greater emphasis on exploring the topics oft-cited in theory and take steps to contextualize their work in broader explanatory models regarding how CSD might bear on the counseling relation-

Table 4
The Significant Mean Effects of Intratherapy Counselor Self-Disclosure (CSD) and Extratherapy CSD

Type of CSD	<i>n</i>	Mean ES	SE	95% CI		<i>Q</i> _{Within}
				LL	UL	
Intratherapy CSD ^a	8					
Attractiveness	5	0.26**	.10	0.07	0.46	4.07
Extratherapy CSD ^b	39					
Attractiveness	19	0.31**	.10	0.11	0.50	54.24***
Congruence	6	0.30*	.12	0.06	0.53	3.89
Likability	3	0.31*	.12	0.07	0.55	0.11
Counselor as caring	10	0.22**	.08	0.07	0.37	7.01

Note. ES = effect size; CI = confidence interval; LL = lower limit; UL = upper limit.

^a In addition to the overall category, the following factors failed to reach statistical significance when examining the broad categories (perception, client/participant self-disclosure, and allegiance) and their specific subcategories (which follow each broad category name) of intratherapy CSD compared with nondisclosure: Overall (*n* = 8). Perception (*n* = 7), expertness (*n* = 5), trustworthiness (*n* = 6), counselor in professional role (*n* = 6), counselor as honest (*n* = 6). Client/participant self-disclosure (*n* = 4), predicted client/participant self-disclosure (*n* = 4). Allegiance (*n* = 4), willingness to return (*n* = 4). ^b In addition to the overall category, the following factors failed to reach statistical significance when examining the broad categories (perception, outcome, client/participant self-disclosure, and allegiance) and their specific subcategories (which follow each broad category name) of extratherapy CSD compared with nondisclosure: Overall (*n* = 39). Perception (*n* = 35), expertness (*n* = 20), trustworthiness (*n* = 20), empathy (*n* = 8), regard (*n* = 6), unconditionality (*n* = 5), counselor's understanding (*n* = 3), similarity to counselor (*n* = 3), counselor as emotionally healthy (*n* = 3), counselor in professional role (*n* = 22), counselor as honest (*n* = 18), counselor as empathic (*n* = 12), general positive perceptions of counselor (*n* = 8), positive attitude toward therapy (*n* = 3), general positive stance toward therapy/counselor (*n* = 4). Outcome (*n* = 8), increase in skills (*n* = 4), predicted outcome (*n* = 3). Client/participant self-disclosure (*n* = 15), predicted willingness of client/participant to self-disclose (*n* = 7), predicted willingness of client/participant to self-disclose personal info (*n* = 5), intimacy of client/participant self-disclosure (*n* = 3), predicted client/participant self-disclosure (*n* = 12), actual client/participant self-disclosure (*n* = 6). Allegiance (*n* = 11), willingness to return (*n* = 10).

p* < .05. *p* < .01. ****p* < .001.

ship and on therapeutic change (e.g., CSD of recovery and CSD of values).

Furthermore, feminist and multicultural counselors (e.g., Brown & Walker, 1990; Mahalik et al., 2000) have advocated for use of CSD as a means of empowering ethnic minority clients; however, in this review, only 13 of the 53 studies provided information related to client/participant ethnicity, with nine of the 13 studies having samples that were between 76% and 97% Caucasian. Thus, more ethnically diverse samples are needed to begin to fuse practice and science by comprehensively exploring the relationship between ethnicity and the impact of CSD. This is an important consideration for future CSD researchers.

One of the key implications of this study for future researchers is that when it comes to the examination of CSD, measurement matters. It may not be enough simply to examine overall effects of self-disclosure. For example, although extratherapy CSD had no significant overall impact on clients/participants or even on their perception of the counselor in general, it had a

robust, favorable impact on the perception of the client/participant on specific attributes of the counselor such as attractiveness and likability. This kind of obscuring could play a role in the mixed and inconclusive results noted throughout the current literature base.

Strengths and Weaknesses

Meta-analytic reviews are only as sound as the individual studies that comprise them; thus, as most of the studies used analogue methodology, this review may not be generalizable to actual therapy. In addition, as some researchers failed to report information related to type of CSD, when these factors could not be coded or estimated, studies had to be excluded from certain analyses. This fact may have rendered this review unable to identify possible significant effects and moderators due to reduced statistical power.

Ideally, all of the studies would have also adhered to the gold standard of random assignment. However, as analyzing studies that used random and nonrandom assignment separately might have decreased the necessary statistical power to detect effects and moderators, it was decided that the set of studies would be examined for differences between the effect sizes of these two sets of studies. As statistically significant differences were not found, the two sets of studies were analyzed together in the review. Therefore, it is possible that the findings of this review are conservative, as studies that do not randomly assign clients/participants may have more variable effect sizes than studies that adhere to random assignment (Shadish & Ragsdale, 1996).

Finally, it might be argued that by examining multiple subsets of the data, one or more significant effects may have been found by chance alone (i.e., committing Type I errors). Thus, it is appropriate to consider this review as being exploratory. However, examining theoretically discrete measures (e.g., at-

Table 5
The Significant Mean Effects of Positive Counselor Self-Disclosure (CSD) and Negative CSD

Type of CSD	<i>n</i>	Mean ES	SE	95% CI		<i>Q</i> _{Within}
				LL	UL	
Positive CSD ^a	8					No significant effects
Negative CSD ^b	11					
Attractiveness	8	0.35***	.09	0.16	0.53	6.06

Note. ES = effect size; CI = confidence interval; LL = lower limit; UL = upper limit.

^a In addition to the overall category, the following factors failed to reach statistical significance when examining the broad categories (perception and outcome) and their specific subcategories (which follow each broad category name) of positive CSD compared with nondisclosure: Overall (*n* = 8). Perception (*n* = 7), expertness (*n* = 7), trustworthiness (*n* = 6), attractiveness (*n* = 7), counselor in professional role (*n* = 7). Outcome (*n* = 3). ^b In addition to the overall category, the following factors failed to reach statistical significance when examining the broad categories (perception and outcome) and their specific subcategories (which follow each broad category name) of negative CSD compared with nondisclosure: Overall (*n* = 11). Perception (*n* = 10), expertness (*n* = 8), trustworthiness (*n* = 7), empathy (*n* = 3), counselor as a professional (*n* = 9), counselor as empathic (*n* = 4). Outcome (*n* = 4).

****p* < .001.

Table 6
The Significant Mean Effects of Similar Counselor Self-Disclosure (CSD) and Dissimilar CSD

Type of CSD	<i>n</i>	Mean ES	SE	95% CI		η^2_{Within}
				LL	UL	
Similar CSD ^a	23					
Attractiveness	15	0.33***	.10	0.14	0.52	26.24*
Allegiance	9	0.29**	.09	0.10	0.47	4.98
Willingness to return	8	0.31***	.09	0.13	0.50	3.49
Dissimilar CSD ^b	10	No significant effects				

Note. ES = effect size; CI = confidence interval; LL = lower limit; UL = upper limit.

^aIn addition to the overall category, the following factors failed to reach statistical significance when examining the broad categories and by their specific subcategories of similar CSD compared with nondisclosure: Overall ($n = 23$); perception ($n = 23$), expertness ($n = 15$), trustworthiness ($n = 14$), empathy ($n = 6$), congruence ($n = 4$), regard ($n = 4$), unconditionality ($n = 3$), counselor in professional role ($n = 15$), counselor as honest ($n = 12$), counselor as caring ($n = 6$); positive attitude toward therapy ($n = 3$), outcome ($n = 6$), increase in skills ($n = 3$), predicted outcome ($n = 3$); client/participant self-disclosure ($n = 3$). ^bIn addition to the overall category, the following factors failed to reach statistical significance when examining the broad categories and by their specific subcategories of dissimilar CSD compared with nondisclosure: Overall ($n = 10$); perception ($n = 10$), expertness ($n = 9$), trustworthiness ($n = 8$), attractiveness ($n = 9$), counselor in professional role ($n = 9$), counselor as honest ($n = 8$); outcome ($n = 3$); client/participant self-disclosure ($n = 3$); allegiance ($n = 5$), willingness to return ($n = 4$), willingness or actual return ($n = 5$).

* $p < .05$. ** $p < .01$. *** $p < .001$.

tractiveness, expertness, trustworthiness) independently, rather than only identifying the overall effect, did yield richer information regarding the impact of CSD and partly may account for the inconclusive results across other studies. Although this review did not exhaust all of the questions that could be investigated, it is the first of its kind to use quantitative meta-analytic procedures to explore the impact of verbal CSD on clients. It is hoped that this article will provide useful guidance for both future research and clinical practice on this incredibly important topic.

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Appendix

Coded Variables

- Assignment to conditions (i.e., random vs. nonrandom and not specified)
- Year of publication
- Publication status (i.e., if the study was published in a peer-reviewed journal or is an unpublished dissertation)
- Professional discipline of first author
- Total sample size
- Sample size per condition
- Sample type (i.e., student nonclinical, student clinical, community nonclinical, or community clinical)
- Specific type of population (e.g., LGBT)
- Whether clients/participants were volunteers or were compensated
- Percentage of Caucasian clients/participants
- Percentage of Caucasian counselors
- Whether the client/participant and counselor were the same ethnicity
- Percentage of female clients/participants
- Percentage of female counselors
- Whether the client/participant and counselor were the same gender
- Average age of clients/participants
- Average age of counselor
- Who played the counselor (e.g., researcher, student, counselor)
- Whether the counselor was blind to the design or purpose of study
- Therapeutic issue of the session
- Type of session (i.e., real session, interview, transcript, video, or audio)
- Session number
- Length of the session in minutes
- Length of the session in transcript pages
- Number of CSDs in the experiment
- Intimacy of CSD (as stated in the study)
- The percent of CSD that was personal (vs. demographic)
- The percent of CSD that was relevant to the participant's/client's preceding talk-turn
- The percent of CSD that was concerning intratherapy thoughts and feelings (vs. extratherapy experiences)
- The percent of CSD that presented similarity to the client/participant
- The percent of CSD that presented dissimilarity to the client/participant
- The percent of CSD that was of positive valence

(Appendix continues)

- The percent of CSD that was of negative valence
- Setting of experiment (i.e., clinical, academic, research/laboratory)
- Whether the experiment was administered individually or in a group format
- Type of control (e.g., reflecting, summarizing, interpreting, disclosing about someone else, "we" talk)
- Bias of researcher for or against CSD
- Client/participant expectation of CSD
- Client/participant preference for CSD
- Whether CSD was in response to a client/participant question
- Whether CSD was spoken directly to the client/participant
- The professional status of the counselor, as told to the client/participant
- Whether the counselor was portrayed as being a doctor
- The percent of participants that had previous therapy experience
- Whether the CSD was about something specific (e.g., recovery, values, sexual identity/orientation)
- The timing of the CSD (i.e., before or after the client disclosed)
- The verb tense of extratherapy CSD (i.e., past, present, or hypothetical/future)
- Whether extratherapy CSD included emotion words
- Whether analogue participants were asked to put themselves in the role/"shoes" of the client for rating purposes (vs. rating the counselor as an observer)
- Whether the CSD included some type of solution relevant to the client
- Whether the study contained a misplaced CSD

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